PREDICTING JUROR BIAS AND ITS EFFECTS
ON GROUP DELIBERATION, VERDICT, AND
RECALL OF TRIAL INFORMATION

BY

ARTHUR HOWARD BRAND

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Dedicated lovingly to
my parents, Robert and Helen,
and my wife, Ana.
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Research ain't pretty. Indeed, after countless days and nights of reading, planning, running subjects, analyzing data, and writing results as well as personally manifesting the entire range of symptoms associated with major forms of psychopathology, it can become quite ugly. Despite the trauma associated with this dissertational experience (I do not know of any such experiences that could have been described as otherwise) I feel a great sense of accomplishment regarding this final (hopefully) graduate student project. I would like to take this opportunity to express my gratitude to the following people and institutions, whose cooperation, assistance, and support greatly facilitated its completion:

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PREDICTING JUROR BIAS AND ITS EFFECTS ON GROUP DELIBERATION, VERDICT, AND RECALL OF TRIAL INFORMATION

BY

ARTHUR HOWARD BRAND

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Chairperson: Jacquelin Goldman, Ph.D.
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The literature has suggested that biasing factors along the authoritarian continuum distort verdict-relevant judgement, even in the context of the trial procedure which attempts to limit and counteract their influences. This investigation examined these biases and at what points in the trial they were likely to be operative.

Seventy college students, classified as authoritarian, egalitarian, or neutral, by subtracting the egalitarian score from the authoritarian score on the Legal Attitudes Questionnaire (developed by Boehm in 1968), served on twelve 6-person mock juries: authoritarian, egalitarian, neutral, and a mixed composition of authoritarians and egalitarians. These latter two types served as control groups. These juries viewed a 4-hour videotaped reenactment of a trial concerning aggravated assault against two police officers and two weapons charges. At different intervals during the trial, jurors were asked
to render verdicts and their confidence in these verdicts. Each jury was allowed up to an hour to deliberate to unanimous decisions. These deliberations were recorded and analyzed. Jurors' recall of different types of trial information was also assessed.

These data revealed that jurors serving on egalitarian juries were the only jurors to take a stance of innocent until proven guilty early in the trial. Additionally, for one charge, egalitarian juries showed lower proportions of guilty verdicts than any other type of jury. Authoritarians recalled less situational evidence than other jurors. Furthermore, for one charge, authoritarian juries showed a relatively high proportion of guilty verdicts, as did mixed and neutral juries, despite their low levels of confidence in these verdicts. The issues concerning which of these jury types were biased were discussed.

The importance of the testimony, judge's instructions, and deliberation in reducing juror bias was highlighted. Additionally, the data suggested that juries comprised of a mixture of authoritarians and egalitarians were likely to have heated debates, expressing varying opinions, and might serve to reduce bias.

Finally, methodological issues emphasized the importance of incorporating deliberations in jury research, the unreliability and misleading results of studies using posttrial assessment weeks after the trial, and the need to study the effects of biases on different types of charges.
CHAPTER I
INTRODUCTION

The Sixth Amendment of the U.S. Constitution guarantees the right to a trial by an "impartial jury" in both criminal and civil matters where the penalty for an offense is greater than six month's imprisonment. Although an estimated two million persons serve as jurors in some 200,000 civil and criminal cases each year (Abraham, 1980), this comprises only half of the criminal and civil cases in federal district course and less than 10% of all cases (both civil and criminal) in state trial courts (Vago, 1981).

In terms of numbers, therefore, trial by jury would appear to be the least significant of our present modes of administering justice. Nevertheless, the trial process has captured the interests of social scientists for almost 20 years. In particular, the emphasis has been on both extralegal factors and trial processes, especially deliberation, which might influence the decision-making of the jury. Emphasis in these areas appears for several reasons. The symbolic, practical, and theoretical importance of the jury raises questions that are open to empirical test.

Both Nemeth (1976) and Sealy (1979) have suggested that the trial by jury is such an attractive object of study because of its symbolic importance. That is to say, the jury somehow symbolizes the systematic and free involvement of ordinary people in the
administration of law. In this context, the jury serves as a safeguard against threats to freedom (Sealy, 1979). The practical importance of the jury has been illustrated by Heurmann (1978). Here it was shown that attributions regarding the case's outcome if the case would go to trial influenced prosecutors and defense attorneys in making decisions about plea bargaining or opposing counsel in private disputes. Finally, social scientists in the fields of communication, small group behavior, social psychology, and personality have employed the trial process as a setting "... ideally suited to act as 'test-beds' for psychological theories" (Sealy, 1979, p. 55).

Perhaps of greatest interest is the fact that, by definition, the trial process is a method for applying the law impartially. Along with this responsibility, the jury is given the authority to take away freedoms and autonomy from the accused, bestow, or settle suits and declare financial liability. However, the jury is one of the few channels through which ordinary citizens can impose on society their own standards or biases concerning what is morally or socially right and wrong behavior (Cornish, 1968). This concern has been summarized by Judge Jerome Frank: "Mr. Prejudice and Miss Sympathy are the names of witnesses whose testimony is never recorded, but must nevertheless be reckoned with in trials by jury" (1949, p. 122).

Unfortunately, it has been difficult to investigate the issue of which factors have influence on the tasks of the jury. Ironically, the very process, in which we entrust tremendous symbolic and theoretical importance and actual power, also has presented itself as an enigma. Answers to questions regarding the jury have been elusive,
partly because empirical investigations of jury behavior are hampered by legal restrictions relative to both the jurors themselves and for the jury process. Nevertheless, since the right to impartial justice by a jury of one's peers is central in our democracy, researchers have found ways to study the jury system. Before discussing the findings of this relevant research, the methods and the methodological issues associated with the study of the jury will be discussed.

Methods of Studying the Jury

The Chicago Jury Project (Broeder, 1958) led to the important publication by Kalven and Zeisel of *The American Jury* in 1966. Along with the work of Simon (1967), they showed the feasibility of empirical research in areas previously thought inaccessible and focused researchers on the sorts of issues that could and should be addressed empirically.

One of the most significant things about these endeavors was that they employed actual jurors, trials, and judges. Kalven and Zeisel conducted posttrial interviews of jurors from 12-person juries in 225 state and federal criminal trials and solicited "verdicts" from the presiding judges. In this manner they reconstructed "first-ballot votes" to compare to the actual jury verdicts. They also used judge-jury agreement as the criteria for the veracity of actual verdicts.

Although the use of real stimuli and subjects allowed Kalven and Zeisel to maximize the generalizability of their findings, they encountered difficulties inherent in doing applied research. First, although 90% of the jurors agreed to participate in the study, only
19% of the judges responded to the questionnaire. Additionally, the use of posttrial interviews (often months after the trial) for reconstructing the "first ballot" made it conceivable that some of the jurors may have confounded their predeliberation decisions with the group verdicts or were unwilling to admit that they were influenced by the group to change their minds (Sonaike, 1978). Furthermore, because of the inaccessibility to study the jury in process, the authors were not able to unravel the possible factors influencing the jury's deliberation and verdict.

In an innovative attempt to clarify some of these issues, Zeisel and Diamond (1978) utilized a "shadow jury." For 12 criminal cases before 3 judges in the U.S. District Court in Illinois, the authors used the actual jurors, who were peremptorily excused, to remain in the courtroom and reveal at the end of the trial how they would have voted. A second shadow jury was constructed by randomly selecting from the remaining venire, four 12-person juries or "English juries." Vinson (1982, 1983) used a somewhat different shadow jury. He constructed a shadow jury which was matched in demographic and psychological traits of actual jurors serving on a multimillion dollar antitrust suit in California.

The great advantage of the shadow jury is that it allowed for the questioning of jurors during the trial and offered access to the deliberation process. This design was not without drawbacks. First, it has been argued that, since shadow jurors know that their decisions do not count, their motivation may be different from actual jurors.
This threatens the external validity of the findings. Additionally, this method is not easily utilized because of its great cost.

Analyses of simulated juries and trials have begun to answer some of the questions raised about jury decision-making. Because of lower costs and the ease with which data can be accumulated, simulation studies comprise the majority of research in this area. Simulation lends itself to experimental manipulation and control of variables which otherwise could not be isolated. These techniques have varied widely in stimuli presented, types of juror subjects, setting or location, trial components included in the simulation, dependent and independent variables, and unit of analysis (i.e., juror or jury; product or process) (Bray & Kerr, 1982).

It is obvious that the most important methodological issue confronting the study of the jury is the trade off between internal and external validity. All research in this area falls somewhere along this continuum. Both general strategies have advantages and disadvantages.

Several legal and psychological writers (Konecni & Ebbesen, 1982; Vidmar, 1979; Weiten & Diamon, 1979) typically favored the field methods which closely approximate realistic situations. However, Monahan and Loftus (1982) highlight that the principal liability of these methods is that, in addition to high cost, they are often illegal, unethical, or impossible to control in order to provide the opportunity for internally valid research. Additionally, in order to avoid concern over the possibility of jury tampering, information from the jurors cannot be obtained until after the trial. This technique
may cause problems with recall and the possibility that aspects of the trial and deliberation might color posttrial reports.

In contrast, jury simulation studies have been the preferred method of study by most psychologists (Baldwin & McConville, 1979; Thibaut & Walker, 1975). As mentioned previously, simulation studies allow for randomization of variables, replication of procedures, access to process (e.g., deliberation), and savings in time and money. These advantages maximize internal validity.

Nonetheless, several criticisms have been launched at simulation research regarding its generalizability (Bray & Kerr, 1982; Davis, Bray, & Holt, 1977; Gerbasi, Zuckerman, & Reis, 1977; Vidmar, 1979; Weiten & Diamond, 1979). Inadequate trial presentations have often been used. Here, the method of presentation (e.g., brief and simplistic audio or written hypothetical case studies), the exclusion of important trial elements (e.g., opening arguments, voir dire, and judge instructions), and the use of laboratory settings have been highly unrealistic. Additionally, subjects (usually college students) are unrepresentative of actual jurors on several dimensions. Jurors are also often not asked to deliberate despite the research findings that deliberation has had a significant effect upon trial outcome (Bray & Noble, 1978; M.F. Kaplan & Miller, 1978; McGuire & Bermant, 1977). They often vote on an artificial continuous measure of guilt rather than on dichotomous ratings (i.e., guilty or not guilty). They are also asked to pass judgment on severity of sentence which jurors are usually not asked to do. Finally, there have been concerns that subjects often perceive the consequences of the decision task
different from real jurors. Equivocal results preclude firm conclusions regarding this last issue (Kerr, Nerenz, & Herrick, 1979; Wilson & Donnerstein, 1977; Zeisel & Diamond, 1978).

Judgments of the merits of jury research must be made with the above issues in mind. Several authors have discussed the utility of both research strategies (Bray & Kerr, 1982; Monohan & Loftus, 1982). In essence, both investigated the extent to which our theories of human behavior can predict and explain findings. Hypotheses are continuously being formulated and tested. Although it would be ideal to find a correct balance between experimental control and authenticity, this is not always possible. However, it has been suggested that the more numerous and independent ways in which effects or results are demonstrated to support a hypothesis, the less numerous and less plausible any single rival invalidating hypothesis becomes (Campbell & Stanley, 1963). Therefore, both applied and experimental studies are worthwhile contributors to the study of the jury.

With a discussion of the methods and methodological issues involved in jury research completed, the literature in this area can now be reviewed with a greater appreciation of its utility and limitations. Most of the available research has been some type of simulation study; however, relevant field studies will also be included in the review.

Personal Bias and Prejudice in Jurors' Decisions

To what extent and by what means a juror's personal decision, as well as the group process of reaching a consensual decision, is
influenced by biasing factors has long concerned the legal and scientific community. Erlanger (1970) suggested that personal characteristics of jurors affect both the individual's decision and the process through which a jury comes to a collective verdict.

The Existence of Juror Bias

In one of the earliest jury simulation studies, Weld and Danzig (1940) showed that 25% of their jurors reached a definite decision early in the trial and testimony served only to strengthen their certainty. About the same time, the United States Supreme Court had to rule on legal challenges to jury panels which were partially based on the biases of the jury (Fay vs. New York, 1947; Thiel vs. Southern Pacific Co., 1946). Indeed, the ruling in the former case was actually reversed because of a biased jury panel. Such findings and rulings are what probably lead Judge Frank (1949) to express his previously quoted concern about extra-evidential biases.

In the context of this atmosphere, the Chicago Jury Project was undertaken in the 1950s. It was, therefore, expected that the findings of Kalven and Zeisel (1966) would confirm Judge Frank's charges that the typical jury lacked the discipline and understanding to render fair decisions in most cases (Frank, 1949). However, their findings were taken to contradict Frank. They found that judge-jury disagreement only occurred in 34% of the trials examined. Furthermore, only 19% were total disagreements (i.e., one acquitted and one convicted). The remaining 15% encompassed hung juries and differences on charge and penalty.
The authors determined that 54% of the reasons for judge-jury disagreement were due to issues of evidence (e.g., credibility of first-time defendants, threshold of proof beyond reasonable doubt). Feelings about equitable issues (e.g., fault of victim, disproportion of punishment, selective enforcement of the law) accounted for 29% of the disagreements and only 11% of the disagreements were due to attitudes toward the defendant (e.g., age, status, attractiveness). With these two types of extra-evidential influences (i.e., equitable issues and attitudes toward defendants) accounting for only one-third of the judge-jury disagreements it was interpreted that extra-evidential factors did not adversely affect the ability of the jury to administer impartial justice.

The findings of Kalven and Zeisel (1966) are of great importance; nevertheless, their conclusions may have been misleading. In addition to the methodological problems cited earlier, the authors failed to consider that evidentiary issues, such as inferring credibility of certain types of witnesses and proper threshold for decision, may themselves be influenced by biasing factors (Wasserman & Robinson, 1980). Other authentic studies have also suggested that biasing factors might be operative in influencing jury decision-making. The results of the shadow juries of Zeisel and Diamond (1978) (to be discussed in more detail later) were supportive of this notion.

The shadow jury studied by Vinson (1982, 1983) was shown to come to a decision before testimony and then only sought information to support their premature decision. This was supportive of the earlier findings of Weld and Danzig (1940). Perhaps the effects of bias are
most potent prior to the presentation of evidence. Indeed, Freundlich (1983) recently found that in four out of six criminal charges 75% of the mock jurors studied had decided on a guilty verdict after the opening argument and became increasingly confident in their decision for the rest of the trial. Thus, it appears that verdict-relevant biases are apparent before evidence is presented and, as Pyszczynski and Wrightsman (1981) suggested, may serve as a "thematic framework" that serves to guide juror information processing.

Sources of Bias and Jury Decisions

Several authentic studies have suggested the presence and potential impact of biasing factors in juror and jury decisions. Simulation studies have allowed psychologists to attempt to explain the sources of bias that might render one particular juror more susceptible to prejudice than another. A number of demographic, situational, personality, and attitude dimensions have been investigated (for reviews of this literature, see Davis, Bray, & Holt, 1977; Gerbasi, Zuckerman, & Reis, 1977; Nemeth, 1981; Saks & Hastie, 1978).

The most frequently studied juror demographic variable has been sex. The data are mixed with respect to conviction proneness of each sex across different types of charges. Nemeth (1981), in an extensive literature review, cited several studies in which males were found to be more conviction prone and/or more punitive, other studies in which females were more conviction prone and/or punitive, and still other studies in which no sex differences were obtained. Nemeth reported
that only in the case of rape have females been consistently found to convict more and be more punitive across different studies.

There have been several other studies which have reported sex differences in jurors with respect to demographic variables, personality styles, attitudes, and deliberation styles, which might influence verdict decisions. Strodtbeck and Mann (1956) showed that, during a simulated deliberation, actual female jurors were more likely to assume traditional roles dealing with social-emotional issues, while males tended to be more task-oriented. Strodtbeck, James, and Hawkins (1957) reported that actual male jurors, in contrast to female ones, showed higher participation, influence, satisfaction, and perceived competence during mock deliberations. Using a written case summary of a rape trial, Rumsey and Rumsey (1977) found that although there were no sex differences in verdict, females were generally more certain of guilt and attributed more responsibility to the defendant. Mills and Bohannon (1980) showed differential verdict responses in highly socialized and empathetic male and female mock jurors. Another study by Moran and Comfort (1982), using 319 felony jurors (22.7% of the sample who responded) impaneled in the Dade County, Florida, state courts, found differences between male and female jurors who convicted. Males who convicted were found to have more children, lower income, and reported themselves to be less concerned with responding in a socially desirable manner; females who convicted tended to report a belief in a just world and that their actions could affect society as well as higher authoritarian beliefs. These variables, however, only accounted for 10.7% and 11%
of the variance for males and females, respectively. Finally, two recent simulation studies (Freundlich, 1983; Freundlich & Goldman, 1982) showed that female mock jurors were not different from males on verdict or deliberation style, but reported higher levels of depression, anxiety, and hostility throughout the trial.

Clearly, the results with respect to sex are inconsistent and can only lead to tentative suggestions that this may be an important variable to consider when conducting jury research.

Age of the juror has been shown to be associated with verdict. Several investigations found that younger jurors tended to acquit more than older jurors (Scroggs, 1976; Sealy & Cornish, 1973; Stephan & Tully, 1977), although one study did not find age differences (Reed, 1965).

The race of the juror also appears to be important although these findings are also equivocal. Evidence has been presented that black defendants are more likely to be convicted and given harsher sentences by white jurors (Broeder, 1965; Greenberg, 1959). However, more recent studies show that both black and white jurors were more likely to find the defendant guilty if the defendant was similar in race to them (M. Miller & Hewitt, 1978; Ugwuegbu, 1976).

Other demographic variables, such as education, occupation, income and political persuasion, have been investigated. In the Strodtbeck et al. (1957) study those jurors with high status occupations showed higher participation, influence, satisfaction, and perceived competence during mock deliberations than those with low status occupations. James (1959) found that more highly educated
jurors reported that procedures and instructions most influenced their trial decisions. Jurors with lower education levels, on the other hand, were reportedly more likely to be influenced by personal life experiences and opinions from the trial. Reed (1965) also found that as education increases the likelihood of voting guilty increases. Simon (1967) found that jurors with higher monthly incomes were less likely to vote not guilty than those with lower monthly incomes. Nemeth and Sosis (1973) found that mock jurors from politically conservative colleges gave harsher sentences to lower status defendants than higher status defendants. Jurors from a liberal college did not appear to make this distinction.

Although available data have suggested that demographic variables may indeed influence jurors' trial behavior and decisions, these findings are equivocal. It might be reasonable to suggest that these variables may interact with each other and other variables such as type of case, defendant characteristics, and personality of the juror.

The personality of the juror has been of interest to those studying juror decision-making. Here, both transient (state) characteristics and/or relatively permanent (trait) characteristics of jurors have been relevant. Fluctuations in affective state has been the most commonly studied transient characteristic in jurors. Using an inferential measure of affective state, Simon (1967) showed that jurors who convicted were more anxious than those who acquitted the defendant in an incest trial. Goldman, Maitland, and Norton (1975) found similar results using a more direct measure of affective state in a simulated criminal insanity case. The same study found that mock
jurors showing greater levels of hostility over the trial duration tended to give more severe penalties. Finally, Freundlich and Goldman (1982) showed that lower levels of emotionality (i.e., depression, hostility, and anxiety) were reported more often in mock jurors of innocent-deciding juries. One cannot safely determine the relationship of the affective state to the decisions of the jurors from these data; although one possibility is that as a juror experiences greater emotion, it may be easier to make a decision to convict.

Another variable, level of moral judgment, appears to potentially clarify the relationship between affective state and juror decisions. For example, Goldman and Thomas (1979) found that low moral level mock jurors showed greater increases in hostility. Using a less affective-arousing simulated trial, Goldman and Casey (1980) demonstrated that low moral level mock jurors reported more extreme affective responses, especially depression and hostility. Since level of moral judgment, a cognitive variable, was not found to influence verdict in these studies, the potential mediating effects of this variable between affective state and juror decisions must remain tentative.

Researchers have also studied trait or global personality characteristics. Several personality constructs have been employed here. One such construct is the belief in a just world (Lerner, 1970)—the belief that one is likely to get what he deserves and deserves what he gets. This idea was used to explain the fact that
under certain conditions innocent victims are blamed for their misfortunes.

Zuckerman and Gerbasi (1973) tested this idea using a simulated rape case. They found that mock jurors who scored high on the Just World Scale (Rubin & Peplau, 1973) assigned more responsibility to the rape victim. This supported Lerner's hypothesis that derogation of the victim serves to maintain a belief in a just world.

Demanding harsher treatment of the defendant may also serve to maintain a belief in a just world. Rubin and Peplau (1975) reported a study by Izzett which employed mock jurors in a simulated negligent homicide case. Here, jurors scoring high on the Just World Scale formed less favorable impressions of the defendant and assigned stiffer sentences than did jurors scoring low on this measure. Gerbasi and Zuckerman (1975) found similar results using a simulated murder case with a population of real jurors. The results of the above studies suggest that belief in a just world may be a biasing factor in juror decisions. However, to what extent deliberation interacts with this personality construct remains unknown since none of these studies had their jurors deliberate. Also, severity of punishment was used as a dependent measure; however, in real trials jurors only decide on the guilt of the defendant.

Internal-external control (Rotter, 1966) has been another personality construct studied for its relationship to sentencing behavior and attribution of responsibility to a defendant. Phares and Wilson (1972) showed that externals tended to favor the defendant in several auto accident cases. In a similar experiment, Sosis (1974)
found internals to be more likely to give harsher sentences and hold the defendant responsible for his crime than externals. The authors explain their findings in terms of projection of self-perceptions of responsibility. Unfortunately, the criticisms against the studies on belief in a just world are relevant here too.

The relationship between character structure—assessed in terms of socialization, empathy, and autonomy—and mock juror behavior was recently investigated in a study by Mills and Bohannon (1980), who used felony jurors impaneled in Baltimore, Maryland. Their data showed that males with high socialization scores were associated with the belief that the jurors' task was to reach some decision and expressed satisfaction in making their decision. Females with high socialization scores, however, expressed more uncertainty about making the right decision. Additionally, highly socialized males gave more guilty verdicts, whereas highly socialized females gave fewer. High empathy scores in males, in contrast, were consistently associated with not guilty verdicts as were high autonomy scores for both sexes. Again, unfortunately, there were no jury deliberations.

The construct of ego development by Loevinger and colleagues (Loevinger, 1976, 1979; Loevinger, Wessler, & Redmore, 1970) and its association with verdict in mock jurors has also been investigated. Ego development, a measure of psychological sophistication or maturity, has been used by Freundlich and Goldman (1982). Here, they found that high ego level mock jurors reported experiencing lower levels of emotionality and were more likely to vote not guilty than those with low ego levels. Freundlich (1983) supported this finding
by showing that low ego level mock jurors were more likely to vote guilty on a simulated case of aggravated assault than those jurors with high ego level. Indeed, high ego level jurors were more likely to render not guilty verdicts even when exposed to guilt-biasing pretrial publicity. These studies had jurors deliberate as a jury. That deliberation is an important part of jury decision making was supported by the finding that ego level was related to deliberation style (Goldman, Freundlich, & Casey, 1983). It therefore appears, at least tentatively, that ego level might be an important biasing variable in jury decision making.

Level of moral development (Kohlberg, 1969, 1976), a construct not dissimilar to that of ego development, has also been shown to be associated with mock juror's decisions about verdict and sentencing. Arbuthnot (1983) found that, in an ambiguous simulated murder case, the jurors' decisions about the degree of guilt and severity of sentence decreased significantly with increasing stages of moral development. Unfortunately, this study was performed with a written summary of the trial and no jury deliberations took place. Nevertheless, this study, taken with the studies using ego development, suggests that further research employing such constructs would seem warranted.

Not all studies have found that juror biases are related to decisions regarding verdict. Sealy (1981) studied fifty 12-person mock juries comprised of a representative adult population of Greater London. They listened to verbatim audiotape recordings of either a rape or a theft trial and rendered verdicts before and after
deliberation. Sealy's results showed that few variables correlated with verdict either before or after deliberation. That is, characteristics, such as occupational status, sex, educational experience, dogmatism, rigidity, and authoritarianism, were not a particularly significant factor in trial decisions. The only significant findings were a slight tendency for younger (up to age 25) and older (above age 40) to acquit, and that jurors with more favorable attitudes toward the jury system tended to convict. Sealy concluded that consideration of evidence is of greatest concern to jurors and, although background and attitude variables may influence how this is done, they have little or no influence on their final decisions.

Despite Sealy's findings and conclusions, one might still consider that there are verdict-relevant attitudes which might be especially important in studying juror biases. Indeed, recent reviews of the literature on juror biases have been replete with studies investigating the association between authoritarian beliefs (and related constructs) and juror decision making (Gerbasi et al., 1977; Hans & Vidmar, 1982; M.F. Kaplan, 1982). Because of the consistent findings using this attitude construct and its importance to the present investigation, the literature in this area will be reviewed in a separate section presently.

**Authoritarian Attitudes and Jury Decisions**

Authoritarianism is the term used to describe an attitude system, which ascribes to the belief that one should unquestionably accept authority from recognized powerful people and institutions. Persons
with this attitude are expected to conform strictly to conventional social norms and demonstrate rigid prejudice toward those who are different or do not embrace their point of view, conservatism, and show hostility toward those who deviate from established social norms (Adorno, Frenkel-Brunswick, Levinson, & Sanford, 1950).

Ellison and Buckhout (1981) have stated that authoritarian attitudes are common in people in varying degrees. Thus, it is possible to speak of an individual as high or low on authoritarian attitudes. Individuals who appear at the latter end of the continuum are often called egalitarian. They are believed to not place great value on conventional norms and have more tolerance for those who deviate.

Ellison and Buckhout (1981) asserted that this attitude dimension very likely plays a significant role in decisions made by jurors. It has been suggested that as jurors, authoritarians may convict more readily and render harsher punishments than egalitarians (Adorno et al., 1950). Indeed, according to Ellison and Buckhout (1981) authoritarian attitudes have been one of the best predictors of conviction that they have encountered. This literature will now be discussed.

Centers, Shomer, and Rodrigues (1970) conducted a field study employing an authoritarian measure by Sanford and Older (1950), with over 1,000 subjects. They found that high authoritarians were more punitive towards a juvenile defendant than either low or medium authoritarians. However, high authoritarians were most likely to
change their recommendations for punishment when presented with an "expert's" views that contradicted their own.

Mitchell and Byrne (1973) studied mock jurors, assessed for degree of authoritarian attitudes with an acquiescence-free authoritarianism scale. They were presented with a case history which led them to believe that the defendant was similar or dissimilar to themselves. Authoritarians were more likely than egalitarians to recommend a more severe punishment. When the defendant was perceived as similar, authoritarians were unsure of the defendant's guilt more often than egalitarians.

Bray and Noble (1978) also classified mock jurors as high or low authoritarians utilizing the F-Scale (Byrne, 1974). Subjects listened to a simulated murder trial. The results showed that high authoritarians voted the defendant guilty more often and issued longer sentences than low authoritarians both before and after deliberation. Additionally, juries composed of high authoritarians reached decisions of guilty more than low authoritarian juries. Unlike Mitchell and Byrne (1973), Bray and Noble showed that perceived similarity to defendant did not affect jurors' judgment.

Werner, Kagehiro, and Strube (1982) recently investigated the ability of jurors to disregard inadmissible evidence. Mock jurors were characterized as high or low authoritarians using the Mitchell-Byrne Authoritarianism Scale (Mitchell & Byrne, 1973) and presenting them with a written summary of the crime and trial. Their results showed that high authoritarians incorporated incriminating evidence almost regardless of admissibility, but not exonerating evidence in
rendering a decision. Furthermore, they were more likely to convict even when they were presented with judges' instructions explicitly stating them to disregard inadmissible evidence. Interestingly, low authoritarians became more lenient in the presence of inadmissible evidence.

Lamberth, Krieger, and Shay (1982) investigated the degree to which changes in juror decision making are mediated by authoritarianism. These authors performed a series of three experiments, two using college students and one using individuals drawn from the venire at the Philadelphia Court of Common Pleas. In each study, jurors were classified as authoritarian or egalitarian based on their responses on a counterbalanced F-Scale (Kirby & Lamberth, 1974), viewed a videotape of a trial based on an actual case of attempted rape and burglary, and deliberated in 12-person juries. Across experiments, authoritarian jurors were more likely to render guilty verdicts on predeliberation ballots than egalitarian jurors and authoritarian jurors were more likely to change their opinions during deliberations (as assessed by postdeliberation questionnaires) than egalitarian jurors. These authors reported that sex, age, and race were not predictive of change in verdict. Supporting the interpretation, that the major predictor regarding a change in one's vote during deliberation was authoritarianism, was the fact that 78% of those jurors who changed their votes were classified as authoritarian. Perhaps the most provocative finding was that most of the juries, which contained a mixture of egalitarian and authoritarian jurors, were either hung or voted not guilty; while the only juries to
convict the defendant were comprised entirely of authoritarians. These data suggest that authoritarians may favor guilty verdicts when left to their own judgments; however, when faced with alternative points of view (i.e., from egalitarians during deliberation), the authoritarian juror may be more malleable. Lamberth et al. (1982) conceptualized their findings by suggesting that the authoritarian juror is more likely to respond in a manner that increases positive affect than is the egalitarian juror, and that accepting the arguments of the perceived power structure generates positive affect. They went on to postulate that at the predeliberation ballot the perceived power structure is the prosecution, who represents the full authority of the law, but that during the deliberation the perceived power structure is the majority opinions of the group, which may be more egalitarian. Clearly, these issues are worthy of further study.

Research with variables associated with the concept of authoritarianism has provided supportive results. For example, conservative mock jurors (Nemeth & Sosis, 1973) and real jurors classified as dogmatic (Hatton, Snortum, & Oskamp, 1971; Rokeach & McLellan, 1969-1970) appear to render harsher sentences than their opposites. Additionally, mock jurors with stern attitudes toward punishment of criminals report both greater certainty of guilt and harsher sentences in simulated cases (M.F. Kaplan & Miller, 1978; M.F. Kaplan & Schersching, 1980).

The Legal Attitudes Questionnaire

It appears that an attitudinal system such as authoritarianism and its associated attributes might be associated with juror and jury
decision making. However, a major criticism of this type of research has been suggested (Boehm, 1968). The independent measures employed such as the F-Scales (Adorno et al., 1950; Byrne, 1974; Mitchell & Byrne, 1973), Dogmatism Scale (Rokeach, 1960), and the scale used by Centers et al. (1970) deal with attitudes towards a wide variety of things. According to Boehm, "few of the items measure attitudes specifically relevant to the jury decision-making process" (1968, p. 739). Indeed, recent writers (Ajzen & Fishbein, 1977) have reviewed the literature on attitudes and behavior and suggested that attitudes toward specific behaviors (e.g., the treatment of criminals in the judiciary system) will provide the best predictor of single-act criteria (e.g., jury decision making).

Boehm (1968), therefore, developed a measure, with moderate to high correlations, with the F-Scale (Adorno et al., 1950) and Dogmatism Scale (Rokeach, 1960), which would be directly relevant to the jury decision process. This Legal Attitudes Questionnaire (LAQ)-Form II (Boehm, 1968) used a forced-choice format to yield three attitude dimensions: authoritarianism, egalitarianism, and antiauthoritarianism. Authoritarian items expressed right wing sentiments and unconditional endorsement of acts of constituted authority, with a trend toward punitiveness and rigidity. Egalitarian items endorsed liberal, nonextreme, and tolerant positions. An antiauthoritarian dimension, based on the findings of Weitman (1962), consisted of extreme left wing sentiments which blame society for antisocial acts and endorse positions which are intended to thwart authority.
In addition to providing construct validity by showing moderate to high correlations with psychological measures of authoritarianism, Boehm (1968) tested its predictive validity. Mock jurors were given the LAQ as a theoretical voir dire and were provided with one of two versions of a manslaughter case. One version biased the evidence in the direction of guilt and the other towards innocence. It was found that authoritarians rendered more guilty verdicts ("tough" errors) than were warranted in the "not guilty" case and antiauthoritarians rendered more not guilty verdicts ("lenient" errors) than were warranted in the "guilty" case. The type and frequency of verdicts made by egalitarian jurors were not reported. Boehm did report that, of the jurors making hypothetical errors in verdict, 72% of the authoritarians, 52% of the antiauthoritarians, and 42% of egalitarians were highly confident of their "incorrect" decisions.

Boehm's data support the findings of others (Freundlich, 1983; Vinson, 1982, 1983; Weld & Danzig, 1940), which have contended that authoritarians and antiauthoritarians reached their verdicts early in the trial (i.e., after opening arguments) and resisted changing their verdict in the face of new information. A field study using the LAQ ("Juror Bias," 1980) found similar results.

Jurow (1971) used the LAQ with adult mock jurors who listened to recordings of murder trials. It was reported that authoritarians were more in favor of the death penalty and more likely to convict than egalitarians.

Alexander and Licker (1975) reported similar results. They found the LAQ to be a good predictor of individual mock jurors' verdicts in
a simulated murder trial. Here, authoritarians were more likely to render guilty verdicts than egalitarians.

Most recently, Goldman, Freundlich, and Thomas (1983) found that authoritarian mock jurors, classified by the LAQ, showed a tendency to convict more often than other mock jurors in a simulated trial involving an attempted murder and aggravated assault of law officers. Of further interest, they found that authoritarian mock jurors tended to favor conviction more than other mock jurors at all stages of the trial (i.e., after opening arguments, after testimony, and after deliberation).

In another study using the LAQ, Buckhout et al. (1979) found that mock juries composed of egalitarians were more likely to acquit than authoritarian or mixed juries in a simulated murder case.

Berg and Vidmar (1975) conducted a study to attempt to explain the differences in authoritarian and egalitarian verdicts. They divided mock jurors into high and low (egalitarian) authoritarians by subtracting the egalitarian score from the authoritarian score on the LAQ. Subjects were presented with a case similar to that used by Mitchell and Byrne (1973), which included both facts about the case (situational data) and information about the defendant's character (which included information making the defendant of high or low status). The results showed that all subjects were more certain that the lower status defendant was guilty; however, high authoritarians were more punitive, especially toward the lower status defendant. Of particular interest, on a 7-10 day recall task, high authoritarian subjects recalled more about the defendant's character than about the
situational evidence. Low authoritarian subjects, in contrast, recalled more situational evidence and less about the defendant's character. The authors concluded that differences in recall might partially explain differences in the attribute of guilt by high and low authoritarians.

Berg and Vidmar (1975) conducted a second study with different mock jurors, a different authoritarian measure (Byrne & Lamberth, 1971), and a different case (automobile manslaughter). Eliminating the part in which the subjects decided on verdict, in order to control for the influence this may have had on recall, similar results to their first study were found.

The relevance to jury behavior of memory being subject to systematic biases has been discussed in a recent review by Sherrod (1985). The research findings were summarized to indicate that people recall, organize, and reconstruct "facts" to fit this theme. Similarly, Pyszczynski and Wrightsman (1981) had previously shown that the opening argument can act as a "thematic framework" into which "facts" are integrated. Perhaps the findings of Berg and Vidmar (1975) may be taken to suggest that authoritarians are more likely to employ such a strategy leading to selective recall of this information.

The findings of Berg and Vidmar (1975) also supported Boehm's (1968) observations that authoritarians base their decisions on impressions of the defendant's character. These results are also similar to previous research with authoritarians. For example,
Johnson and Steiner (1967) found authoritarians to be "source-oriented" and nonauthoritarians to be "message-oriented."

To summarize, the literature on authoritarianism, especially as assessed by the LAQ, has shown fairly consistent findings. Authoritarian jurors appear more conviction prone than egalitarians or antiauthoritarians. They are also more likely to give harsher punishments. Research supports the hypotheses that authoritarians make their conviction prone decisions early in the trial and may selectively attend to information, such as the defendant's character and inadmissible incriminating evidence, to support their bias.

Some tentative suggestions can also be made. There is some support that defendant characteristics, such as perceived similarity or status, may interact with the dimension of authoritarianism; however, these results are less consistent (for a review of the influences of defendant characteristics on jurors, see Dane & Wrightsman, 1982).

Another set of interesting findings is that, in addition to antiauthoritarians, egalitarians may be biased towards leniency. This is important to clarify with further research since it has normally been assumed that egalitarians are impartial and unbiased (Boehm, 1968). The issue of reducing juror bias will be discussed shortly.

First, it is noteworthy of mention that many of the studies above did not employ jury deliberations in their methodology. This issue will be discussed in a later section where it will be shown that the dimension of authoritarianism may interact with the deliberation
process (Alexander & Licker, 1975; Bray & Noble, 1978; Buckhout et al., 1979).

The Reduction of Juror Bias

As was stated in the beginning of this review, the Sixth Amendment guarantees to each criminal defendant the right to trial by an impartial jury. In the spirit of protecting this constitutional right, several aspects of the trial process can be considered means through which jury impartiality might be assured. These included the voir dire, the presentation of evidence or testimony, judge instructions to the jury, and deliberations. Relevant issues and findings generated from the study of these different trial components will now be discussed.

The Voir Dire

The term voir dire has been translated to mean "to see, to tell." It refers to the first phase of the trial in which prospective jurors are questioned and selected to sit on the impaneled jury. There are three judicially accepted purposes of the voir dire: (a) to determine whether prospective jurors are legally qualified to sit as jurors (i.e., meet age and residence requirements); (b) to determine whether prospective jurors can make an impartial decision based only on the law and evidence presented in the trial; and (c) to allow the attorneys to obtain information that will aid them in intelligently employing their limited number of peremptory challenges to dismiss biased prospective jurors (Suggs & Sales, 1978). The first two purposes are associated with establishing reasons to dismiss
prospective jurors for cause. A prospective juror can be dismissed for cause when it is very apparent that he is unable to render an impartial decision because of his experience, occupation, or personal or financial interests. Although challenges for cause are of unlimited number, they are subject to the final discretion of the judge who may overrule the challenge (Fried, Kaplan, & Klein, 1975). The number of peremptory challenges allowed, in contrast, is fixed by law or court rule, but they are not subject to judicial discretion. That is, they can be for unspecified reasons of the attorney. When any type of challenge is accepted, the prospective juror is dismissed and a new prospective juror is randomly chosen from the venire and the above process is repeated (Fried et al., 1975).

Lawyers must, therefore, be shrewd in their use of peremptory challenges because there is always risk that subsequent prospective jurors may be more unsuitable (e.g., biased in an unfavorable direction) than the one who was dismissed (Broeder, 1965). For this reason, the legal literature has provided suggestions for jury selection which, for the most part, are based on folklore, common stereotypes, and untested hypotheses (Mahoney, 1982).

There are few existing studies which assessed the effectiveness of the voir dire in identifying and removing biased jurors. To test this question, Pawader-Singer, Singer, and Singer (1974) compared jurors selected at random to jurors selected by lawyers through the voir dire process. Their findings suggested that jurors selected by the voir dire were more sympathetic to mitigating circumstances, less influenced by prejudicial pretrial publicity, and displayed fewer
shifts of opinion during deliberation. The authors concluded that lawyers may be effective in employing the voir dire to select a favorable jury panel.

In contrast, other studies have yielded less favorable results as to the efficacy of the popular use of the voir dire. For example, Broeder (1965) conducted posttrial interviews of 225 actual jurors who had served on 1 of 23 consecutive federal district court cases. He reported that the attorneys conducting the voir dires were unsuccessful at both identifying and eliminating unfavorable jurors.

In an investigation cited earlier, Zeisel and Diamond (1978) created shadow juries for 12 trials in a federal court, composed of jurors who had been peremptorily challenged in each trial. An "English jury" (i.e., a jury without challenges) was reconstructed for each case by using the first 12 jurors (accepted or dismissed) who were randomly called from the venire. Their first and final ballot votes were estimated. They reported that the average first ballot votes of English and actual jurors were quite similar. However, the estimated final ballots showed that in 5 of the 12 cases, the English juries demonstrated a greater probability of guilty verdict than the actual juries. Interestingly, judge-jury disagreements occurred on the same five cases (which were all acquittals). In other words, in these five cases the actual juries (i.e., the result of peremptory challenges) voted for acquittal and showed disagreement with the judges, who like the English juries voted for guilt. These results might be taken to support the defense attorney's ability to employ peremptory challenges effectively in the voir dire. However, Zeisel
and Diamond (1978) calculated a "performance index" which indicated inconsistent and variable performances by all the attorneys and showed that the average performance scores for both the prosecution and defense attorneys were near the zero point. They concluded, therefore, that attorneys demonstrated an inability to distinguish potential bias in jurors.

Clearly, there is a paucity of concrete information about the effectiveness of lawyers' selection techniques during the voir dire. The information that is available has yielded equivocal results. At best, the present research suggests that general jury selection strategies may be only minimally effective. Zeisel and Diamond (1978) suggested that increasing the amount of information on which lawyers base their decisions might improve the disparate performances noted in their study.

Indeed, such an approach has been employed by social scientists since the early 1970s in a broad number of techniques encompassed under the rubric of "scientific jury selection." Scientific jury selection involves the use of a number of social science methodologies and bodies of data. These include pretrial investigative techniques, such as surveys to assess community opinion, the construction of juror profiles, the use of information networks in the community to obtain information about demographic and personal characteristics of potential juror, expert observation of linguistics and body language in the courtroom, and the application of sophisticated mathematical formulas (Covington, 1983; Hans & Vidmar, 1982; Lees-Haley, 1984; Mahoney, 1982).
There have been numerous anecdotal reports of success with the use of scientific jury selection. Some of these have been well publicized trials, such as the Vietnam Veterans against the War trial, the Wounded Knee trials, the trial of John Mitchell and Maurice Stans, and the trial of Joan Little (Saks, 1976; Schulman, Shaver, Coleman, Emrich, & Christie, 1973; Zeisel & Diamond, 1976).

Scientific jury selection has been criticized for a number of reasons by Hans and Vidmar (1982) in their review of the literature. It was argued that this selection procedure may have enhanced the success of the defense attorneys via a "placebo effect." That is, the defense attorneys may have worked harder. Additionally, the jurors may have responded to the demand characteristics of the defense attorneys because they were being chosen by "experts" (McConahay, Mullin, & Frederick, 1977). It was also suggested that the voir dire may have served to indoctrinate the jurors to an unusual degree about being impartial (Mahoney, 1982; Suggs & Sales, 1978). Hans and Vidmar point out that the weak evidence by the prosecution in such conspiracy cases could easily account for the noted acquittals. A final, but obvious criticism was that these reports utilized no control groups.

Horowitz (1980) addressed this issue by actually comparing conventional jury selection methods used by lawyers to systematic social science methods. Potential jurors were screened by advanced law students using either conventional folklore or the social science technique used by Schulman et al. (1973) in one of four mock criminal cases. The results showed that in cases where actuarial data showed strong predictions (e.g., the sale of illegal drugs and a court
martial case) the scientific method was superior, but where they were weak the conventional method was equal or superior. Horowitz concluded that scientific methods overall were not superior to conventional methods unless the interaction with the particular type of case was considered.

Scientific jury selection has also been subject to ethical criticisms (Herbsleb, Sales, & Berman, 1979; Mahoney, 1982). One concern involves a violation of an individual's personal life by invasion of privacy when investigating the prospective juror. In addition, often such techniques are extremely costly, which would limit their availability to many. It would clearly run counter to the notion of impartial justice if juries were selected to the advantage of only those with sufficient money. Similarly, it appears that scientific jury selection has been utilized, for the most part, by defense attorneys who tend to equate freedom from bias as a tendency toward acquittal and bias as a vote for conviction.

Based on these criticisms, it would appear that if a scientific method is to be used it must be an in-court procedure which is less intrusive than most scientific techniques, inexpensive, easy to use, and of benefit to both the defense and the prosecution. Mahoney (1982) suggested that an efficient screening device which can meet these criteria and identify prospective jurors with extreme verdict-relevant biases could be useful. Boehm's (1968) Legal Attitudes Questionnaire, which was discussed earlier, would seem appropriate here.
Of particular interest to the present study, a field study ("Juror Bias," 1980) was conducted to determine the LAQ's efficacy in identifying biased jurors in criminal trials. The subjects were actual jurors from 18 felony trials (a total of 117 out of 216 possible jurors participated). These subjects completed the LAQ and responded to a posttrial interview (2 weeks posttrial). A control group of 70 subjects, who were called for jury duty but did not serve, also completed the LAQ and showed no significant differences as compared to the sample jurors on authoritarianism.

The results of the field study showed that jurors classified as authoritarian were found to admit to bias against the defendant for not taking the stand, reported the belief that defendants in general were seldom or never innocent, and favored conviction regardless of the possible sentence significantly more often than either antiauthoritarians or egalitarians. Authoritarians also showed a trend toward favoring conviction after only the opening arguments and tended to overrate the prosecution's performance or underrate the defense's performance. Authoritarians were found to report the presence of multiple conviction-prone biases (i.e., those biases just mentioned more often than antiauthoritarians or egalitarians).

Indeed, authoritarians were twice as likely to reveal more than two of the biases and four times as likely to reveal more than three biases.

The fact that an expected pattern emerged for each measure of bias and across 18 different criminal trials clearly suggests that the jurors whose LAQ responses predicted biases were those most often displaying actual bias. The results are especially encouraging
considering the many factors and wide variety of biases which could have masked the pattern of bias predicted by the LAQ. The study's obvious limitation, however, is its retrospective nature which assumes that the subjects' recall of their feelings and thoughts during the trial were similar to their actual thoughts and feelings at that time. It also assumes that the subjects' recall was not influenced by the fact that they had already deliberated. These are questions that can be answered empirically.

To summarize, available research suggests that traditional methods of conducting jury selection may be ineffective. It also suggests that scientific jury selection methods have yet to be sufficiently subjected to empirical test as well as presenting several ethical problems. The Legal Attitudes Questionnaire (Boehm, 1968) appears to show promise in addressing these issues. It is important to mention that several studies which yielded favorable results regarding the LAQ (Alexander & Licker, 1975; Boehm, 1968; Buckhout et al., 1979; "Juror Bias," 1980) have recognized that its utility is as a supplement to voir dire questioning, not as a substitute. To draw an analogy, the trial lawyer may be able to employ the LAQ effectively to aid in the decision process involving the use of peremptory challenges just as the psychologist uses test data to make decisions regarding classification, treatment, and prognosis. Both require experience and skill in effective interviewing and interpretation of test results.
The Evidence

From the literature reviewed thus far, it is clear that the available voir dire methods are not without fault and are not perfect at the removal of all prospective jurors with verdict-relevant biases. Therefore, juries are likely to have some members with verdict-relevant biases. In any case, juries are supposed to base their decisions on the evidence presented. A brief review of the literature will be presented here concerning the effects of the presentation of evidence on jury decisions, with particular emphasis on how this interacts with verdict-relevant biases.

Recent publications (M.F. Kaplan & Miller, 1978; M.F. Kaplan & Schersching, 1980) presented research addressing the question of how biases interact with evidential information in producing decisions. This was done within the framework of Information Integration Theory (Anderson, 1974; M.F. Kaplan, 1977a). Briefly, the theory, as it applies to jury behavior, states that jurors employ a cognitive system of weighting the values of different pieces of information related to the trial (factual or otherwise). As mentioned earlier in this review, the effects of juror biases are often apparent and least likely to be confounded before the presentation of evidence (i.e., initial impressions and impressions after the opening arguments). The theory hypothesizes that reducing the weight attached to biasing information (e.g., initial impressions, verdict-relevant attitudes, inadmissible evidence, pretrial publicity, coerced confessions) or increasing the weight of evidential information will serve to reduce juror bias.
A series of experiments were performed. In the first experiment mock jurors with either lenient or harsh attitudes toward the punishment of criminals (a concept similar to the dimension of authoritarianism) rated defendants' guilt and severity of punishment for summaries of traffic felony cases, in which the evidence had a high or low appearance of guilt. The subjects were either led to believe the source of the evidence was reliable and trustworthy or unreliable. Harsh subjects gave higher guilt ratings than lenient subjects in cases across both levels of apparent guilt. However, in both conditions of guilt, harsh and lenient mock jurors gave essentially the same guilt ratings when the evidence was characterized as reliable and trustworthy. When nothing was said about the evidence or when it was questioned, harsh jurors remained severe relative to lenient jurors.

The second experiment was similar except that mock jurors were told that either the evidence was inconsistent and questioned by the attorneys or that, although the evidence was inconsistent, it was considered by the attorneys to be true and accurate. When the evidence was characterized as arguable, harsh jurors showed higher guilt ratings than lenient ones. Again, convergence of guilt ratings was noted when the evidence was characterized as not contested. Additionally, it was shown that lenient jurors were more likely to discount incriminating evidence as influencing their decision if they were told that the evidence was contestable. This parallels the findings using guilt ratings.
These findings support the hypothesis that increasing the weight of the evidential information serves to reduce the observed effects of biases. Similarly, Hepburn (1980) found that perceived strength of evidence is the most important predictor of verdict.

Aside from not having jurors deliberate, a major flaw of these studies was that the presentation of evidence by written case summaries did not allow the authors to clarify how various parameters concerning the presentation of evidence might influence the weight attached to it. Procedure, medium of presentation, order of presentation, and eyewitness testimony will be the parameters discussed here.

Procedure would appear to have an influence on the perception and evaluation of evidence. Here, there are two types of methods for presenting evidence: (a) the adversary system has the two opposing sides present and dispute the evidence, and (b) the inquisitorial system has the judge ascertain evidence from both sides. The issue of which of these systems are more likely to help reduce juror biases has yet to be resolved. While the inquisitorial system has the theoretical advantage of presenting evidence that is more homogeneous and appears less contentious (Lind, Thibaut, & Walker, 1973), it has been shown that mock jurors who are biased toward conviction show more extreme beliefs in the defendant's guilt in the inquisitorial method of evidence presentation (Thibaut, Walker, & Lind, 1972). Additionally, studies have shown that impartial observers perceived the adversarial system as being more fair and jurors within this system were more satisfied with the rendered verdict (Walker, La Tour,
Lind, & Thibaut, 1974). Thibaut and Walker (1975) also reported that trial participants favored the adversarial system because it provided a means of influencing the presentation of evidence. This finding was criticized by Sheppard and Vidmar (1980), who found that lawyers may actually induce biases in witnesses during interviews in the adversarial system. More research is clearly needed to determine how the procedure of evidence presentation influences the weight jurors attach to the evidence and biased impressions.

The medium of presentation of evidence is another parameter which may influence the differential attachment of weights to evidential and biasing information. Specifically, the use of videotaped trial materials in the resolution of civil disputes has been of interest.

G.R. Miller (1976) reported a series of studies with actual jurors that found no differences between live and videotaped civil disputes in attribution of negligence, awarding of damages, perception of attorney credibility, retention of trial-related information, and interest in the trial proceedings. However, a comparison of live, monochromatic, and color videotaped trials revealed that over time jurors viewing the monochromatic videotape showed better retention of trial-related information than those who viewed the color videotape or a live presentation. Finally, comparing color versus monochromatic videotape presentations, it was reported that more trial-related information was recalled by jurors who viewed monochromatic tapes but attorneys received higher credibility ratings by jurors who viewed color tapes.
Farmer et al. (1976) reanalyzed some of the above data and found that jurors in videotape conditions were more likely to find the defendant negligent than those in live presentation conditions. They also found that videotape presentation might influence the jurors' evaluations of the witnesses.

More research is needed in this area before firm conclusions can be drawn. Certainly, the data presented by G.R. Miller (1976) and Farmer et al. (1976) would tentatively suggest that the mode of presentation of evidence might be an important factor in influencing, at least, civil dispute-relevant decisions.

The order of presentation of evidence has received attention in the literature. The idea that primacy or recency effects might be relevant in the presentation of evidence originates from the experimental literature where it was shown that such phenomena occur on free-recall tasks (Murdock, 1962). The courtroom procedure, however, is more complicated than simple, free-recall tasks. This might account for the equivocal results found in the literature (Insko, 1964; Lund, 1925; Pennington, 1982; Thibaut et al., 1972).

A final parameter relevant to the presentation of evidence is perhaps the most popular current area of psycholegal research. Evidence in criminal trials is often presented by one or several eyewitnesses. Recent literature reviews (Loftus, 1979a; Penrod, Loftus, & Winkler, 1982) have concluded that eyewitnesses are likely to be inaccurate much of the time. Despite this, their influence on verdict-relevant decisions of jurors is important. For example, Loftus (1974) reported that, in a simulated case, the use of an
eyewitness resulted in 72% of the jurors favoring conviction. Without an eyewitness, only 18% of jurors voted guilty. Discrediting the witness here did not have a significant effect; however, other studies have found that discrediting the eyewitness results in jurors ignoring the witness's testimony (Hatvany & Strack, 1980; Weinberg & Baron, 1980).

A few studies have been conducted to clarify what factors in eyewitness testimony are important in influencing jurors. Witnesses, who are considered experts (e.g., physicians), have been found to have the greatest testimonial impact and are seen as being most credible (Ludwig & Fontaine, 1978; Sonaike, 1978). Indeed, Loftus (1980) has shown that the use of expert witnesses, who have testified on the unreliability of eyewitness testimony, results in reduced conviction rates. Ludwig and Fontaine (1978) reported that opinionated eyewitness testimony had a significant influence on jurors in cases with more serious charges, such as first and second degree murder. Wells, Lindsay, and Ferguson (1979) showed that juror perceptions of eyewitness confidence greatly enhanced their credibility even though eyewitness confidence is not associated with eyewitness' accuracy. These studies show that eyewitness testimony, regardless of accuracy, probably has an impact on verdict-relevant decisions.

That eyewitness testimony might lead to biased decisions has been demonstrated by Hatton, Snortum, and Oskamp (1971). Two groups of jurors viewed the same film of an accident, but received different biasing eyewitness testimony. Although no differences in information
recalled from the film were found, jurors were shown to make inferences congruent with the biased testimony they heard.

The presentation above illustrated that several parameters of the mode of presentation of evidence--adversarial or inquisitorial systems, videotape or live presentations, primacy-recency effects, and eyewitness testimony--might influence the differential weights attached to evidential and nonevidential information, which, in turn, might have an impact on verdict-relevant decisions.

The type of evidence presented, especially that which may be biasing, is also an important factor to consider in this context. Inadmissible evidence comes to mind first. For example, Sue, Smith, and Caldwell (1973) reported that jurors were only influenced by inadmissible evidence when the trial evidence was perceived as weak. Regarding verdict, Thompson, Fong, and Rosenhan (1981) showed that inadmissible proacquittal evidence was more likely to have an impact in the expected direction (i.e., toward acquittal) on juror verdict than proconviction inadmissible evidence or no inadmissible evidence.

Prejudicial pretrial publicity may be considered a subset of inadmissible evidence. Mock jury research has shown pretrial publicity to influence individual juror decisions (Hoiberg & Stires, 1973; Sue, Smith, & Gilbert, 1974). A more authentic study (Pawader-Singer & Barton, 1975) used subjects from actual jury pools and found that exposure to negatively biased pretrial publicity resulted in juries being more likely to convict. Loftus (1979a) showed that jurors exposed to advertisements sympathetic to insurance companies were more likely to award less money in damages.
Most recently, Freundlich (1983) showed that, although low ego level jurors tend toward conviction when presented with negative pretrial publicity, high ego level jurors were more likely to overcompensate and render more acquittals. Therefore, although pretrial publicity shows a biasing impact on verdict-relevant decision, it appears that ego level (and perhaps other personality and attitudinal variables) might mediate this effect.

The influence of coerced confessions on jurors was investigated by Kassin and Wrightsman (1980, 1981). Here, jurors did not regard evidence which was obtained through coercion but incorporated evidence obtained through favorable inducement into their decision-making. This would certainly appear to bear on juror decisions concerning the weight of evidence.

Finally, temporarily biased conditions in the courtroom have been studied. M.F. Kaplan and Miller (1978, experiment 3) showed that obnoxious and annoying behavior in the courtroom resulted in biasing jurors more toward conviction. Additionally, the closer the source of these courtroom annoyances to the defendant (i.e., the defense attorney), the greater the effect of bias.

To summarize, integration information theory (Anderson, 1974; M.F. Kaplan, 1977a) has been proposed as a framework with which to conceptualize the decision-making process of the juror. Research consistent with this theory suggests that an increase in the weight attached to evidential information will often offset the impact of verdict-relevant biases. However, several parameters such as the type of procedure, medium of presentation, order of presentation, type of
evidence (e.g., credibility of eyewitnesses), and transient features of the courtroom would appear to influence the weight of evidential and nonevidential information and impressions. It is certainly difficult to control for these variables in applied studies in order to see if these findings generalize. Even simulated studies can usually only control or manipulate one or two of these variables. What is important, however, is that findings be interpreted within the context of available research concerning the effects of evidence on jury decision-making.

**Judge's Instructions to the Jurors**

After the evidence is completely presented, the judge instructs the jurors on how the law applies to the factual issues of the case. The purpose of these instructions is to provide the jurors with a set of rules designed to guide their decisions within the legal framework. That jurors view these instructions as important is illustrated by Kalven and Zeisel (1966), who reported that the more difficult the case being tried the more likely juries request more instructions from the judge. Instructions are also believed to facilitate impartiality (Hastie, Penrod, & Pennington, 1983). There is very little research which has investigated this.

Two studies (Charrow & Charrow, 1979; Strawn & Buchanan, 1976) have reported that many jurors have difficulty understanding the instructions because they are often termed in legal jargon. Monohan and Loftus (1982) reported a study by Elwork and his associates which showed that clearly written instructions improved comprehension.
The majority of the simulation research on the efficacy of instructions to jurors in reducing extra-evidential biases concerns the instruction to disregard inadmissible evidence. Doob and Kirshenbaum (1973) found that mock jurors were likely to judge a defendant guilty when given negatively biasing information about the defendant's past history regardless of whether they received instructions from the judge to ignore that information. Kerr et al. (1976) reported that jurors were more likely to follow instructions if they concern legal criteria in contrast to the disregard of information. Recall that the findings of Thompson et al. (1981) showed jurors receiving inadmissible proacquittal evidence were more lenient. They also found that instructions to disregard this evidence had no effect. Similar findings have been reported by Fontes, Miller, and Bender (1977). Perhaps jurors consider inadmissible evidence as containing truthful information (Kadish & Kadish, 1971).

Of greater concern is that there is evidence to show that instructions to the juror may actually result in effects opposite of its intention. Wolf and Montgomery (1977) have identified what they call the "boomerang effect." They found that stronger warnings from the judge to disregard evidence resulted in an increased weighting of that information by the jurors. It is especially relevant to this study that Werner et al. (1982) found this effect to be particularly prevalent in authoritarian jurors. Borgida (1979) proposed that the more explicit or strong the judicial instruction, the more it is perceived by jurors to threaten their decision freedom, resulting in a reactance response.
In addition to being instructed as to which evidence and information to consider, jurors are instructed as to the types of verdicts they may render. Here, both Vidmar (1972) and K.J. Kaplan and Simon (1972) showed that when charges were severe (e.g., first degree murder) restricted decision alternatives (i.e., guilty vs. not guilty) often resulted in increased chances of obtaining a not guilty verdict. Increasing the choice of three or four alternatives resulted in a reduction of not guilty verdicts. Most relevant to the present study, Buckhout et al. (1979) using the LAQ showed that, when jurors were given a choice of guilty (of first degree murder) or not guilty, 45% of authoritarians voted guilty and 33% of the egalitarians voted the same. When five alternative verdicts were offered, however, there was no difference between these groups of juries in verdict decision.

To summarize, jurors are given instructions providing decision rules with reference to factual issues such as the admissibility of evidence and the type of verdicts to be rendered. Research suggests that instructions to disregard evidence have either been ineffective or have resulted in opposite effects. However, it appears that increasing the number of decision alternatives, at least in trials concerning heinous crimes, may reduce verdict-relevant biases.

Deliberation

Through careful selection of jurors, presentation of a strong case, and provision of a legal framework within which to make decisions, the legal system attempts to insure that the jury will reach an impartial decision based on legally acceptable evidence. Until the point that deliberation begins, however, these safeguards
only operate on the level of the individual juror. The factors influencing the individual jurors' decisions have been discussed. The question now becomes: "Does the deliberation process influence individual juror's decisions?" Phrased in a manner more consistent with the present study: "Through what processes does deliberation help to reduce the effects of individual juror biases or preferences on the trial outcome?" These appear to be important questions given that deliberation is also supposed to serve as a safeguard for the justice system and, that once the jury retires to deliberate, they, in essence, become justice itself.

Process. The process of jury deliberation can refer to any behaviors that occur during the group's interaction, including rate and style of participation, verbal behaviors, nonverbal behaviors (e.g., gestures, facial expressions), and cognitive events occurring within the individual juror (e.g., opinion changes, interpersonal attraction). Research has been conducted almost exclusively on the verbal communication processes during jury deliberation. Here, the question is "Who says what to whom in what manner?"

One topic, that has been studied using recorded verbal communications during deliberation, has been rate of participation among jurors. Research on 12-person juries suggests that in most juries more than one-half of the total verbal acts are monopolized by relatively few jurors (Hastie, Penrod, & Pennington, 1983; Simon, 1967; Strodtbeck et al., 1957). These studies also report that the foremen are responsible for between one-fourth and one-third of all verbal acts. With respect to nonforeman, jurors with high
occupational status and high education tend to participate more actively than their lower educated, lower occupational status counterparts (Hawkins, 1962; James, 1959; Simon, 1967; Strodtbeck et al., 1957). Indeed, there are data to suggest that these jurors are more likely to be perceived by their fellow jurors as being more influential. Additionally, Hastie et al. (1983) showed that the size of the faction to which the juror belongs is positively associated with the probability that the individual juror would speak.

Unequal participation in deliberation counters the philosophy of equal representation in the jury. However, a study by Foss (1976b) suggested that the number of people who participate in the deliberation may not be as important as the issue of whether all points of view are expressed. Using college students as mock jurors, in juries ranging from five to seven people, and studying the recordings of their deliberations, he found that juries made their decisions through an "equalitarian" process. That is, each juror's position was given fair hearing in the deliberation, with pro and con arguments made for all supported positions by at least one group member. Foss interpreted this finding as indicating that the deliberation process prevents a decision based on extra-legal juror biases unless similar biases are adhered to by all or an overwhelming majority of the jury members. This suggests that a jury composed of members with a mixture of biases will render an "impartial" decision.

Another area of investigation in deliberation processes is at whom comments and arguments are directed. The paucity of research on the target of jurors' comments is not surprising given the difficulty
in identifying the target based on audiotape recordings. The literature suggests a pattern in that those who tend to speak more are likely to be spoken to more often. In most cases the target of juror communications have been the foreman (James, 1959) and men (Nemeth, Endicott, & Wachtler, 1976). Other patterns of communication have been investigated as a means of studying this area. Hawkins (1962) studied the sequence of channeling of communication in the deliberating jury. Dividing the deliberation process in four phases, Hawkins reported that the proportion of communications between members of opposing factors rose steadily through the first three phases, while comments directed toward the members of a juror's own faction and toward the whole group simultaneously dropped. During the final phase, when the outcome appeared decided, communication between factors dropped greatly while the amount of communication toward the whole group increased considerably. Other studies have found similar patterns (Levin, Farrell, & Perotta, 1981; Simon, 1967). These patterns confirmed models of the sequence of stages of small group discussion, which propose increasing conflict between members until resolution occurs followed by a reconciliation, solidarity, and commitment to the final decision (Bales & Strodtbeck, 1951).

Foss (1976a) obtained a pattern in deliberations in which the early phases were characterized by various jurors contributing new pieces of information which had been missed or forgotten by other jurors and presenting their own interpretations of the evidence. During later phases of deliberation, pressures to conform were observed to be predominant. This pattern would suggest that early
phases of deliberation consist mainly of an exchange of views between active parties; whereas, later phases may consist of normative social influence processes so that a group consensus can be reached. The findings of Hastie et al. (1983) support this explanation. Holstein (1985) also reported similar findings in that the number of interpretations offered by jurors in mock deliberations decreased as the deliberation progressed.

The deliberation process appears to be an anxiety-producing experience for most jurors (Goldman & Casey, 1980). Therefore, in addition to investigating who participates and the patterns of communication in jury deliberations, authors have also studied the style of jury interactions during deliberation. The Bales Interaction Process Analysis (Bales, 1951) coding scheme has been most widely used in this area of research. Here, James (1959) found that it was more common for a juror to express ideas and opinions more often than agree with another juror. In contrast, Goldman et al. (1983) showed that jurors most commonly sought agreement and support from each other. Perhaps future research will suggest that different styles of interactions may characterize different phases of the deliberation.

Several findings have indicated that style of interaction may be influenced by juror characteristics. Here, Strodtbeck and Mann (1956) employed Bales' system to assess differences in interaction style with respect to sex. Males were reported as more likely than females to express the categories "gives information" and "gives opinion"; whereas females were more likely than males to devote their comments to the categories "shows solidarity," "shows tension release," and
"agrees" (i.e., the metacategory of "positive reactions"). This sex role differentiation in interactional styles of jury deliberations has been replicated (Nemeth et al., 1976; Piliavin & Martin, 1978).

Goldman et al. (1983) corroborated these results by finding that male juries had a higher rate of disagreements than female or mixed-sexed juries. Additionally, Piliavin and Martin (1978) found that sex role differentiation was strongest in same-sex groups; mixed-sex groups tended to exhibit an attenuation of the existence of sex role differentiation. Mixed-sex juries might then be one means by which to increase the probability of equal participation and representation. Nonetheless, it remains to be determined empirically whether equal participation leads to significantly different jury decisions.

With respect to jurors' education, James (1959) reported that jurors with no more than a grammar school education tended to offer comments that were less accurate and more disruptive to the deliberation process; focused more of their comments on testimony, personal experiences, and opinions of the trial; and were more likely to passively accept another's view than were their higher educated counterparts.

Moral judgment level has also been investigated. Recall the finding of Goldman and Casey (1980) that the deliberation process appears to be an anxiety-arousing experience. Here, it was additionally found that jurors with lower levels of moral judgment were more likely to demonstrate heightened levels of affect.

Recently, Freundlich (1983) showed that ego level, a measure of psychological sophistication, is related to deliberation style. He
found that juries composed of mock jurors with high levels of ego
development, who received incriminating pretrial publicity,
demonstrated comments indicating low solidarity (characterized by
discord and conflict), few agreements, and few positive reactions. In
contrast, juries composed of low ego level jurors, receiving the same
pretrial information, exhibited higher rates of solidarity, agreement,
and positive reactions yet were less efficient as noted by the
presence of decision problems. These findings suggest that juries
comprised of jurors who are psychologically sophisticated, although
generating more conflict, also are more efficient at decision making
and more apt to overcome biases. More research is needed here to
further clarify the role of ego level in jury decision making.

Of greater relevance to the present study, Freundlich (1983) also
found a nonsignificant trend in high authoritarian jurors who
responded in a similar manner to those juries which were comprised of
low ego level jurors. Since these juries were not organized according
to authoritarian attitudes and the findings were not significant,
further research is needed to address the issue of whether the
authoritarian dimension has an influence on deliberation style.

The research reviewed above suggested that several
characteristics of jurors may influence the style of interaction
during the deliberation process. However, a more precise role of
these variables must be clarified by further research. Regardless of
these findings, process is only one important aspect of
deliberation. The content of what is said must also be examined.
Not surprisingly, relatively little research has been devoted to the content of deliberations, given the difficulty in obtaining access to deliberations. James (1959) reported that juries devoted very little time (15%) to actual testimony. Most of the time (50%) was found to be spent discussing personal experiences and opinions or procedural issues (25%). These findings would appear to contradict the notion of the jury as a task-oriented group; however, James showed that the majority of the jurors' comments were usually of high quality. In other words, references to testimony were rated to be accurate approximately 80% of the time; opinions and personal experiences were rated as pertinent to the jury's task approximately 70% of the time; and procedural discussions were rated as being facilitative approximately 70% of the time. Interestingly, she found that 64% of the jurors' comments were neutral.

Kessler (1973) found results which supported James' data. Lawyers and law students rated the content of mock jury deliberations and found that 82% of the discussion to be legally relevant. Additionally, jurors' comments were rated as not favoring either guilt or innocence.

Hastie, Penrod, and Pennington (1983) formed sixty-nine 12-person mock juries comprised of volunteers recruited from Superior Court jury pools in three counties in Massachusetts. After viewing a 3 1/2 hour videotape of a re-enactment of a murder trial, each of these juries deliberated to a verdict. The contents of these deliberations were examined closely and it was shown that 53% of the remarks made during deliberation related to testimony and trial evidence and 25% of the
remarks were references to the judge's instructions about the
definitions of the law. They also rated these deliberations to
indicate that 75% of the remarks made were intended to communicate
information concerning the case from one juror to others. These data
suggested that jurors are indeed task-oriented for a good portion of
the deliberation. That juries monitor their own behavior was evident
from the fact that 40% of the expressed erroneous interpretations of
the judge's instructions were corrected in the deliberation.

Although not formally rating the content of deliberation, Goldman
et al. reported that their mock juries appear mostly "concerned with
details of the evidence, legal definitions, reliability and
credibility of the witnesses and evidence, and consequences of
verdicts" (1975, p. 376).

M. Levine, Farrell, and Perotta (1981) employed a content
analysis system relevant to group development (Farrell, 1976) which
was a modified form of the Bales (1951) interactional system.
Comparing the jury to an unstructured group, they found that juries
exhibited less disclosure of personal information and expression of
feelings while spending a greater proportion of time working and
clarifying the rules guiding deliberation.

In a very recent investigation, Holstein (1985) looked
specifically at the frequency with which juries make interpretations
of evidence and testimony (i.e., when a juror verbalized a formulation
of "what really happened" in the case to the jury). Here, jurors were
recruited who had recently served two months on the jury panels of the
Washtenaw County, Michigan District, or Superior Courts. They formed
forty-eight 5- to 6-person mock juries which viewed a videotape of a theft case and then deliberated to a unanimous verdict. Holstein found that at least one interpretation of "what really happened" was rendered during each of the 48 mock deliberations and that jurors presented more than one interpretation in 75% of the mock deliberations. Indeed out of the 48 mock deliberations studied, 15 different interpretations were identified. These findings would corroborate Foss's (1976b) conclusions that several jurors' positions are given a fair hearing during deliberation.

The research on process and content has suggested that deliberation is a complex and dynamic process. Different jurors appear to participate unequally and may be more influential, particularly foremen, members with higher educational and occupational status, and men. Nevertheless, the jury follows the stages and operates as a task-oriented group adhering to instructions provided by the court and focusing on decision-related contents. However, process and content are only important as they relate to the final jury decisions.

Product. Doob (1976) illustrated that although juries appear to operate "within the etiquette" of the law, extra-legal biases can still be influential toward the final decisions. Therefore, this discussion will proceed from purely descriptive aspects of deliberation to what processes and contents might influence the product or outcome deliberation, with specific attention devoted to the role of verdict-relevant biases (i.e., the authoritarian dimension).
Kalven and Zeisel (1966) were skeptical of the influence of deliberation on the trial outcome. Recall their study which reconstructed first ballot votes from posttrial interviews of actual jurors. They reported that the first ballots were predictive of actual jury verdicts 90% of the time and suggested, "The deliberation process might well be likened to what the developer does for an exposed film: it brings out the picture but the outcome is predetermined" (Kalven & Zeisel, 1966, p. 489). Their data also suggested that the majority of the initial opinions were extremely predictive of trial outcome.

Nemeth (1977) provided support for this majority effect. By keeping a running total of the number of comments supporting each decision choice, she found that once the difference between totals for guilty versus not guilty exceeded seven, the alternative with the higher tally predicted the juries' final decision in 36 of 37 cases. Furthermore, this critical difference was observed early in the deliberation. However, the question of whether the majority effect is the result of the actual number of supporting arguments or the position which has the most supporters has yet to have been answered. M.F. Kaplan (1977b) has provided tentative evidence that the number of unique and nonredundant arguments is the critical variable here. Hastie et al. (1983) showed that majority factions are more confident in their decisions and therefore might be more persuasive. The implication of these findings is that the deliberation process is ineffective at reducing initial biases, particularly if those holding such biases are in the majority.
Furthermore, they would suggest that the effects of bias on individual juror decisions will generalize to the decisions of juries.

More disheartening has been a body of research which suggests that deliberations usually have the effect of exaggerating the individual's predeliberation opinions and biases. This has been referred to as the group polarization phenomenon (Myers & Lamm, 1976). Simply stated, "The average postgroup response will tend to be more extreme in the same direction as the average of the pregroup responses" (Myers & Lamm, 1976, p. 603). In other words, if individual jurors were leaning toward a not guilty verdict, the deliberation would increase their commitment to a not guilty verdict even more. Similarly, if individual jurors tended to believe a defendant to be guilty, deliberation would result in a stronger commitment to a guilty verdict.

Myers and Kaplan (1976) measured mock jurors' responses before and after deliberation on eight abstracts of actual traffic felony cases. As predicted, after discussing cases low in incrimination value, subjects were more extreme in their judgments of innocence and more lenient in recommended punishment; after discussing cases high in incrimination value, subjects shifted toward harsher judgments of guilt and punishment. Thus, prediscussion preferences (i.e., incrimination value of evidence) resulted in polarization of verdict response.

The group polarization phenomenon has been investigated in jurors assessed along the authoritarian dimension. These studies are relevant to the present investigation and will be discussed here.
Vidmar (1972b) divided a group of mock jurors into high and low dogmatism juries. The dogmatism juries were found to shift toward harsher sentences and the low dogmatism juries shifted toward more lenient sentences, despite the fact that both types of juries did not differ in their predeliberation judgments. It is possible here that, although biases were hidden, they were still influential.

The study of Buckhout et al. (1979) employed the LAQ to divide mock jurors into egalitarian, authoritarian, and mixed juries. They found that "pure" juries shifted more after deliberation in the predicted directions than did "mixed" juries. Furthermore, "pure" egalitarian juries shifted more toward leniency than other juries. These results suggest that one way to reduce the polarization of verdict-relevant biases is to either have a nonbiased jury or to at least insure that different biases are equally representative.

Bray and Noble (1978) used the F-Scale (Byrne, 1974) to classify mock jurors as high or low authoritarians. This study yielded several results relevant to the effects of deliberation on authoritarian biases. After listening to an audiotape presentation of a murder trial, the juries deliberated. Pre- and postassessments of guilt and sentencing showed that low authoritarians were more lenient after deliberation than before and high authoritarians were more severe after deliberation than before. These findings again support the notion that juries moved in the direction of choice tendencies initially favored.

Although there are considerable data supporting a predictable polarization phenomenon after group deliberation, this is not always
the case. Indeed, Kalven and Zeisel (1966) found that, in 9% of their cases in which there was a proacquittal majority, the juries actually convicted or were hung. Additionally, 14% of the cases which had proconviction majorities acquitted or were hung. Nemeth (1977) explained the differences between these percentages by postulating that it is easier for a minority to persuade other members of the jury that they might have a reasonable doubt than to convince them beyond such a doubt as in a proacquittal majority. She also hypothesized that minorities holding a position of not guilty are less likely to give in, which she reported is an important variable in swaying a majority. She postulated no explanation for the former finding.

Although his findings were not in the same direction as those of Kalven and Zeisel (1966), Holstein (1985) provided data suggesting that group polarization or majority effects do not necessarily occur after deliberation. In the 48 mock deliberations studied, 11 out of 15 interpretations rendered favored not guilty verdicts; however, only 8% of the juries actually acquitted and 45% convicted the defendant. Holstein also found that 38% of the juries were hung and that this was positively related to the number of alternative interpretations postulated during the deliberation.

There are also other data which suggest that deliberation may serve to reduce the influences of bias. For example, Izzet and Leginski (1974) showed that deliberation served to reduce a predeliberation attraction leniency bias. The study of M.F. Kaplan and Miller (1978, experiment 3), which showed that annoying behavior in the courtroom resulted in biasing jurors more toward conviction,
found that the biasing effects of the courtroom virtually disappeared after deliberation. Finally, Carretta and Moreland (1983), using college students serving on 6-person mock juries who had read a written summary of a murder trial, found that although inadmissible evidence affected the jurors' pre- and postdeliberation estimate of the defendant's guilt, it had no effect on postdeliberation verdict. Furthermore, it was found that when one group member would mention inadmissible evidence, there was an 84% chance that another juror would respond by either reminding the group that such evidence was inadmissible or by reiterating a trial argument from the opposing view. This finding suggested that jurors "monitored" one another during the deliberations to minimize the effects of this biasing element.

With regard to the authoritarian dimension, Alexander and Licker (1975) showed that egalitarian jurors who favored a predeliberation guilty verdict shifted more toward leniency during deliberation when faced with arguments which vigorously favored acquittal. These authors, as well as others (Boehm, 1968; Buckhout et al., 1979), argued that, as expected, authoritarians were more resistant to change and that egalitarians were more persuadable. However, Bray and Noble (1978) found that high authoritarian jurors changed their verdicts from predeliberation to postdeliberation in both directions more often than low authoritarians. Similarly, Lamberth et al. (1982) found that authoritarians changed their verdicts after deliberation from guilty to not guilty. Clarification of this issue of influenceability awaits further research.
To summarize, how can one account for the various and apparently contradictory findings with respect to how the deliberation process influences the outcome of the trial? It has been shown that in many cases not only does the preference of the majority of the jurors prevail, but that these preferences are often exaggerated through the processes of group polarization or conformity influences. In contrast, some aspects of the deliberation process appear to reduce initial preferences or biases and may even result in reversals from predeliberation preferences. These reassuring findings indicated that deliberations may be task-oriented processes where jurors share information and alternative interpretations of case material and definitions of the law and monitor each others' responses to reduce the influences of extra-legal juror biases.

Information Integration Theory (IIT) (Anderson, 1974; M.F. Kaplan, 1977a) has been proposed as a theoretical model which can account for these disparate findings (M.F. Kaplan, 1977b; M.F. Kaplan & Miller, 1977). In this model, each piece of information available for a judgment has two properties: (a) the scale value which is the position on a dimension judgment or valence (i.e., degree of innocence or guilt), and (b) the weight which is the importance of that piece of information for the judgment. For each piece of information (e.g., evidence, initial impression) of which the individual is made aware, a scale value is assigned and through an averaging of the given weights (i.e., "cognitive algebra") the information is integrated into a decision.
Briefly, IIT’s explanation focuses on the deliberation as affecting decisions through information influences (i.e., information sharing, persuasive argumentation) and normative influences (i.e., pressure to conform to the group’s norms).\footnote{The information influences have been given greater support by the available data (M.F. Kaplan, 1977b; M.F. Kaplan & Miller, 1977; Myers & Lamm, 1976).} Data have been provided which suggest that when jurors are provided with nonredundant information of scale values similar to their own or information more extreme in scale value from their neutral initial impressions, the averaging of weights will lead to a polarized final decision (M.F. Kaplan, 1977a). This would also seem to explain the majority effect. If during deliberation jurors are provided with information of opposite scale value, through differential recall for example, the averaging of weights will lead to a more moderate decision, a reduction of initial preferences or biases, or even a reversal of predeliberation decision (M.F. Kaplan, 1977b; M.F. Kaplan & Miller, 1977). For example, recall that juries comprised of both egalitarians and authoritarians were less likely to exhibit polarization than "pure" juries (Buckhout et al., 1979). It is possible that these juries contained members that recalled different trial information (Berg & Vidmar, 1975) with different scale values, and in which the averaging of weights resulted in a more moderate decision.

Of course, this can only be considered tentative speculation since the studies designed to support IIT only have manipulated the evidence presented to the juries and have not considered the possibility that verdict-relevant biases may carry a heavily weighted
informational scale value. The utility of this theory, therefore, remains to be investigated.

**Objectives**

The literature reviewed in the previous discussion has suggested that biasing factors distort verdict-relevant judgment even in the context of a procedure which attempts to limit and counteract their influences. Authoritarian jurors and juries have consistently rendered harsher decisions. Research has also tentatively suggested that egalitarian jurors and juries might be more biased toward leniency (Buckhout et al., 1979). Clarification of this issue is certainly warranted since authoritarians have been viewed as biased and egalitarians as nonbiased (Mahoney, 1982).

The questionable efficacy of traditional voir dire methods have led several authors (Boehm, 1968; "Juror Bias," 1980; Mahoney, 1982) to suggest methods which might improve the effectiveness of the voir dire procedure at removing jurors with extreme verdict-relevant biases. A verdict-relevant measure which assesses the authoritarian attitude dimension, the Legal Attitudes Questionnaire (Boehm, 1968), has been suggested for its additional advantages of being a relatively nonintrusive in-court procedure, which is inexpensive, easy to use, and may benefit both the defense and prosecution. This is worthy of investigation since the selection of a jury comprised of citizens that do not hold extreme biases and whom will render a fair and impartial decision appears most desirable. This might increase the probability that the presentation of legally acceptable evidence, judge's
instructions to the jury, and deliberation would be likely to foster impartial justice.

An emerging theme in research on the effects of juror biases on trial outcome is the investigation of the processes during the trial which might account for observed differences. The literature has suggested that differences in transient affective states (Freundlich, 1983; Freundlich & Goldman, 1982; Goldman et al., 1975), style of deliberation (Freundlich, 1983; James, 1959; Kessler, 1973), and recall of trial information (Berg & Vidmar, 1975; M.F. Kaplan & Miller, 1977; Sherrod, 1985) are worthy of further investigation. The influence of theoretically bias-reducing trial procedures (i.e., testimony, judge instructions, deliberation) must also be identified.

The effects of juror biases on process and outcome of trials may be of interest to social scientists. However, for this research to be legally relevant, it must be shown that biased jurors and juries differ from nonbiased jurors and juries (Gerbasi et al., 1977). Previous research has employed judge-jury disagreements as a means with which to evaluate jury performance (Kalven & Zeisel, 1966). However, others have suggested that it is more important to employ a theoretically neutral group with which to compare biased groups (Saks & Hastie, 1978).

The present investigation attempted to address these issues employing a simulated trial paradigm. This allowed for the experimental manipulation of jury composition (through an experimental voir dire) and the use of a theoretically important control group. Attempts were also made to maximize the genuineness of the trial
presentation, which included an audiovisual presentation of the trial and the inclusion of all important trial procedures (i.e., opening arguments, testimony, judge's instructions, and deliberation).

Other methodological and theoretical questions were also addressed here. It has been popular for field and applied jury research to exclude jury deliberations and/or to rely on posttrial interviews (often more than two weeks) to reconstruct the decision processes of the jury ("Juror Bias," 1980; Kalven & Zeisel, 1966; Zeisel & Diamond, 1978). The research clearly suggests that deliberation is important (Caretta & Moreland, 1983; Foss, 1976b; Hastie et al., 1983; M.F. Kaplan & Miller, 1978). Also, given that jurors with different biases recall different aspects of the trial (Berg & Vidmar, 1975) and that memory may also be reconstructive and unreliable (Loftus, 1979a; Penrod et al., 1982; Sherrod, 1985), it appeared important to evaluate the accuracy of posttrial recall.

With regard to theoretical issues, the group polarization phenomenon has been a popular finding in the literature. By investigating deliberation processes, the factors which may contribute to this phenomenon might be clarified. Additionally, this study addressed how different juror biases might interact with the group polarization phenomenon.

To summarize, there were several unique aspects of this investigation. This study directly assessed the efficacy of the LAQ as a voir dire supplement by deriving and comparing biased to theoretically nonbiased jurors and juries. Its repeated measures design allowed for it to clarify the effectiveness of different parts
of the trial at reducing biases. It examined the processes through which biases operate or were reduced during the trial. The study also determined the difficulties of not studying group deliberation and/or relying on jurors' posttrial recall to reconstruct the decision processes of the jurors during the trial.

**Hypotheses**

The effects of verdict-relevant jury biases [i.e., authoritarian, egalitarian, mixed composition (half authoritarian/half egalitarian), and neutral] and sex of the jurors were assessed on verdict, a weighted index of verdict, confidence in verdict decision, and recall of trial information. The potentially moderating effects of demographic variables and affective states on these relationships were also examined. Several directional hypotheses were offered here. It was predicted that authoritarian jurors and juries would be more prone to convict, more confident in their verdicts, more likely to recall information about the defendant's character and the prosecution attorney's trial arguments, and less likely to recall situational evidence than other jurors. Although with less confidence, it was expected that if egalitarians respond in a less biased manner, they might recall more situational evidence; but, if they tended to be more prone to leniency, they might recall more of the defense attorney's trial arguments. The comparisons between these jurors and juries to the theoretically neutral jurors and juries as well as to the juries with mixed compositions were of particular interest because of the expected bias-reducing effects of these latter two types of juries.
Since the literature has yielded many equivocal and unclear findings, all other hypotheses tested were nondirectional.

The effects of time period in the trial was assessed on verdict, a weighted index of verdict, confidence in verdict decision, and recall of trial information. Again, the potentially moderating effects of demographic variables and effective states on these relationships were also examined. It was predicted that an interaction with verdict-relevant jury biases would be found. Here, the literature predicted that biased jurors would be more likely to decide on their verdict earlier in the trial and become progressively more confident in their verdicts. Specific hypotheses were also made with reference to recall of trial information. Here, it was predicted that if informational exchange was an integral part of deliberation, recall of trial information would improve after deliberation. No predictions could be made as to whether certain types of trial information were more likely to be recalled (with the exception that it was likely that interactions with verdict-relevant jury biases would occur). Examining the effects of time period also allowed for clarifying the influence of opening arguments, testimony, judge's instructions, and deliberation on verdict and confidence in verdict. Additionally, to assess the efficacy of methodologies that study jury behavior without the inclusion of a deliberation and/or using posttrial juror polling, the effects of deliberation and the passing of time (i.e., two weeks after the trial) on verdict, a weighted index of verdict, confidence in verdict decision, and recall of trial information was examined. Nondirectional hypotheses were tested with
respect to the relationship between the passing of time and recall of trial information.

The effects of verdict-relevant jury biases were assessed on deliberation style. Nondirectional hypotheses were tested for these relationships. Also, to clarify these above-noted effects, the effects of deliberation processes were assessed on the changes between pre- and postdeliberation measures of verdict, confidence in verdict decision, weighted verdict, recall of trial information, and affective states.

Of secondary importance, other relationships were examined to illuminate the above findings; here, the role of recall of trial information in its relationship with verdict was examined. It was expected that predeliberation assessment of these recall variables would indicate that jurors would recall more information that was more favorable to their verdict decisions. Other hypotheses with respect to these relationships were nondirectional. Also, the effects of verdict-relevant jury biases, sex, and time period were assessed on affective state. Again, nondirectional hypotheses were tested. In addition, an attempt was made to illustrate the aspects of the trial process which the jurors reported were most influential in their decision making. Finally, a comparison between pre- and postdeliberation juror verdict preferences and the jury verdicts were illustrated.
CHAPTER II
METHOD

Experimental Design

The study consisted of a single-factor experiment with repeated measures on the same elements. Verdict-relevant biases of the juries and sex were the between-group factors. Time period in the trial was the repeated within-subject factor.

Subjects

An initial subject pool consisted of 149 undergraduate psychology students at the University of Florida. The subjects who agreed to participate received extra credit towards meeting course requirements. From the initial subject pool, 72 subjects (36 males and 36 females) were selected on the basis of pretesting to participate as mock jurors. Seventy subjects (35 males and 35 females) actually participated in the study.

These subjects ranged in age from 18 to 33 years (mean = 20.2, SD = 2.19). One hundred percent of the subjects were single; 92.9% were white; 75.7% came from families with a reported annual income of greater than $25,000; and 75.7% fell within social classes I-III in Hollingshead's 2-factor index of socioeconomic status. These demographic data are presented in more detail in Table 1.
Table 1  
Demographic Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>100</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>92.9</td>
</tr>
<tr>
<td>Black</td>
<td>4.3</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.4</td>
</tr>
<tr>
<td>Other</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
</tr>
<tr>
<td>Protestant</td>
<td>31.4</td>
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<tr>
<td>Catholic</td>
<td>30.0</td>
</tr>
<tr>
<td>Jewish</td>
<td>20.0</td>
</tr>
<tr>
<td>None</td>
<td>12.9</td>
</tr>
<tr>
<td>Other</td>
<td>5.7</td>
</tr>
<tr>
<td><strong>Social Class</strong></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>28.6</td>
</tr>
<tr>
<td>II</td>
<td>25.7</td>
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<tr>
<td>III</td>
<td>21.4</td>
</tr>
<tr>
<td>IV</td>
<td>21.4</td>
</tr>
<tr>
<td>V</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>Annual Family Income</strong></td>
<td></td>
</tr>
<tr>
<td>&gt; $30,000</td>
<td>64.3</td>
</tr>
<tr>
<td>$21,000-30,000</td>
<td>19.9</td>
</tr>
<tr>
<td>$12,000-20,000</td>
<td>8.7</td>
</tr>
<tr>
<td>&lt; $11,000</td>
<td>7.1</td>
</tr>
</tbody>
</table>
Description of the Case and Charges

The case used in the present study was entitled The State of Florida vs. John Doe Smith. Hypothetically, the events of the case took place just outside of Gainesville, Florida.

John Doe Smith, the defendant, was a 28-year-old, Tennessee-born, white, married male with three children. He supported his family and his grandfather. He had a 10th grade education. His wife had recently contracted tuberculosis and could no longer work. The defendant worked two blue-collar jobs, for a total of 60 hours per week. Evidence was presented that he had recently been having several marital arguments. On two separate occasions these were reportedly followed by his wife calling her brother and father, who responded by allegedly assaulting the defendant; once by attacking him with a knife and once by driving up to the defendant's house and firing one shot into the house at the defendant. Evidence was also presented as to the defendant's excellent marksmanship abilities.

During the night (approximately 1:30 a.m.) of the incident in question, the defendant reportedly had had a fight with his wife about whether he could go fishing. The defendant left and went to a local tavern and had two drinks. His wife later found him there with another woman, with whom the defendant had been drinking. Another marital dispute erupted. As the Smiths left the tavern together and got into the car to go home, the defendant was seen striking his wife with his hand. The owner of the tavern noted the license tag number and phoned it to the police, reporting the dispute.
Once at home the defendant was packing his car to leave for the weekend. His wife was inside the house. Two unmarked police cars with their lights out arrived. This was testified to be standard procedure when investigating marital disputes. The defendant, now on the porch of his house, noticed the cars and "tracked" them with his rifle as they drove by the house. The police officers got out of their cars, verbally identified themselves, and ordered the defendant to drop his gun. The defendant asked the police to identify themselves by turning on their blue lights. (The defendant later testified that he thought it was his father- and brothers-in-law trying to retaliate against him for hitting his wife.) The police refused to turn on their blue lights and repeated their order. They testified that if they put on the lights, it would have made them an easy target. As the defendant made his request again, one policeman, Officer White, ran behind a telephone pole in front of the house. The defendant fired one shot, which lodged itself 11 inches above the ground in the same telephone pole. Officer Rhodes, the second policeman, was running toward the pole and fell to the ground when he heard the shot. After the shot, the defendant walked calmly back into his house, reportedly put down his shotgun and had a cigarette and a cup of coffee.

Later extra police officers came to assist. The defendant looked out his window and saw the blue lights of the new cars and came out onto the porch, where he was physically overtaken by two other policemen. He was arrested and read his Miranda rights. He was charged with Aggravated Assault against Officer White, Aggravated
Assault against Officer Rhodes, Discharging a Firearm in Public, and Improper Exhibition of a Weapon (Supreme Court of the State of Florida, 1981).

The equivocal nature of this case suggested that a jury could find reasons for both acquittal as well as for conviction. It was expected that given the presence of such uncertainty, jurors would rely on their own personal biases to help them arrive at a decision.

**Dependent Measures**

Individual juror verdicts on all four charges were obtained at several points during the experiment. This assessment yielded nominal scale data (i.e., guilty or not guilty).

Individual juror's degree of confidence in their verdict decisions were also assessed each time the jurors rendered a verdict. This measure of confidence ratings of juror verdict decisions was a nondirectional measure. That is, it assessed the degree of the jurors' confidence in whatever their verdict was, making no distinction between guilty and not guilty verdicts. This was measured by instructing the subjects to make a mark on a line to indicate the strength of their belief in their verdict choice. The line's endpoints were labeled "No Confidence" and "Total Confidence." This measure yielded ratio scale data with a range from 0 (no confidence) to 100 (total confidence).

A weighted index of verdict was created for use in this study in order to have a directional measure of jurors' confidence. That is, this measure assessed the degree of the jurors' confidence in their
specific (i.e., guilty or not guilty) verdicts. This index was derived by multiplying the jurors' confidence in each verdict decision by +1 if the verdict rendered was guilty and by -1 if the verdict rendered was not guilty. This measure yielded ratio scale data with a range from -100 (total confidence in not guilty verdict) to +100 (total confidence in guilty verdict).

A jury verdict for each charge was obtained by deliberation at the conclusion of the trial. Each jury was required to deliberate to a unanimous decision on each of the four charges. This assessment yielded nominal scale data (i.e., guilty or not guilty).

The Multiple Affect Adjective Checklist (Zuckerman, 1960) was employed to assess each subject's affective state at several points during the experiment. This measure included scales for depression (40 items), anxiety (21 items), and hostility (28 items). Subjects were instructed to circle items which described how they felt at that given point in time. Zuckerman, Lubin, Vogel, and Valerius (1964) have reported Spearman-Brown split half reliability coefficients of .92, .90, and .79 for depression, hostility, and anxiety, respectively.

Bales' (1951) interactional process analysis was employed to classify the style of each jury interaction during the deliberation. This method has often been reliably and effectively employed in research concerning group problem-solving, especially jury research. It classifies, into 12 categories, each action or statement one person makes to another within the deliberation. These categories themselves may be grouped into "metacategories," which may be classified in terms
of problem areas (e.g., communication, control, decision), responses (e.g., positive or negative reactions, questions, attempted answers), or the neutral task area.

Three raters, who were blind to the composition of the jury conditions, were trained to use Bale's rating system. Two raters were used in any one given time when rating the tapes. First, the raters practiced on taped deliberations from a previous simulated jury study. The raters would agree on the statement to be rated and then would rate that statement independent of each other. They assigned each statement made during the deliberation into 1 of the 12 Bale's categories. The raters practiced until they obtained a statement-for-statement interrater agreement of over 70% for a randomly chosen 5-minute segment. This procedure was then used in the actual rating of the deliberations. It should be noted that although different rater dyads were used to rate the deliberation tapes, the same dyad would rate an entire jury's deliberation. Statement-for-statement interrater agreement was obtained for each jury deliberation. These reliability indices are presented in Table 2. As can be seen, interrater agreement was consistently high across juries (and rater dyads) regardless of length of deliberation. Since the time taken to reach a verdict varied across juries, all category scores were transformed to rate (i.e., occurrence per minute) scores to permit comparisons based on ratio scale data.

Recall of trial information was assessed with a questionnaire designed for this investigation (see Appendix A). This was necessary since every trial presents a unique set of information. The recall
<table>
<thead>
<tr>
<th>Jury Number</th>
<th>Jury Type</th>
<th>% Agreement</th>
<th>Length of Deliberation (min.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Egalitarian</td>
<td>89</td>
<td>29.27</td>
</tr>
<tr>
<td>2</td>
<td>Authoritarian</td>
<td>89</td>
<td>26.83</td>
</tr>
<tr>
<td>3</td>
<td>Mixed</td>
<td>88</td>
<td>35.17</td>
</tr>
<tr>
<td>4</td>
<td>Neutral</td>
<td>91</td>
<td>20.50</td>
</tr>
<tr>
<td>5</td>
<td>Egalitarian</td>
<td>84</td>
<td>24.52</td>
</tr>
<tr>
<td>6</td>
<td>Authoritarian</td>
<td>92</td>
<td>11.33</td>
</tr>
<tr>
<td>7</td>
<td>Mixed</td>
<td>80</td>
<td>34.45</td>
</tr>
<tr>
<td>8</td>
<td>Neutral</td>
<td>83</td>
<td>57.22</td>
</tr>
<tr>
<td>9</td>
<td>Authoritarian</td>
<td>91</td>
<td>3.25</td>
</tr>
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<td>10</td>
<td>Egalitarian</td>
<td>87</td>
<td>27.03</td>
</tr>
<tr>
<td>11</td>
<td>Mixed</td>
<td>77</td>
<td>11.42</td>
</tr>
<tr>
<td>12</td>
<td>Neutral</td>
<td>81</td>
<td>26.33</td>
</tr>
</tbody>
</table>
questionnaire consisted of a total of 32 questions: 8 about the defendant's character, 8 about the evidence presented, 8 about arguments presented by the prosecution (during opening and closing statements), and 8 about arguments presented by the defense (during opening and closing statements). These questions comprised indices of character recall, situational evidence recall, prosecution-biased recall, and defense-biased recall, respectively.

Questions were worded simply and excluded any biasing presuppositions. They were open-ended and required that the subjects respond with only 1- or 2-word answers. This open-ended format of questioning has been shown to maximize both accuracy and completion of recall better than either total free recall (i.e., free narrative) or multiple-choice questions (Lipton, 1977; Penrod et al., 1982). A similar questionnaire format was utilized in the study of Berg and Vidmar (1975) concerning juror bias, as assessed by the LAQ, and recall of trial information. Items were given a score of 1 if the answer was correct and a score of 0 if the answer was incorrect or unanswered. This questionnaire yielded ratio scale data.

At the conclusion of deliberation, all subjects were also asked an open-ended question which inquired as to what aspects of the trial had the greatest influence on their decisions. This was done in order to obtain, from the jurors' perspective, important influential variables. All the subjects' responses were listed and tabulated. Inspection of these data revealed 10 different variables in the trial, which were perceived as being most influential to their decision. They were (a) the judge's instructions, which included the definitions
of the law; (b) the evidence; (c) the attorneys' opening and closing arguments; (d) the prosecution attorney's arguments; (e) the witnesses for the prosecution (their testimony and credibility); (f) the defense attorney's arguments; (g) the witnesses for the defense (their testimony and credibility); (h) the defendant's testimony and credibility; (i) the presence of reasonable doubt (i.e., the prosecution's failure of meeting the burden of proof); and (j) deliberation. The subjects' responses comprised answers which fell into one or a combination of these categories.

**Independent Measures**

Juror bias was assessed by the Legal Attitudes Questionnaire-Form II (Boehm, 1968). The LAQ was designed to assess verdict-relevant biases in jurors. It employs forced-choice format with a total of 30 items (divided into 10 triads). Each triad contains one item representing each of the three verdict-relevant attitude dimensions: authoritarian, egalitarian, and antiauthoritarian. For each triad, the subjects were instructed to place a "+" beside the item with which they most agree, "-" beside the item with which they least agree, and to leave the remaining item unmarked. The "+," unmarked, and "-" items were assigned scores of 3, 2, and 1, respectively. The scores for each attitude dimension were then summed (the range for each dimension could be from 10 to 30).

Since the authoritarian dimension is a relative one, for each subject the score of the egalitarian subscale of the LAQ was subtracted from the authoritarian subscale to yield a distribution of
scores (i.e., +20 indicated the highest authoritarianism score; -20 indicated the highest egalitarianism score; 0 indicated theoretical neutrality). The resulting distribution was divided into thirds representing authoritarianism, theoretical neutrality, and egalitarianism, respectively.\(^1\)

To date, no reliability data have been provided for the LAQ. Therefore, a 3-week, test-retest, pilot study of the LAQ was conducted to provide such needed data. Seventy-nine subjects from an Introduction to Criminal Justice class at the University of Florida signed informed consent, agreeing to complete the LAQ on two administrations which were 3 weeks apart and to provide demographic data. Sixty-eight (86\%) of the subjects (35 males, 33 females) returned completed LAQs on both occasions. The ages of the subjects were between 17 and 27 years (X = 19.6); 89.5\% were white; 95.5\% were single; and 79.4\% fell within social classes I-III on Hollingshed's (1957) 2-factor classification.

Pearsons product-moment correlations yielded the following significant reliability coefficients for the LAQ scores:
Authoritarian (r = .79, p<.0001), Egalitarian (r = .84, p<.0001), and Antiauthoritarian (r = .25, p<.05). Of greatest importance, was the

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\(^1\) The anti-authoritarian dimension was not investigated in the present study because of its rare occurrence in subject pools of several studies using the LAQ (Alexander & Licker, 1975; Berg & Vidmar, 1975; Buckhout et al., 1979; Goldman et al., 1983). Therefore, subjects whose anti-authoritarian score was the highest of their three LAQ dimension scores (2 out of 114 completed LAQs or 1.7\% in this sample) were eliminated from this study.
significance of the reliability coefficient for the subjects' authoritarian minus egalitarian scores \( r = .85, p < .0001 \) since this score was used to create a distribution from which jurors were categorized. This finding suggests that the relative difference between the subjects' authoritarian and egalitarian attitudes remained stable over a 3-week period of time.

Good construct and predictive validity of the LAQ have been shown by demonstrating consistent differences in verdict and other jury processes between juries differing with respect to LAQ classification. These studies were reported in detail earlier (Alexander & Licker, 1975; Berg & Vidmar, 1975; Boehm, 1968; Buckhout et al., 1979).

For some of the analyses of this study, the Multiple Affective Adjective Checklist (Zuckerman, 1969), Bales' (1951) interactional process analysis, and the recall of trial information also served as independent measures.

**Procedure**

Three weeks prior to the showing of the simulated trial, the pool of 149 subjects were administered the Legal Attitudes Questionnaire-Form II (Boehm, 1968), the Multiple Affective Adjective Checklist (Zuckerman, 1969), and a questionnaire ascertaining demographic information. At this time, informed consent was also obtained from all subjects.

Of the 149 questionnaire packets administered, 120 (81%) were returned. Of these 120, 4 were completed incorrectly and those
Subjects were dropped from this study. Two subjects' LAQ scores showed that their Antiauthoritarian scores were greater than both their Authoritarian and Egalitarian scores, and they were also dropped from this study. The remaining 114 subjects comprised the venire or pool of potential jurors.

Next, a distribution of each subject's Authoritarian minus Egalitarian score was created. The scores ranged between -13 and +10 with a mean score of 0.25 and standard deviation of 4.89 (0.5 standard deviation = 2.45) and formed a normal distribution. A plot of this distribution is shown in Figure 1. Based on this distribution, it was decided that subjects with a score of less than or equal to -2 would be classified as Egalitarian; subjects with a score between -1 and +1 would be classified as Neutral; and subjects with a score greater than or equal to +2 would be classified as Authoritarian. Figure 2 shows the normal distribution of classified jurors' Authoritarian minus Egalitarian scores who served in experimental juries (mean = 0.19, SD = 4.88, range = -12 to +10). These data indicate that the jurors who served on experimental juries were representative of the experimental venire.

Subjects were assigned to 1 of 12 6-person juries on the basis of their pretested LAQ attitude distributions. In other words, the administration of the LAQ served as the experimental voir dire. Specifically, there were a total of three juries in each of four conditions: authoritarian, theoretically neutral, egalitarian, or mixed composition (authoritarian and egalitarian). Subjects classified to be included into one of the four jury conditions were
Figure 1. Distribution of Authoritarian Minus Egalitarian Scores in the Experimental Venire
Figure 2. Distribution of Authoritarian Minus Egalitarian Scores in Jurors Serving in Experimental Juries
randomly assigned to one of three juries within each condition, with
the exception that all juries contained equal numbers of males and
females.

The subjects viewed a videotape of a simulated trial from the
University of Florida College of Law practice court. Here, advanced
law students acting as the trial attorneys had enacted a criminal
trial involving a case of aggravated assault. The trial enactment
took place in the College of Law classroom, which resembles the
physical appearance of actual courtrooms.

Subjects were seated with their assigned juries in rows. They
were instructed by the experimenter that the study is a collaborative
endeavor by the Departments of Clinical Psychology and School of Law;
that its purpose was to investigate how students sitting on a jury
view a criminal trial; and that they were not to take notes or have
discussions amongst themselves during the trial. They then viewed the
4-hour color videotape on a 5-foot screen in a small classroom.
Eighteen subjects (comprising three juries) viewed the videotape at
one time. This procedure was repeated until all subjects had
completed the procedure. Juries were randomly assigned to viewing
dates.

The tape contained the trial in its entirety, beginning with the
opening arguments. The tape was filmed from the perspective of the
onlooking jury. Following the presentation of the testimony and
closing arguments, the jurors were given standard instructions for
deliberation by the judge (Supreme Court of the State of Florida,
1981). These instructions were detailed, lengthy, designed to impress
upon the jurors the seriousness of their task, and to inform them of the legal guidelines to be used in deciding their verdict.

Juries were then escorted to individual deliberation "chambers" near the viewing room where the deliberations were tape recorded. These "chambers" were the same size as a small conference room; each contained a rectangular table in the center surrounded by chairs. Before beginning their deliberation, each jury was given the same instructions by the experimenter which informed them that they were to first select a foreman and then to deliberate to a final decision (i.e., guilty or not guilty) on each of the charges. Juries were allotted up to one hour to deliberate. Jury verdicts, which were recorded by the foreman, were also obtained following deliberation.

Several measures were given to all subjects repeatedly throughout the study. Following the opening argument, testimony, judge's instructions, deliberation, and at a 2-week posttrial follow-up, the Multiple Affective Adjective Checklist was administered to assess changes in affective state. Similarly, the jurors' individual verdicts and degree of confidence was assessed. In addition, the individual jurors' recall of trial information and their statement of which aspects of the trial were most influential was assessed with a questionnaire following the judge's instructions (i.e., predeliberation), postdeliberation, and at a 2-week posttrial follow-up.
Analyses

Verdict-relevant jury biases (i.e., authoritarian, egalitarian, mixed composition, and neutral), sex of the jurors, and time period were the independent variables. The effects of these independent variables were assessed on confidence in verdict decision, weighted verdict, verdict, recall of trial information, and affective state. Here, the BMDP2V program of the BMDP Statistical Software (BMDP, 1983) was used to perform a series of repeated measures analysis of variances, with type of jury and sex as the between-subjects factor and time period as the within-subjects factor. These analyses were performed to test the hypotheses with respect to the effects of jury type, sex, and time period to jurors' confidence in verdict decisions. Specific hypotheses included the predictions that authoritarians would be more confident in their verdict decisions throughout the trial than other types of jurors and, that for biased jurors, the confidence in verdict decisions would increase as the trial progressed. Additionally, to assess the role of potentially moderating variables, a series of separate repeated analysis of covariances were employed in which age; socioeconomic status; and state of anxiety, hostility, and depression served as covariates.\(^1\)

The same statistical procedures were used to test the hypotheses with respect to the effects of jury type, sex, and time period of the weighted verdict index. Here, it was predicted that authoritarians

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\(^1\) State of anxiety, hostility, and depression were covariates which changed over time periods.
might be more confident in guilty verdicts and egalitarians more confident in not guilty verdicts. It was also hypothesized that type of jury would show interaction with time period.

To analyze the data on verdict, first, the distributions of the proportion of guilty verdicts within each jury per charge for each separate time period were examined. For each charge, the variances of these proportions were quite variable over the time periods. Therefore, to stabilize the variances over time, the proportion of guilty verdicts within each jury were transformed by obtaining the arcsine of the square root of the proportion of guilty verdicts within each jury. This is otherwise known as an arcsine transformation (Winer, 1971). To test the hypotheses of the effects of the independent variables on the arcsine transformation of the proportion of guilty verdicts within each jury, the same analyses as described above, were employed. Here, it was predicted that authoritarians would show higher proportions of guilty verdicts than other juries. It was also predicted, although with less certainty, that egalitarian juries might show lower proportions of guilty verdicts than other juries. It was also hypothesized that for these two jury types, the proportion of guilty verdicts after the opening arguments might predict the proportions following deliberation.

In order to test the hypotheses regarding the effects of the independent variables on recall of trial information, the same analyses were, again, employed. Authoritarians were hypothesized to recall more about the defendant's character and the prosecution attorney's trial arguments and less about the situational evidence
than other jurors. Egalitarians were expected to recall more situational evidence and, perhaps, more about the defense attorney's trial arguments than other jurors. Additionally, it was predicted that recall of trial information might increase following deliberation if information exchange was an integral part of the deliberation process. Furthermore, it was predicted that follow-up assessment would indicate a decrease in recall of trial information, as well as changes in confidence in verdict decision, weighted verdict, and verdict. Of additional interest, the hypothesis that jurors would recall more information, that was favorable to their specific verdict decisions, was tested by employing the Spearman's correlational procedure to analyze the relationship between verdict and recall of trial information.

In order to test the hypotheses regarding the effects of jury type, sex, and time period on affective states, the BMDP4V program of the BMDP Statistical Software (BMDP, 1983) was employed to perform a repeated measures multivariate analysis of variance. Again, the between-subjects factors were type of jury and sex and the within-subjects factor was time period. The MANOVA was used because pretesting revealed that the variables for affective states showed moderately high intercorrelations. Nondirectional hypotheses were tested.

The effects of jury type on deliberation process was also examined. To test the nondirectional hypotheses concerning these relationships, a one-way analysis of variance was performed with type of jury as the between factor, for each of the scales on the Bale's
(1951) Interaction Process Analysis ratings of the deliberations and for the length of deliberation time.

Regarding nondirectional hypotheses of secondary interest, to analyze the effects of deliberation processes on changes between pre- and postdeliberation measures of verdict, weighted verdict, confidence in verdict decision, recall of trial information, and affective state a true score analysis (Cook & Campbell, 1979) was used. That is, essentially, for each variable, a regression, using the general linear models procedure of the Statistical Analysis System (SAS Institute, 1982), was performed between pre- and postdeliberation jury averages. The residuals or true scores obtained from these regressions were then correlated with the deliberation process variables.
CHAPTER III
RESULTS

Repeated measures analysis of variances (ANOVAs) were employed to analyze the effects of type of jury and sex on confidence ratings of juror verdict decisions, the weighted index of juror verdicts, verdicts, and the recall of trial information over different time periods in the trial for each crime. Type of jury and sex served as between-subjects variables and time period was the within-subjects variable. To analyze how potentially moderating variables contributed to these relationships, a series of separate repeated measures analysis of covariances (ANCOVAs) were used, in which demographic variables (i.e., age and socioeconomic status) and affective variables (i.e., state of anxiety, hostility, and depression) served as covariates. The BMDP2V program of the BMDP Statistical Software (BMDP, 1983) was used to perform these analyses. The conservative estimate by Geisser and Greenhouse (1958) of the probability value for F-tests was utilized in cases where the assumption of sphericity (i.e., that adjacent observations over time on the same variable are independent or not correlated) was violated in order to reduce the increased probability of Type I errors when such violations occur.

1 State of anxiety, hostility, and depression were covariates which changed over time periods.
Confidence Ratings of Juror Verdict Decisions

Aggravated Assault against Officer White

For the crime of aggravated assault against Officer White, the repeated measures ANOVA on confidence ratings of juror verdict decisions yielded a significant main effect for time period, $F(4, 248) = 29.61, p < .00001$, and a significant interaction of time period and type of jury composition, $F(12, 248) = 2.21, p < .02$. These results are presented in Table 3. Additionally, this analysis found a nonsignificant trend for the interaction of sex and type of jury, $F(3, 62) = 2.57, p < .06$. The series of separate ANCOVAs revealed that these relationships were not significantly altered when any of the demographic or affective variables were used as covariates.

Tukey's studentized range a posteriori test (Winer, 1971) for making pairwise comparisons between means ($df = 248, p < .05$) was used to indicate that jurors' confidence in their verdict decisions were relatively low after the opening arguments, but that after the testimony their confidence significantly increased and, following the judge's instructions (predeliberation) confidence again significantly increased and remained essentially at the same level after deliberation and at the 2-week follow-up. The means and standard deviations for these results are presented in Table 4.

---

1 This measure of confidence ratings of juror verdict decisions is a nondirectional measure. That is, it assessed the degree of the jurors' confidence in whatever their verdict was, making no distinction between guilty and not guilty verdicts.

2 The conversative estimate for the $p$-values for F-tests by Geisser and Greenhouse (1958).
Table 3
Repeated Measures Analysis of Variance Source Table:
Confidence in Verdict Decisions
(Charge: Aggravated Assault against Officer White)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Sex)</td>
<td>1</td>
<td>304.55</td>
<td>0.38</td>
</tr>
<tr>
<td>B (Type of Jury)</td>
<td>3</td>
<td>849.44</td>
<td>1.06</td>
</tr>
<tr>
<td>A x B</td>
<td>3</td>
<td>2060.45</td>
<td>2.57**</td>
</tr>
<tr>
<td>Error</td>
<td>62</td>
<td>801.88</td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>4</td>
<td>12966.69</td>
<td>29.61***</td>
</tr>
<tr>
<td>Time x A</td>
<td>4</td>
<td>735.47</td>
<td>1.68</td>
</tr>
<tr>
<td>Time x B</td>
<td>12</td>
<td>967.23</td>
<td>2.21*</td>
</tr>
<tr>
<td>Time x A x B</td>
<td>12</td>
<td>254.06</td>
<td>0.58</td>
</tr>
<tr>
<td>Error</td>
<td>248</td>
<td>437.98</td>
<td></td>
</tr>
</tbody>
</table>

* p<.02 (Geisser-Greenhouse)
** p<.06
*** p<.00001 (Geisser-Greenhouse)
Table 4
Means and Standard Deviations of Confidence in Verdict Decision Scores Across Time Periods (Charge: Aggravated Assault against Officer White)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Opening Arguments</th>
<th>Testimony/Evidence</th>
<th>Judge's Instructions Predeliberation</th>
<th>Post-deliberation</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>(SD)</td>
<td>(n=70)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opening Arguments</td>
<td>49.0</td>
<td>(25.2)</td>
<td>A^a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Testimony/Evidence</td>
<td>68.7</td>
<td>(21.4)</td>
<td>B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judge's Instructions Predeliberation</td>
<td>79.5</td>
<td>(20.3)</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-deliberation</td>
<td>81.5</td>
<td>(19.5)</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow-up</td>
<td>80.0</td>
<td>(19.1)</td>
<td>C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a Means with the same letter are not significantly different (p<.05).
Tukey's procedure \((df = 248, p<.05)\) also demonstrated that jurors' confidence in their verdict decisions were significantly greater in authoritarian juries than in mixed composition (i.e., authoritarian and egalitarian) juries. The means and standard deviations for these results are presented in Table 5 and represented graphically in Figure 3.

Finally, Tukey's procedure showed no significant differences between means for the nonsignificant interaction between sex and type of jury composition.

**Aggravated Assault against Officer Rhodes**

For the crime of aggravated assault against Officer Rhodes, the repeated measures ANOVA on confidence ratings of juror verdict decisions yielded a significant main effect for time period, \(F(4, 248) = 29.24, p<.00001.\) These results are presented in Table 6. The series of separate ANCOVAs revealed that these relationships were not significantly altered when any of the demographic or affective variables were used as covariates.

Tukey's studentized range \textit{a posteriori} test for making comparisons between means \((df = 248, p<.05)\) was used to show that jurors' confidence in their verdict decisions were relatively lower after the opening arguments, but that after the testimony their confidence significantly increased and remained at essentially the same level following the judge's instructions (predeliberation).

---

1 The conservative estimate for the \(p\)-values for \(F\)-tests by Geisser and Greenhouse (1958).
Table 5
Means and Standard Deviations of Confidence in Verdict Decisions Scores By Type of Jury Across Time Periods (Charge: Aggravated Assault against Officer White)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Type of Jury</th>
<th>Opening Arguments M (SD)</th>
<th>Testimony/ Evidence M (SD)</th>
<th>Judge's Instructions/ Pre-deliberation M (SD)</th>
<th>Post-deliberation M (SD)</th>
<th>Follow-up M (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Authoritarian (n=18)</td>
<td>43.4 (25.3)</td>
<td>69.2 (22.5)</td>
<td>82.9 (19.4)</td>
<td>92.5 (7.0)</td>
<td>78.8 (22.2)</td>
</tr>
<tr>
<td></td>
<td>Egalitarian (n=16)</td>
<td>55.2 (25.2)</td>
<td>78.4 (13.2)</td>
<td>84.5 (17.1)</td>
<td>81.6 (20.0)</td>
<td>77.9 (21.2)</td>
</tr>
<tr>
<td></td>
<td>Mixed (n=18)</td>
<td>43.0 (28.6)</td>
<td>62.9 (27.4)</td>
<td>82.0 (18.2)</td>
<td>68.1 (30.3)</td>
<td>87.2 (15.2)</td>
</tr>
<tr>
<td></td>
<td>Neutral (n=18)</td>
<td>55.1 (21.9)</td>
<td>65.5 (22.5)</td>
<td>69.5 (26.4)</td>
<td>83.6 (20.9)</td>
<td>75.9 (17.9)</td>
</tr>
</tbody>
</table>

Note: D>N (p<.05).
Figure 3. Mean Confidence in Verdict Decision Scores by Type of Jury Across Time Periods (Charge: Aggravated Assault Against Officer White)
Table 6
Repeated Measures Analysis of Variance Source Table:
Confidence in Verdict Decision
(Charge: Aggravated Assault against Officer Rhodes)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Sex)</td>
<td>1</td>
<td>571.21</td>
<td>0.51</td>
</tr>
<tr>
<td>B (Type of Jury)</td>
<td>3</td>
<td>971.09</td>
<td>0.87</td>
</tr>
<tr>
<td>A x B</td>
<td>3</td>
<td>1742.77</td>
<td>1.57</td>
</tr>
<tr>
<td>Error</td>
<td>62</td>
<td>1109.90</td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>4</td>
<td>13252.69</td>
<td>29.24*</td>
</tr>
<tr>
<td>Time x A</td>
<td>4</td>
<td>330.55</td>
<td>0.73</td>
</tr>
<tr>
<td>Time x B</td>
<td>12</td>
<td>422.76</td>
<td>0.93</td>
</tr>
<tr>
<td>Time x A x B</td>
<td>12</td>
<td>454.96</td>
<td>1.00</td>
</tr>
<tr>
<td>Error</td>
<td>248</td>
<td>453.19</td>
<td></td>
</tr>
</tbody>
</table>

* p<.00001 (Geisser-Greenhouse)
After deliberation, confidence again showed a significant increase which remained at a similar level at the 2-week follow-up. The means and standard deviations for these results are presented in Table 7.

**Discharging a Firearm in Public**

For the crime of discharging a firearm in public, the repeated measures ANOVA in confidence ratings of juror verdict decisions yielded a significant main effect for time period, $F(4, 248) = 7.74, p < .0001$. These results are presented in Table 8. The series of separate ANCOVAs revealed that these relationships were not significantly altered when any of the demographic or affective variables were used as covariates.

Tukey's studentized range *a posteriori* test for making comparisons between means (df = 248, $p < .05$) was used to demonstrate that jurors' confidence in their verdict decisions were reasonably high after the opening arguments; however, their confidence showed a significant increase after the testimony. Confidence remained essentially at this level after the judge's instructions (predeliberation) and postdeliberation. At the 2-week follow-up there was a significant decrease in confidence. The means and standard deviations for these results are presented in Table 9.

---

1 The conservative estimate for the p-values for F-tests by Geisser and Greenhouse (1958).
Table 7  
Means and Standard Deviations of Confidence in 
Verdict Decision Scores Across Time Periods  
(Charge: Aggravated Assault against Officer Rhodes)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Opening Arguments</th>
<th>Testimony/Evidence</th>
<th>Judge's Instructions/Predeliberation</th>
<th>Post-deliberation</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td></td>
<td>77.3</td>
<td>80.0</td>
<td>79.2</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td>(SD)</td>
<td>(SD)</td>
<td>(SD)</td>
<td>(SD)</td>
</tr>
<tr>
<td></td>
<td>(n=70)</td>
<td>(n=70)</td>
<td>(n=70)</td>
<td>(n=70)</td>
<td>(n=70)</td>
</tr>
<tr>
<td></td>
<td>A(^a)</td>
<td>B</td>
<td>BC</td>
<td>C</td>
<td>C</td>
</tr>
</tbody>
</table>

\(^a\) Means with the same letter are not significantly different (\(p<.05\)).
Table 8  
Repeated Measures Analysis of Variance Source Table: Confidence in Verdict Decisions  
(Charge: Discharging a Firearm in Public)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Sex)</td>
<td>1</td>
<td>722.41</td>
<td>1.06</td>
</tr>
<tr>
<td>B (Type of Jury)</td>
<td>3</td>
<td>1008.16</td>
<td>1.48</td>
</tr>
<tr>
<td>A x B</td>
<td>3</td>
<td>274.20</td>
<td>0.40</td>
</tr>
<tr>
<td>Error</td>
<td>62</td>
<td>681.40</td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>4</td>
<td>1904.04</td>
<td>7.74*</td>
</tr>
<tr>
<td>Time x A</td>
<td>4</td>
<td>248.83</td>
<td>1.01</td>
</tr>
<tr>
<td>Time x B</td>
<td>12</td>
<td>200.81</td>
<td>0.82</td>
</tr>
<tr>
<td>Time x A x B</td>
<td>12</td>
<td>156.54</td>
<td>0.64</td>
</tr>
<tr>
<td>Error</td>
<td>248</td>
<td>246.06</td>
<td></td>
</tr>
</tbody>
</table>

* $p < .0001$ (Geisser-Greenhouse)
Table 9
Means and Standard Deviations of Confidence in Verdict Decision Scores Across Time Periods (Charge: Discharging a Firearm in Public)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Opening Arguments</th>
<th>Testimony/Evidence</th>
<th>Judge's Instructions/Predeliberation</th>
<th>Post-deliberation</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>79.1</td>
<td>86.4</td>
<td>88.9</td>
<td>93.3</td>
<td>85.4</td>
</tr>
<tr>
<td>(SD)</td>
<td>(19.96)</td>
<td>(17.53)</td>
<td>(14.89)</td>
<td>(7.91)</td>
<td>(20.66)</td>
</tr>
<tr>
<td>(n=70)</td>
<td>A(^a)</td>
<td>BC</td>
<td>BC</td>
<td>BC</td>
<td>AB</td>
</tr>
</tbody>
</table>

\(^a\) Means with the same letter are not significantly different \((p<.05)\).
Improper Exhibition of a Weapon

For the crime of improper exhibition of a weapon, the repeated measures ANOVA on confidence ratings of juror verdict decisions yielded a significant main effect for time period, $F(4, 248) = 7.02$, $p < .0001$. These results are presented in Table 10. Additionally, this analysis found a nonsignificant trend for the interaction of time period and sex, $F(4, 248) = p < .07$. The series of separate ANCOVAs revealed that these relationships were not significantly altered when any of the demographic or affective variables were used as covariates.

Tukey's studentized range a posteriori test for making comparisons between means (df = 248, $p < .05$) was employed to indicate that juror's confidence in their verdict decisions were moderately high; however, after the testimony their confidence showed a significant increase. Confidence remained essentially at this same level throughout the rest of the trial and at the 2-week follow-up. The means and standard deviations for these results are presented in Table 11.

The same procedure showed no significant differences between means for the nonsignificant interaction between time period and sex.

---

1 The conservative estimate for the p-values for F-tests by Geisser and Greenhouse (1958).
Table 10
Repeated Measures Analysis of Variance Source Table:
Confidence in Verdict Decisions
(Charge: Improper Exhibition of a Weapon)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Sex)</td>
<td>1</td>
<td>877.46</td>
<td>1.28</td>
</tr>
<tr>
<td>B (Type of Jury)</td>
<td>3</td>
<td>835.37</td>
<td>1.22</td>
</tr>
<tr>
<td>A x B</td>
<td>3</td>
<td>844.01</td>
<td>1.23</td>
</tr>
<tr>
<td>Error</td>
<td>62</td>
<td>687.42</td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>4</td>
<td>2630.74</td>
<td>7.02**</td>
</tr>
<tr>
<td>Time x A</td>
<td>4</td>
<td>860.66</td>
<td>2.30*</td>
</tr>
<tr>
<td>Time x B</td>
<td>12</td>
<td>220.56</td>
<td>0.59</td>
</tr>
<tr>
<td>Time x A x B</td>
<td>12</td>
<td>501.06</td>
<td>1.34</td>
</tr>
<tr>
<td>Error</td>
<td>248</td>
<td>374.61</td>
<td></td>
</tr>
</tbody>
</table>

* $p < .07$ (Geisser-Greenhouse)
** $p < .0001$ (Geisser-Greenhouse)
Table 11
Means and Standard Deviations of Confidence in Verdict Decision Scores Across Time Periods (Charge: Improper Exhibition of a Weapon)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Opening Arguments</th>
<th>Testimony/Evidence</th>
<th>Judge's Instructions/Predeliberation</th>
<th>Post-deliberation</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>71.1</td>
<td>80.9</td>
<td>85.7</td>
<td>86.2</td>
<td>82.3</td>
</tr>
<tr>
<td>(SD)</td>
<td>(24.1)</td>
<td>(17.4)</td>
<td>(17.1)</td>
<td>(18.2)</td>
<td>(19.7)</td>
</tr>
<tr>
<td>(n=70)</td>
<td>A^a</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

^a Means with the same letter are not significantly different (p<.05).
Weighted Juror Verdicts

Aggravated Assault against Officer White

For the crime of aggravated assault against Officer White, the repeated measures ANOVA on weighted juror verdicts\(^1\) yielded a significant interaction between time period and type of jury, 
\[ F(12, 248) = 2.11, p<.04. \]^2 These results are presented in Table 12. The series of separate ANCOVAs revealed that these relationships were not significantly altered when any of the demographic or affective variables were used as covariates.

Tukey's studentized range \(a\) posteriori test for making pairwise comparisons between means (\(df = 248, p<.05\)) was employed to demonstrate that jurors' weighted verdicts were significantly different between neutral and mixed composition (i.e., authoritarian and egalitarian) juries following deliberation only. That is to say, following deliberation, mixed composition juries tended to vote not guilty and were reasonably confident in this verdict; whereas neutral juries tended to vote guilty but showed relatively low confidence in this verdict. The difference between these two types of juries at postdeliberation was significant. The means and standard deviations on which these results are based are presented in Table 13 and represented graphically in Figure 4.

---

1 This measure of weighted juror verdicts is a directional measure. That is, it assessed the degree of the jurors' confidence in their specific (i.e., guilty or not guilty) verdicts.

2 The conservative estimate for the p-values for F-tests by Geisser and Greenhouse (1958).
Table 12
Repeated Measures Analysis of Variance Source Table:
Weighted Verdict
(Charge: Aggravated Assault against Officer White)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Sex)</td>
<td>1</td>
<td>24109.27</td>
<td>1.56</td>
</tr>
<tr>
<td>B (Type of Jury)</td>
<td>3</td>
<td>24014.00</td>
<td>1.56</td>
</tr>
<tr>
<td>A x B</td>
<td>3</td>
<td>11587.49</td>
<td>0.75</td>
</tr>
<tr>
<td>Error</td>
<td>62</td>
<td>15409.49</td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>4</td>
<td>3363.90</td>
<td>1.03</td>
</tr>
<tr>
<td>Time x A</td>
<td>4</td>
<td>734.77</td>
<td>0.23</td>
</tr>
<tr>
<td>Time x B</td>
<td>12</td>
<td>6862.09</td>
<td>2.11*</td>
</tr>
<tr>
<td>Time x A x B</td>
<td>12</td>
<td>1928.77</td>
<td>0.59</td>
</tr>
<tr>
<td>Error</td>
<td>248</td>
<td>3257.14</td>
<td></td>
</tr>
</tbody>
</table>

* $p < .04$ (Geisser-Greenhouse)
Table 13  
Means and Standard Deviations of Weighted Verdict Scores 
by Type of Jury Across Time Periods 
(Charge: Aggravated Assault against Officer White) 

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Opening Arguments</th>
<th>Testimony/Evidence</th>
<th>Pre-deliberation</th>
<th>Post-deliberation</th>
<th>Follow-up</th>
</tr>
</thead>
</table>
| **Authoritarian**  
(n=18) | | | | | |
| M | 2.3 | -2.9 | 14.8 | 22.5 | 20.7 |
| (SD) | (48.2) | (74.9) | (85.3) | (94.8) | (83.7) |
| **Egalitarian**  
(n=16) | | | | | |
| M | -9.5 | 1.0 | -10.8 | -14.8 | -31.9 |
| (SD) | (63.1) | (84.4) | (91.1) | (89.0) | (78.6) |
| **Mixed**  
(n=18) | | | | | |
| M | -8.0 | -14.4 | -5.5 | -68.1 | -40.6 |
| (SD) | (52.1) | (68.9) | (81.0) | (60.5) | (76.0) |
| **Neutral**  
(n=18) | | | | | |
| M | 3.8 | -18.6 | -6.4 | 23.1 | -22.7 |
| (SD) | (61.4) | (70.5) | (77.3) | (87.7) | (79.0) |

Note: N>S (p<.05).

a Inordinately large standard deviations as compared to the means are due to the fact that the values of this variable ranged between +100 and -100. Small means with large standard deviations reflect a large amount of variability between positive and negative values.
Figure 4. Mean Weighted Verdict Scores by Type of Jury Across Time Periods (Charge: Aggravated Assault Against Officer White)
Aggravated Assault against Officer Rhodes

For the crime of aggravated assault against Officer Rhodes, the repeated measures ANOVA on weighted juror verdicts yielded a significant main effect for time period, $F(4, 248) = 20.89$, $p<.00001$. These results are presented in Table 14. The series of separate ANCOVAs revealed that these relationships were not significantly altered when any of the demographic or affective variables were used as covariates.

Tukey's studentized range **a posteriori** test for making pairwise comparisons between means (df = 248, $p<.05$) revealed that after the opening arguments jurors rendered guilty verdicts but showed almost no confidence in this verdict. Following the testimony, there was a significant change, in which jurors rendered not guilty verdicts with relatively low confidence in this verdict. This decision remained essentially unchanged after the judge's instructions (predeliberation). Following deliberation, the jurors' confidence in their not guilty verdicts showed a significant increase. At the 2-week follow-up confidence in their not guilty verdicts showed a significant decrease back to the predeliberation level. The means and standard deviations from which these results were obtained are presented in Table 15.

Discharging a Firearm in Public

For the crime of discharging a firearm in public, the repeated measures ANOVA on weighted juror verdicts yielded a significant main

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1 The conservative estimate for the p-values for F-tests by Geisser and Greenhouse (1958).
Table 14
Repeated Measures Analysis of Variance Source Table:
Weighted Verdict
(Charge: Aggravated Assault against Officer Rhodes)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Sex)</td>
<td>1</td>
<td>7014.65</td>
<td>0.70</td>
</tr>
<tr>
<td>B (Type of Jury)</td>
<td>3</td>
<td>11026.95</td>
<td>1.11</td>
</tr>
<tr>
<td>A x B</td>
<td>3</td>
<td>6705.51</td>
<td>0.67</td>
</tr>
<tr>
<td>Error</td>
<td>62</td>
<td>9978.97</td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>4</td>
<td>48572.50</td>
<td>20.89*</td>
</tr>
<tr>
<td>Time x A</td>
<td>4</td>
<td>1108.71</td>
<td>0.48</td>
</tr>
<tr>
<td>Time x B</td>
<td>12</td>
<td>3867.45</td>
<td>1.66</td>
</tr>
<tr>
<td>Time x A x B</td>
<td>12</td>
<td>1993.65</td>
<td>0.86</td>
</tr>
<tr>
<td>Error</td>
<td>248</td>
<td>2325.48</td>
<td></td>
</tr>
</tbody>
</table>

* $p<.00001$ (Geisser-Greenhouse)
Table 15  
Means and Standard Deviations of  
Weighted Verdict Scores Across Time Periods  
(Charge: Aggravated Assault against Officer Rhodes)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Opening Arguments M</th>
<th>Testimony/Evidence</th>
<th>Judge's Instructions/Pre-deliberation</th>
<th>Post-deliberation</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-deliberation Follow-up</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>0.56</td>
<td>-29.7</td>
<td>-39.9</td>
<td>-73.7</td>
<td>-40.4</td>
</tr>
<tr>
<td>(SD)a</td>
<td>(51.4)</td>
<td>(68.3)</td>
<td>(71.8)</td>
<td>(37.0)</td>
<td>(66.8)</td>
</tr>
<tr>
<td>(n=70)</td>
<td>A</td>
<td>B</td>
<td>B</td>
<td>C</td>
<td>B</td>
</tr>
</tbody>
</table>

---

a Inordinately large standard deviations as compared to the means are due to the fact that the values of this variable ranged between +100 and -100. Small means with large standard deviations reflect a large amount of variability between positive and negative values.

b Means with the same letter are not significantly different (p<.05).
effect for time period, $F(4, 248) = 2.84, p < .05$. These results are presented in Table 16. Additionally, this analysis found a nonsignificant trend for the interaction between time period and sex, $F(4, 248) = 2.53, p < .07$. The series of separate ANCOVAs revealed that these relationships were not significantly altered when any of the demographic or affective variables were used as covariates.

Tukey's studentized range test for making pairwise comparisons between means (df = 248, $p < .05$) showed that after the opening arguments jurors rendered guilty verdicts and showed moderately high confidence in this verdict, which remained essentially unchanged after the testimony and judge's instructions (predeliberation). Following deliberation confidence in these guilty verdicts showed a significant increase over the level of confidence observed after the opening arguments. At the 2-week follow-up jurors showed a slight decrease in their confidence in these guilty verdicts; however, this change was not significant. The means and standard deviations from which these results were obtained are presented in Table 17.

Tukey's procedure revealed no significant differences between means for the nonsignificant interaction between time period and sex.

**Improper Exhibition of a Weapon**

For the crime of improper exhibition of a weapon, the repeated measures ANOVA on weighted juror verdicts yielded significant main

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1 The conservative estimate for the p-values for F-tests by Geisser and Greenhouse (1958).
Table 16
Repeated Measures Analysis of Variance Source Table:
Weighted Verdict
(Charge: Discharging a Firearm in Public)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Subjects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Sex)</td>
<td>1</td>
<td>2274.29</td>
<td>1.12</td>
</tr>
<tr>
<td>B (Type of Jury)</td>
<td>3</td>
<td>3505.84</td>
<td>1.72</td>
</tr>
<tr>
<td>A x B</td>
<td>3</td>
<td>1734.43</td>
<td>0.85</td>
</tr>
<tr>
<td>Error</td>
<td>62</td>
<td>2033.35</td>
<td></td>
</tr>
<tr>
<td>Within Subjects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>4</td>
<td>2270.01</td>
<td>2.84**</td>
</tr>
<tr>
<td>Time x A</td>
<td>4</td>
<td>2017.27</td>
<td>2.53*</td>
</tr>
<tr>
<td>Time x B</td>
<td>12</td>
<td>850.18</td>
<td>1.07</td>
</tr>
<tr>
<td>Time x A x B</td>
<td>12</td>
<td>804.65</td>
<td>1.01</td>
</tr>
<tr>
<td>Error</td>
<td>248</td>
<td>798.13</td>
<td></td>
</tr>
</tbody>
</table>

* $p < .07$ (Geisser-Greenhouse)
** $p < .05$ (Geisser-Greenhouse)
Table 17
Means and Standard Deviations of
Weighted Verdict Scores Across Time Periods
(Charge: Discharging a Firearm in Public)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Opening Arguments</th>
<th>Testimony/Evidence</th>
<th>Judge's Instructions/Predeliberation</th>
<th>Post-deliberation</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>76.9</td>
<td>85.2</td>
<td>79.5</td>
<td>90.8</td>
<td>78.9</td>
</tr>
<tr>
<td>(SD)</td>
<td>(24.5)</td>
<td>(20.9)</td>
<td>(35.4)</td>
<td>(15.2)</td>
<td>(30.6)</td>
</tr>
<tr>
<td>(n=70)</td>
<td>A&lt;sup&gt;a&lt;/sup&gt;</td>
<td>AB</td>
<td>AB</td>
<td>B</td>
<td>AB</td>
</tr>
</tbody>
</table>

<sup>a</sup> Means with the same letter are not significantly different (p<.05).
effects for type of jury, $F(3, 62) = 5.03, p<.004$, and time period, $F(4, 248) = 13.18, p<.00001$. This analysis also yielded a significant interaction between time period and type of jury, $F(12, 248) = 3.53, p<.002$. These results are presented in Table 18. The series of separate ANCOVAs revealed that these relationships were not significantly altered when any of the demographic or affective variables were used as covariates.

Tukey's studentized range a posteriori test for making pairwise comparisons between means revealed no significant differences between the different types of juries. The means and standard deviations for the weighted verdict scores by type of jury are presented in Table 19. Examination of these means suggest that the significant main effect for type of jury might have been due to a significant difference between the scores of jurors on egalitarian juries and some linear combination of the scores of the jurors on the other three types of juries. In other words, that the low confidence-not guilty verdicts rendered by jurors on egalitarian juries were significantly different from the low-to-moderate confidence-guilty verdicts rendered by jurors on authoritarian, mixed, and neutral juries. To test this, Sheffe's (Winer, 1971) method for multiple comparisons was employed; however, a significant difference was not found here. It is reasonable to assume that the high number of the degrees of freedom in the model rendered Sheffe's method more conservative than it already is, which removed any chance of obtaining significant findings. Given

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1 The conservative estimate for the p-values for F-tests by Geisser and Greenhouse (1958).
### Table 18
Repeated Measures Analysis of Variance Source Table:
Weighted Verdict
(Charge: Improper Exhibition of a Weapon)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Sex)</td>
<td>1</td>
<td>7073.46</td>
<td>0.56</td>
</tr>
<tr>
<td>B (Type of Jury)</td>
<td>3</td>
<td>63110.85</td>
<td>5.03**</td>
</tr>
<tr>
<td>A x B</td>
<td>3</td>
<td>2265.53</td>
<td>0.18</td>
</tr>
<tr>
<td>Error</td>
<td>62</td>
<td>12545.16</td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>4</td>
<td>42620.53</td>
<td>13.18***</td>
</tr>
<tr>
<td>Time x A</td>
<td>4</td>
<td>4068.16</td>
<td>1.26</td>
</tr>
<tr>
<td>Time x B</td>
<td>12</td>
<td>11407.30</td>
<td>3.53*</td>
</tr>
<tr>
<td>Time x A x B</td>
<td>12</td>
<td>4817.62</td>
<td>1.49</td>
</tr>
<tr>
<td>Error</td>
<td>248</td>
<td>3234.53</td>
<td></td>
</tr>
</tbody>
</table>

* p<.002 (Geisser-Greenhouse)
** p<.004
*** p<.00001 (Geisser-Greenhouse)
Table 19
Means and Standard Deviations of Weighted Verdict Scores by Type of Jury
(Charge: Improper Exhibition of a Weapon)

<table>
<thead>
<tr>
<th>Type of Jury</th>
<th>Mean</th>
<th>(SD)a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authoritarian (n=18)</td>
<td>39.4</td>
<td>(88.8)</td>
</tr>
<tr>
<td>Egalitarian (n=16)</td>
<td>-10.9</td>
<td>(62.3)</td>
</tr>
<tr>
<td>Mixed (n=18)</td>
<td>52.4</td>
<td>(86.2)</td>
</tr>
<tr>
<td>Neutral (n=18)</td>
<td>36.1</td>
<td>(99.6)</td>
</tr>
</tbody>
</table>

Note: Positive numbers indicate guilty verdicts and negative numbers indicate not guilty verdicts.

a Inordinately large standard deviations as compared to the means are due to the fact that the values of this variable ranged between +100 and -100. Small means with large standard deviations reflect a large amount of variability between positive and negative values.
the degree of significance of the main effect for type of jury, therefore, the observed differences between egalitarian juries and authoritarian, mixed, and neutral juries should not be dismissed.

Tukey's studentized range *a posteriori* test for making pairwise comparisons between means (df = 248, \( p < .05 \)) was employed to demonstrate that after the opening arguments jurors rendered guilty verdicts and were moderately confident in this verdict. This decision and confidence level remained essentially unchanged after the testimony and the judge's instructions (predeliberation). However, following deliberation, although jurors still rendered guilty verdicts, there was a significant decrease to almost no confidence in this verdict. This remained the same at the 2-week follow-up. The means and standard deviations from which these findings were obtained are presented in Table 20.

Tukey's procedure was also used to show that there were significant changes over time for jurors on egalitarian juries. More specifically, these jurors tended to render guilty verdicts in which they reported relatively low confidence after the opening arguments, testimony, and judge's instructions (predeliberation). However, there was a significant change following deliberation at which these jurors rendered not guilty verdicts in which they reported high confidence. This decision and level of confidence remained essentially unchanged at the 2-week follow-up. Additionally, it was found, that following deliberation, jurors on egalitarian juries tended to give not guilty verdicts about which they were highly confident; whereas jurors on neutral juries rendered guilty verdicts about which they reported
Table 20
Means and Standard Deviations of Weighted Verdict Scores Across Time Periods (Charge: Improper Exhibition of a Weapon)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Opening Arguments</th>
<th>Testimony/Evidence</th>
<th>Judge's Instructions/ Predeliberation</th>
<th>Post-deliberation</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>47.3</td>
<td>53.5</td>
<td>40.8</td>
<td>1.4</td>
<td>8.6</td>
</tr>
<tr>
<td>(SD)</td>
<td>(56.8)</td>
<td>(61.9)</td>
<td>(78.2)</td>
<td>(71.4)</td>
<td>(68.5)</td>
</tr>
<tr>
<td>(n=70)</td>
<td>A(^b)</td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

\(^a\) Inordinately large standard deviations as compared to the means are due to the fact that the values of this variable ranged between +100 and -100. Small means with large standard deviations reflect a large amount of variability between positive and negative values.

\(^b\) Means with the same letter are not significantly different (p<.05).
relatively low confidence. This difference was significant. The means and standard deviations from which these results were obtained are presented in Table 21 and presented graphically in Figure 5.

**Verdict**

**Aggravated Assault against Officer White**

For the crime of aggravated assault against Officer White, the repeated measures ANOVA on the arc sine transformation of the proportion of guilty verdicts within each jury yielded no significant findings. The series of separate ANCOVAs did not significantly change these relationships when any of the demographic or affective variables were used as covariates. This suggested that for the charge of aggravated assault against Officer White, verdicts remained essentially the same between sexes and juries and across time periods.

**Aggravated Assault against Officer Rhodes**

For the crime of aggravated assault against Officer Rhodes, the repeated measures ANOVA on the arc sine transformation of the proportion of guilty verdicts within each jury yielded a significant main effect for time period, $F(4, 64) = 18.58, p<.00001$, and a significant interaction between time period and type of jury, $F(12, 64) = 2.06, p<.03$. These results are presented in Table 22. The series of separate ANCOVAs revealed that these relationships were not significantly altered when any of the demographic or affective variables were used as covariates.

---

1 This measure of verdict was derived by taking the arc sine of the square root of the proportion of guilty verdicts within each jury.
Table 21
Means and Standard Deviations of Weighted Verdict Scores
By Type of Jury Across Time Periods
(Charge: Improper Exhibition of a Weapon)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Opening Arguments</th>
<th>Testimony/Evidence</th>
<th>Pre-deliberation</th>
<th>Post-deliberation</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Jury</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authoritarian (n=18)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>56.4 (SD)</td>
<td>68.1 (SD)</td>
<td>48.7 (SD)</td>
<td>6.5 (SD)</td>
<td>16.7 (SD)</td>
</tr>
<tr>
<td>(n=18)</td>
<td>50.5</td>
<td>58.7</td>
<td>71.4</td>
<td>93.1</td>
<td>81.6</td>
</tr>
<tr>
<td>Egalitarian</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>29.6 (SD)</td>
<td>45.2 (SD)</td>
<td>24.1 (SD)</td>
<td>-82.2 (SD)</td>
<td>-70.9 (SD)</td>
</tr>
<tr>
<td>(n=16)</td>
<td>56.7</td>
<td>51.5</td>
<td>85.7</td>
<td>19.2</td>
<td>36.2</td>
</tr>
<tr>
<td>Mixed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>61.4 (SD)</td>
<td>61.7 (SD)</td>
<td>63.9 (SD)</td>
<td>36.3 (SD)</td>
<td>48.8 (SD)</td>
</tr>
<tr>
<td>(n=18)</td>
<td>46.9</td>
<td>64.5</td>
<td>71.7</td>
<td>85.9</td>
<td>75.8</td>
</tr>
<tr>
<td>Neutral</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>40.1 (SD)</td>
<td>38.2 (SD)</td>
<td>35.0 (SD)</td>
<td>35.8 (SD)</td>
<td>31.2 (SD)</td>
</tr>
<tr>
<td>(n=18)</td>
<td>73.2</td>
<td>73.0</td>
<td>84.2</td>
<td>87.5</td>
<td>80.5</td>
</tr>
</tbody>
</table>

Note: F, G, H > I (p<.05); S > I (p<.05).

a Inordinately large standard deviations as compared to the means are due to the fact that the values of this variable ranged between +100 and -100. Small means with large standard deviations reflect a large amount of variability between positive and negative values.
Figure 5. Mean Weighted Verdict Scores by Type of Jury Across Time Periods (Charge: Improper Exhibition of a Weapon)
Table 22
Repeated Measures Analysis of Variance Source Table:
Arc Sine Transformation of the Proportion of
Guilty Verdicts Within Each Jury
(Charge: Aggravated Assault against Officer Rhodes)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Sex)</td>
<td>1</td>
<td>0.15</td>
<td>0.29</td>
</tr>
<tr>
<td>B (Type of Jury)</td>
<td>3</td>
<td>0.39</td>
<td>0.75</td>
</tr>
<tr>
<td>A x B</td>
<td>3</td>
<td>0.07</td>
<td>0.14</td>
</tr>
<tr>
<td>Error</td>
<td>16</td>
<td>0.54</td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>4</td>
<td>1.65</td>
<td>18.58**</td>
</tr>
<tr>
<td>Time x A</td>
<td>4</td>
<td>0.04</td>
<td>0.79</td>
</tr>
<tr>
<td>Time x B</td>
<td>12</td>
<td>0.18</td>
<td>2.06*</td>
</tr>
<tr>
<td>Time x A x B</td>
<td>12</td>
<td>0.05</td>
<td>0.53</td>
</tr>
<tr>
<td>Error</td>
<td>64</td>
<td>0.09</td>
<td></td>
</tr>
</tbody>
</table>

* p<.03
** p<.00001
Tukey's studentized range a posteriori test for making pairwise comparisons between means (df = 64, \( p < .05 \)) showed that after the opening arguments a moderate proportion of jurors found the defendant to be guilty of this charge. Following the testimony, however, there was a significant decrease in the proportion of guilty verdicts. This proportion did not significantly change after the judge's instructions (predeliberation). At postdeliberation the proportion of guilty verdicts dropped to almost zero, which was a significant change. At the 2-week follow-up the proportion of guilty verdicts significantly rose back to predeliberation proportions. The means and standard deviations on which these results are based are presented in Table 23.

Tukey's procedure revealed significant differences between juries with different types of constituents at different time periods. More specifically, jurors on egalitarian juries showed significant fluctuations over time; the proportion of guilty verdicts were relatively low after the opening arguments, significantly increased after the testimony, significantly decreased after the judge's instructions (predeliberation), and significantly dropped to almost zero following deliberation and remained essentially unchanged at the 2-week follow-up. For jurors serving on mixed juries, there was relatively high proportion of guilty verdicts after the opening arguments, which dropped significantly after the testimony and remained essentially at the same proportion for the rest of the trial and at the 2-week follow-up. Additionally, it was shown that after the opening arguments jurors on mixed and neutral juries rendered a significantly greater proportion of guilty verdicts than those serving
Table 23
Means and Standard Deviations of the Arc Sine Transformation of the Proportion of Guilty Verdicts within Each Jury Across Time Periods (Charge: Aggravated Assault against Officer Rhodes)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Opening Arguments M</th>
<th>Testimony/Evidence SD</th>
<th>Judge's Instructions/ Predeliberation</th>
<th>Post-deliberation</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.81</td>
<td>0.49</td>
<td>0.41</td>
<td>0.08</td>
<td>0.36</td>
</tr>
<tr>
<td>(SD)</td>
<td>(0.38)</td>
<td>(0.47)</td>
<td>(0.38)</td>
<td>(0.13)</td>
<td>(0.45)</td>
</tr>
<tr>
<td>(n=12)</td>
<td>A(^a)</td>
<td>B</td>
<td>B</td>
<td>C</td>
<td>B</td>
</tr>
</tbody>
</table>

\(^a\) Means with the same letter are not significantly different (p<.05).
on egalitarian juries. Perhaps what was most striking is that following deliberation jurors serving on the different juries rendered virtually the same proportion of guilty verdicts, which for this charge was almost zero. The means and standard deviations from which these findings were obtained are presented in Table 24 and illustrated graphically in Figure 6.

**Discharging a Firearm in Public**

For the crime of discharging a firearm in public, the repeated measures ANOVA on the arc sine transformation of the proportion of guilty verdicts within each jury yielded no significant findings. The series of separate ANCOVAs did not significantly change these relationships when any of the demographic or affective variables were used as covariates. This suggested that for the charge of discharging a firearm in public, verdicts remained essentially the same between sexes and juries and across time periods.

**Improper Exhibition of a Weapon**

For the crime of improper exhibition of a weapon, the repeated measures ANOVA on the arc sine transformation of the proportion of guilty verdicts within each jury yielded significant main effects for type of jury, \( F(3, 16) = 3.23, p < .05 \), and time period, \( F(4, 64) = 5.96, p < .009 \). There were no significant interactions. These results are presented in Table 25. The series of separate ANCOVAs did not significantly alter these relationships when any of the demographic or affective variables were used as covariates.

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1 The conservative estimate for the p-values for F-tests by Geisser and Greenhouse (1958).
Table 24  
Means and Standard Deviations of the  
Arc Sine Transformation of the Proportion of  
Guilty Verdicts within Each Jury  
By Type of Jury Across Time Periods  
(Charge: Aggravated Assault against Officer Rhodes)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Authoritarian (n=3)</th>
<th>Egalitarian (n=3)</th>
<th>Mixed (n=3)</th>
<th>Neutral (n=3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Opening Arguments</td>
<td>Testimony/Evidence</td>
<td>Instructions/Pre-deliberation</td>
<td>Post-deliberation</td>
</tr>
<tr>
<td>Type of Jury</td>
<td>M</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td>M</td>
<td>(SD)</td>
<td>(SD)</td>
</tr>
<tr>
<td>Authoritarian</td>
<td>0.83 (0.37)</td>
<td>0.73 (0.49)</td>
<td>0.42 (0.52)</td>
<td>0.10 (0.18)</td>
</tr>
<tr>
<td>Egalitarian</td>
<td>0.37 (0.45)</td>
<td>0.47 (0.42)</td>
<td>0.36 (0.42)</td>
<td>0.10 (0.18)</td>
</tr>
<tr>
<td>Mixed</td>
<td>1.05 (0.46)</td>
<td>0.32 (0.55)</td>
<td>0.31 (0.35)</td>
<td>0.00 (0.00)</td>
</tr>
<tr>
<td>Neutral</td>
<td>1.00 (0.25)</td>
<td>0.47 (0.42)</td>
<td>0.57 (0.24)</td>
<td>0.10 (0.18)</td>
</tr>
</tbody>
</table>
Figure 6. Mean Arc Sine Transformation of the Proportion of Guilty Verdicts within Each Jury by Type of Jury Across Time Periods (Charge: Aggravated Assault Against Officer Rhodes)
Table 25
Repeated Measures Analysis of Variance Source Table:
Arc Sine Transformation of the Proportion of Guilty Verdicts within Each Jury
(Charge: Improper Exhibition of a Weapon)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Sex)</td>
<td>1</td>
<td>0.35</td>
<td>0.59</td>
</tr>
<tr>
<td>B (Type of Jury)</td>
<td>3</td>
<td>1.89</td>
<td>3.23*</td>
</tr>
<tr>
<td>A × B</td>
<td>3</td>
<td>0.10</td>
<td>0.16</td>
</tr>
<tr>
<td>Error</td>
<td>16</td>
<td>0.59</td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>4</td>
<td>1.14</td>
<td>5.96**</td>
</tr>
<tr>
<td>Time × A</td>
<td>4</td>
<td>0.06</td>
<td>0.32</td>
</tr>
<tr>
<td>Time × B</td>
<td>12</td>
<td>0.33</td>
<td>1.74</td>
</tr>
<tr>
<td>Time × A × B</td>
<td>12</td>
<td>0.21</td>
<td>1.09</td>
</tr>
<tr>
<td>Error</td>
<td>64</td>
<td>0.19</td>
<td></td>
</tr>
</tbody>
</table>

* p<.05  
** p<.009 (Geisser-Greenhouse)
Tukey's studentized range *a posteriori* test for making pairwise comparisons between means revealed no significant differences between the different types of juries. The means and standard deviations for the arc sine transformations of the proportion of guilty verdicts within each jury by type of jury are presented in Table 26. Examination of these means suggest that the significant main effect for type of jury might have been due to a significant difference between the proportion of guilty verdicts rendered by egalitarian juries and some linear combination of the proportion of guilty verdicts rendered by the other three types of juries. In other words, the relatively lower proportion of guilty verdicts rendered by egalitarian juries were significantly different from the higher proportion of guilty verdicts rendered by authoritarian, mixed, and neutral juries. To test this, Sheffe's method for multiple comparisons was employed; however, a significant difference was not found here. It is reasonable to assume that the high number of the degrees of freedom in the model made Sheffe's method more conservative than it already is, which removed any chance of obtaining significant findings. Therefore, the observed differences between egalitarian juries and authoritarian, mixed, and neutral juries should not be dismissed.

Tukey's studentized range *a posteriori* test for making pairwise comparisons between means (df = 64, *p* < .05) showed that after the opening arguments the proportion of juror verdicts was relatively high and remained this way following the testimony. A significant decrease in the proportion of guilty verdicts was observed after the jurors
<table>
<thead>
<tr>
<th>Type of Jury</th>
<th>Mean</th>
<th>(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authoritarian (n=3)</td>
<td>1.10</td>
<td>(0.66)</td>
</tr>
<tr>
<td>Egalitarian (n=3)</td>
<td>0.66</td>
<td>(0.37)</td>
</tr>
<tr>
<td>Mixed (n=3)</td>
<td>1.24</td>
<td>(0.54)</td>
</tr>
<tr>
<td>Neutral (n=3)</td>
<td>1.08</td>
<td>(0.63)</td>
</tr>
</tbody>
</table>
received the judge's instructions (predeliberation). Furthermore, after deliberation the proportion of guilty verdicts again showed a significant decrease. This remained essentially unchanged at the 2-week follow-up. The means and standard deviations from which these results were obtained are presented in Table 27.

Recall of Trial Information

Recall of Situational Evidence

The repeated measures ANOVA on recall of situational evidence scores yielded a significant main effect for time period, $F(2, 124) = 24.52, p < .00001$, and a significant interaction between time period and type of jury, $F(6, 124) = 3.24, p < .01$. These results are presented in Table 28. The series of separate ANCOVAs revealed that these relationships were not significantly altered when any of the demographic or affective variables were used as covariates.

Tukey's studentized range $a$ posteriori test for making pairwise comparisons between means ($df = 124, p < .05$) showed that recall of situational evidence was high at both pre- and postdeliberation; however, there was a significant decreased observed at the 2-week follow-up. The means and standard deviations on which these findings are based are presented in Table 29.

Tukey's procedure also revealed that at postdeliberation jurors on authoritarian juries recalled significantly less situational

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1 The conservative estimate for the p-values for F-tests by Geisser and Greenhouse (1958).
Table 27
Means and Standard Deviations of the Arc Sine Transformation of the Proportion of Guilty Verdicts within Each Jury Across Time Periods (Charge: Improper Exhibition of a Weapon)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Opening Arguments</th>
<th>Testimony/Evidence</th>
<th>Judge's Instructions/Predeliberation</th>
<th>Post-deliberation</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td></td>
<td>1.22</td>
<td>1.02</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td></td>
<td>(0.38)</td>
<td>(0.31)</td>
<td>(0.61)</td>
</tr>
<tr>
<td></td>
<td>(n=12)</td>
<td></td>
<td>A^{a}</td>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>

^{a} Means with the same letter are not significantly different (p<.05).
Table 28
Repeated Measures Analysis of Variance Source Table:
Recall of Situational Evidence

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Sex)</td>
<td>1</td>
<td>4.24</td>
<td>1.26</td>
</tr>
<tr>
<td>B (Type of Jury)</td>
<td>3</td>
<td>1.89</td>
<td>0.56</td>
</tr>
<tr>
<td>A x B</td>
<td>3</td>
<td>1.08</td>
<td>0.32</td>
</tr>
<tr>
<td>Error</td>
<td>62</td>
<td>3.38</td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>2</td>
<td>19.85</td>
<td>24.52**</td>
</tr>
<tr>
<td>Time x A</td>
<td>2</td>
<td>0.11</td>
<td>0.13</td>
</tr>
<tr>
<td>Time x B</td>
<td>6</td>
<td>2.62</td>
<td>3.24*</td>
</tr>
<tr>
<td>Time x A x B</td>
<td>6</td>
<td>0.70</td>
<td>0.87</td>
</tr>
<tr>
<td>Error</td>
<td>124</td>
<td>0.81</td>
<td></td>
</tr>
</tbody>
</table>

*p < .01 (Geisser-Greenhouse)

**p < .00001 (Geisser-Greenhouse)
evidence than jurors serving on neutral juries. The means and standard deviations from which these findings were obtained are presented in Table 30 and illustrated graphically in Figure 7.

Recall of the Defendant's Character

The repeated measures ANOVA on recall of the defendant's character scores yielded a significant main effect for time period, $F(2, 124) = 127.28, p < .00001$, and a significant interaction between time period and sex, $F(2, 124) = 4.38, p < .03$. These results are presented in Table 31. The series of separate ANCOVAs revealed that these relationships were not significantly altered when any of the demographic or affective variables were used as covariates.

Tukey's studentized range *a posteriori* test for making pairwise comparisons between means ($df = 124, p < .05$) showed that jurors' recall of the defendant's character was high at both pre- and postdeliberation; however, there was a significant decrease observed at the 2-week follow-up. The means and standard deviations on which these results are based are presented in Table 32.

Tukey's procedure found no significant differences between means for the interaction between time period and sex.

Recall of the Defense Attorney's Trial Arguments

The repeated measures ANOVA on recall of the defense attorney's trial arguments yielded significant main effects for sex ($F(1, 62) = 4.59, p < .04$, and time period, $F(2, 124) = 4.50, p < .02$. No significant interactions were found. These results are presented in

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1 The conservative estimate for the p-values for F-tests by Geisser and Greenhouse (1958).
<table>
<thead>
<tr>
<th>Time Period</th>
<th>Predeliberation</th>
<th>Postdeliberation</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>6.6</td>
<td>6.4</td>
<td>5.6</td>
</tr>
<tr>
<td>(Standard Deviation)</td>
<td>(1.09)</td>
<td>(1.25)</td>
<td>(1.37)</td>
</tr>
<tr>
<td>(n=70)</td>
<td>A(^a)</td>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>

\(^a\) Means with the same letter are not significantly different (p<.05).
Table 30
Means and Standard Deviations of
Recall of Situational Evidence Scores
by Type of Jury Across Time Periods

<table>
<thead>
<tr>
<th>Type of Jury</th>
<th>Predeliberation</th>
<th>Postdeliberation</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authoritarian (n=18)</td>
<td>M 6.3 (SD 1.08)</td>
<td>M 5.6 (SD 1.28)</td>
<td>M 5.4 (SD 1.12)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Egalitarian (n=16)</td>
<td>M 6.6 (SD 1.21)</td>
<td>M 6.7 (SD 1.20)</td>
<td>M 6.1 (SD 1.02)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>Mixed (n=18)</td>
<td>M 7.2 (SD 0.60)</td>
<td>M 6.6 (SD 0.86)</td>
<td>M 6.0 (SD 1.44)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G</td>
<td>H</td>
</tr>
<tr>
<td>Neutral (n=18)</td>
<td>M 6.6 (SD 2.91)</td>
<td>M 6.6 (SD 1.46)</td>
<td>M 5.1 (SD 2.00)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>J</td>
<td>K</td>
</tr>
</tbody>
</table>

Note: K > B (p<.05)
Figure 7. Mean Recall of Situational Evidence Scores by Type of Jury Across Time Periods
### Table 31
Repeated Measures Analysis of Variance Source Table:
Recall of the Defendant's Character

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Sex)</td>
<td>1</td>
<td>3.94</td>
<td>1.59</td>
</tr>
<tr>
<td>B (Type of Jury)</td>
<td>3</td>
<td>0.44</td>
<td>0.18</td>
</tr>
<tr>
<td>A x B</td>
<td>3</td>
<td>0.44</td>
<td>0.18</td>
</tr>
<tr>
<td>Error</td>
<td>62</td>
<td>2.47</td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>2</td>
<td>88.83</td>
<td>127.28**</td>
</tr>
<tr>
<td>Time x A</td>
<td>2</td>
<td>3.06</td>
<td>4.38*</td>
</tr>
<tr>
<td>Time x B</td>
<td>6</td>
<td>0.12</td>
<td>0.17</td>
</tr>
<tr>
<td>Time x A x B</td>
<td>6</td>
<td>0.97</td>
<td>1.39</td>
</tr>
<tr>
<td>Error</td>
<td>124</td>
<td>0.70</td>
<td></td>
</tr>
</tbody>
</table>

* $p < .03$ (Geisser-Greenhouse)

** $p < .00001$ (Geisser-Greenhouse)
Table 32
Means and Standard Deviations of
Recall of the Defendant's Character Scores
Across Time Periods

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Predeliberation</th>
<th>Postdeliberation</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>7.3</td>
<td>7.4</td>
<td>5.4</td>
</tr>
<tr>
<td>(Standard Deviation)</td>
<td>(0.82)</td>
<td>(0.78)</td>
<td>(0.77)</td>
</tr>
<tr>
<td>(n=70)</td>
<td>A&lt;sup&gt;a&lt;/sup&gt;</td>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>

<sup>a</sup> Means with the same letter are not significantly different (p<.05).
in Table 33. The series of separate ANCOVAs revealed that these relationships were not significantly altered when any of the demographic or affective variables were used as covariates.

The means and standard deviations of recall of the defense attorney's trial arguments by sex are presented in Table 34. As can be seen females recalled significantly more of this information than males.

Tukey's studentized range a posteriori test for making pairwise comparisons between means (df = 124, p < .05) showed that there was a significant decrease between pre- and postdeliberation recall of the defense attorney's trial arguments. This decrease remained virtually unchanged at the 2-week follow-up. The means and standard deviations from which these findings were obtained are presented in Table 35.

Recall of the Prosecution Attorney's Trial Arguments

The repeated measures ANOVA on recall of the prosecution attorney's trial arguments yielded a significant main effect for time period, $F(2, 124) = 12.02, p < .00001$.¹ These results are presented in Table 36. The series of separate ANCOVAs revealed that these relationships were not significantly altered when any of the demographic or affective variables were used as covariates.

Tukey's studentized range a posteriori test for making pairwise comparisons (df = 124, p < .05) demonstrated that jurors' recall of the prosecution attorney's trial arguments was moderately high at both

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¹ The conservative estimate for the p-values for F-tests by Geisser and Greenhouse (1958).
Table 33
Repeated Measures Analysis of Variance Source Table:
Recall of the Defense Attorney's Trial Arguments

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Sex)</td>
<td>1</td>
<td>14.33</td>
<td>4.59**</td>
</tr>
<tr>
<td>B (Type of Jury)</td>
<td>3</td>
<td>2.85</td>
<td>0.91</td>
</tr>
<tr>
<td>A x B</td>
<td>3</td>
<td>0.45</td>
<td>0.14</td>
</tr>
<tr>
<td>Error</td>
<td>62</td>
<td>3.12</td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>2</td>
<td>4.83</td>
<td>4.50*</td>
</tr>
<tr>
<td>Time x A</td>
<td>2</td>
<td>0.60</td>
<td>0.56</td>
</tr>
<tr>
<td>Time x B</td>
<td>6</td>
<td>0.92</td>
<td>0.86</td>
</tr>
<tr>
<td>Time x A x B</td>
<td>6</td>
<td>0.95</td>
<td>0.88</td>
</tr>
<tr>
<td>Error</td>
<td>124</td>
<td>1.07</td>
<td></td>
</tr>
</tbody>
</table>

* p<.02 (Geisser-Greenhouse)
** p<.04
Table 34  
Means and Standard Deviations of Recall of the Defense Attorney's Trial Arguments by Sex

<table>
<thead>
<tr>
<th>Sex</th>
<th>Male (n=35)</th>
<th>Female (n=35)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.9</td>
<td>5.4</td>
</tr>
<tr>
<td>(Standard Deviation)</td>
<td>(1.24)</td>
<td>(1.32)</td>
</tr>
</tbody>
</table>

Table 35  
Means and Standard Deviations of Recall of the Defense Attorney's Trial Arguments Across Time Periods

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Predeliberation</th>
<th>Postdeliberation</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>5.4</td>
<td>5.0</td>
<td>4.9</td>
</tr>
<tr>
<td>(Standard Deviation)</td>
<td>(1.14)</td>
<td>(1.22)</td>
<td>(1.36)</td>
</tr>
<tr>
<td>(n=70)</td>
<td>A(^a)</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

\(^a\) Means with the same letter are not significantly different (p<.05).
Table 36
Repeated Measures Analysis of Variance Source Table: Recall of the Prosecution Attorney's Trial Arguments

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>1</td>
<td>8.89</td>
<td>2.71</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
<td>1.58</td>
<td>0.48</td>
</tr>
<tr>
<td>A x B</td>
<td>3</td>
<td>2.64</td>
<td>0.81</td>
</tr>
<tr>
<td>Error</td>
<td>62</td>
<td>3.28</td>
<td></td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>2</td>
<td>14.31</td>
<td>12.02*</td>
</tr>
<tr>
<td>Time x A</td>
<td>2</td>
<td>0.62</td>
<td>0.52</td>
</tr>
<tr>
<td>Time x B</td>
<td>6</td>
<td>0.79</td>
<td>0.67</td>
</tr>
<tr>
<td>Time x A x B</td>
<td>6</td>
<td>1.18</td>
<td>0.99</td>
</tr>
<tr>
<td>Error</td>
<td>124</td>
<td>1.19</td>
<td></td>
</tr>
</tbody>
</table>

* p<.00001
pre and postdeliberation; however, there was a significant decrease observed at the 2-week follow-up. The means and standard deviations on which these results are based are presented in Table 37.

**Correlational Analyses**

Of secondary interest was to clarify the role of recall of trial information in its relationship with verdict. Here, Spearman's correlation procedure yielded significant relationships between recall of situational evidence and predeliberation verdicts for the charges of aggravated assault against Officer White ($r = -.37, p < .002$), aggravated assault against Officer Rhodes ($r = -.31, p < .008$), and improper exhibition of a weapon ($r = -.28, p < .02$). This suggested that jurors who recalled more situational evidence at predeliberation, tended to convict more often on these charges than jurors who recall less situational evidence. Similar analysis revealed that at predeliberation, jurors who recalled more about the defendant's character were significantly more likely to convict the defendant on the charge of discharging a firearm in public ($r = -.25, p < .04$). Following deliberation, the Spearman's correlation yielded a significant relationship between recall of the defense attorney's trial arguments and verdicts rendered on the charge of aggravated assault against Officer White ($r = .25, p < .04$). This suggested that after deliberation, jurors who recalled more of the defense attorney's trial arguments tended to acquit more often than jurors recalled less of this information. Finally, at the 2-week follow-up, a significant Spearman's correlation was found between recall of situational evidence and the verdict for the charge of improper exhibition of a
Table 37
Means and Standard Deviations of Recall of the Prosecution Attorney's Trial Arguments Across Time Periods

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Predeliberation</th>
<th>Postdeliberation</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>5.3</td>
<td>5.1</td>
<td>4.4</td>
</tr>
<tr>
<td>(Standard Deviation)</td>
<td>(0.99)</td>
<td>(1.11)</td>
<td>(1.65)</td>
</tr>
<tr>
<td>(n=70)</td>
<td>A^a</td>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>

^a Means with the same letter are not significantly different (p<.05).
weapon \( r = .32, p < .008 \), suggesting that a follow-up, jurors who recalled more of this type of information tended to acquit the defendant on this charge more than jurors who recalled less situational evidence.

**Affective State**

One of the secondary questions was to assess the effects of type of jury, sex of the juror, and time period on different affective states. Pretest assessment of these variables yielded moderately high significant intercorrelations which are presented below: anxiety and hostility \( r = .73, p < .0001 \); anxiety and depression \( r = .70, p < .0001 \); and hostility and depression \( r = .68, p < .0001 \). Because of the relatively high intercorrelations of these dependent variables, a repeated measures multivariate analysis of variance, using BMDP4V of the BMDP Statistical Software (BMDP, 1983), was employed to analyze these data. Under these circumstances, the MANOVA yields a better estimate of the F-ratio than the univariate ANOVA. The repeated measures MANOVA yielded a significant interaction between time period and sex for the multivariate matrix of affective variables (Maximum Likelihood Ratio = .92; Rau's \( F(12, 651) = 1.84, p < .04 \)). Inspection of the ANOVAs revealed that this interaction was only significant for hostility, \( F(4, 248) = 3.71, p < .02 \). This suggested that the significant interaction for the multivariate matrix was accounted for primarily by the time period and sex interaction with the univariate

---

1 The conservative estimate for the p-values for F-tests by Geisser and Greenhouse (1958).
variable, hostility. These results are presented in Table 38. The means on which these findings are based are presented graphically in Figure 8. Examination of this graph suggests that both males and females report relatively the same degree of hostility throughout the trial except following the testimony, when the degree of hostility elicited in females appears to have increased and the degree of hostility elicited in males appears to have decreased.

Spearman correlations showed no significant relationships between any of the affective variables and verdicts for any of the four charges.

Deliberation Process

To analyze the nature of the deliberation process as a function of type of jury, length of deliberation time, and each category of the Bales (1951) interactional process ratings of the deliberations were examined. In addition, this study investigated the effects that these process variables had on the change between pre- and postdeliberation confidence in verdict decision, weighted verdict, juror and jury verdicts, affective states, and recall of trial information.

Intercorrelations

Of the 78 possible intercorrelations between time and the 12 Bales (1951) interactional process categories, 6 showed moderately high significant relationships for the juries in this investigation, suggesting that these categories were relatively independent of each other. Only the significant relationships are presented below: showing solidarity and given opinions \( r = .56, \ p < .05 \); showing
### Table 38
Repeated Measures Multivariate Analysis of Variance Effects Table: Affective State (Anxiety, Hostility, and Depression)

<table>
<thead>
<tr>
<th>Effect</th>
<th>Variate</th>
<th>df</th>
<th>Statistic</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jury</td>
<td>All</td>
<td>9, 146</td>
<td>Maximum Likelihood Ratio</td>
<td>0.86</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean Square</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>3</td>
<td>Statistic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hostility</td>
<td>3</td>
<td>28.3</td>
<td>0.63</td>
</tr>
<tr>
<td></td>
<td>Depression</td>
<td>3</td>
<td>28.7</td>
<td>1.03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean Square</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>1</td>
<td>Statistic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hostility</td>
<td>1</td>
<td>0.77</td>
<td>0.90</td>
</tr>
<tr>
<td></td>
<td>Depression</td>
<td>1</td>
<td>1.96</td>
<td>0.79</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean Square</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>3</td>
<td>Statistic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hostility</td>
<td>3</td>
<td>4.34</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td>Depression</td>
<td>3</td>
<td>13.70</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean Square</td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>Anxiety</td>
<td>62</td>
<td>Statistic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hostility</td>
<td>62</td>
<td>44.94</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Depression</td>
<td>62</td>
<td>27.75</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean Square</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>All</td>
<td>12, 651</td>
<td>Maximum Likelihood Ratio</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean Square</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>4</td>
<td>Statistic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hostility</td>
<td>4</td>
<td>6.12</td>
<td>1.01</td>
</tr>
<tr>
<td></td>
<td>Depression</td>
<td>4</td>
<td>0.92</td>
<td>0.28</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean Square</td>
<td></td>
</tr>
</tbody>
</table>
Table 38—continued.

<table>
<thead>
<tr>
<th>Effect</th>
<th>Variate</th>
<th>df</th>
<th>Statistic</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time x Jury</td>
<td>All</td>
<td>36, 151</td>
<td>Maximum Likelihood Ratio</td>
<td>1.32</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean Square</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>12</td>
<td>6.96</td>
<td>1.15</td>
</tr>
<tr>
<td></td>
<td>Hostility</td>
<td>12</td>
<td>4.00</td>
<td>1.21</td>
</tr>
<tr>
<td></td>
<td>Depression</td>
<td>12</td>
<td>7.44</td>
<td>1.32</td>
</tr>
<tr>
<td>Time x Sex</td>
<td>All</td>
<td>12, 651</td>
<td>Maximum Likelihood Ratio</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean Square</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>4</td>
<td>10.74</td>
<td>1.77</td>
</tr>
<tr>
<td></td>
<td>Hostility</td>
<td>4</td>
<td>12.29</td>
<td>3.79**</td>
</tr>
<tr>
<td></td>
<td>Depression</td>
<td>4</td>
<td>11.91</td>
<td></td>
</tr>
<tr>
<td>Time x Sex x Jury</td>
<td>All</td>
<td>36, 151</td>
<td>Maximum Likelihood Ratio</td>
<td>0.64</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean Square</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>12</td>
<td>4.80</td>
<td>0.79</td>
</tr>
<tr>
<td></td>
<td>Hostility</td>
<td>12</td>
<td>0.77</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>Depression</td>
<td>12</td>
<td>2.65</td>
<td>0.47</td>
</tr>
<tr>
<td>Error</td>
<td></td>
<td></td>
<td>Mean Square</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>248</td>
<td>6.06</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hostility</td>
<td>248</td>
<td>3.32</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Depression</td>
<td>248</td>
<td>5.64</td>
<td></td>
</tr>
</tbody>
</table>

* p<.04
**p<.02 (Geisser-Greenhouse)
Figure 8. Mean Anxiety, Hostility, and Depression Scores by Sex and Time Periods
solidarity and giving orientation \( (r = .74, p < .005) \); asking for suggestions and giving suggestions \( (r = .58, p < .05) \); asking for orientation and giving orientation \( (r = .56, p < .05) \); giving opinions and giving orientation \( (r = .64, p < .02) \); and showing antagonism and showing tension \( (r = .72, p < .008) \).

**Deliberation Time**

To analyze the effects of type of jury on the length of deliberation time, a one-way ANOVA was employed by using the Statistical Analysis System (SAS Institute, 1982). Here, no significant differences were found between the four different types of juries.

**Deliberation Styles**

To analyze the effects of type of jury on styles of interaction during the deliberation, separate one-way ANOVAs were performed for each category of the Bales (1951) interaction process ratings of the deliberation.\(^1\) Only those categories for which significant results were found are presented below.

**Shows antagonism.** Bales (1951) defined statements or behaviors which show antagonism as those that deflate other's status, defend or assert one's self. The ANOVA performed on this category was significant, \( F(3, 8) = 8.78, p < .007 \). These results are presented in Table 39. Tukey's studentized range a posteriori test (df = 8, \( p < .05 \)) revealed that mixed juries showed antagonism significantly more often.

\(^1\) Since the time taken to reach a verdict varied across all juries, all category scores were transformed to rate (i.e., occurrence per minute) scores to permit comparisons.
Table 39
One-Way Analysis of Variance Source Table:
Shows Antagonism

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Jury</td>
<td>3</td>
<td>2.83</td>
<td>8.78*</td>
</tr>
<tr>
<td>Error</td>
<td>8</td>
<td>0.32</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.007

Table 40
Means and Standard Deviations on Rate
(Occurrences per Minute) of Shows Antagonism

<table>
<thead>
<tr>
<th>Type of Jury</th>
<th>Bales (1951) Category</th>
<th>Authoritarian (n=3)</th>
<th>Egalitarian (n=3)</th>
<th>Mixed (n=3)</th>
<th>Neutral (n=3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M 1.12 (SD 0.98) A</td>
<td>0.68 (SD 0.35) A</td>
<td>2.69 (SD 0.27) B</td>
<td>0.60 (SD 0.37) A</td>
</tr>
</tbody>
</table>

^a Means with the same letter are not significantly different (*p<.05*).
than either authoritarian, egalitarian, or neutral juries. The means and standard deviations pertaining to these findings are presented in Table 40.

**Negative reactions.** Bales (1951) defined this "metacategory" as being composed of three basic categories: shows antagonism, which was defined above; shows tension, which includes asking for help or withdrawing out of the field of participation; and disagreements, which consist of showing passive rejection or withholding help. The ANOVA performed on this "metacategory" was significant, $F(3, 8) = 5.64, p < .02$. Tukey's studentized range *a posteriori* test ($df = 8, p < .05$) showed that mixed juries had significantly more negative reactions than either authoritarian, egalitarian, or neutral juries. However, since the correlation between shows antagonism and negative reactions is extremely high ($r = .97, p < .0001$), it is likely that the rate of expressed antagonism has accounted for most of the variance in this analysis.

**Problems of reintegration.** Bales (1951) defined this "metacategory" as consisting of two basic categories: shows antagonism, which was defined above; and shows solidarity, which consists of raising another's status, giving help, or rewarding another. The ANOVA performed on this "metacategory" was significant, $F(3, 8) = 9.77, p < .005$). Tukey's studentized range *a posteriori* test ($df = 8, p < .05$) showed that mixed juries exhibited significantly higher rates of problems of reintegration than either authoritarian, egalitarian, or neutral juries. Again, however, since the correlation between shows antagonism and problems of reintegration is extremely
high \((r = .92, p<.0001)\), it is likely that the rate of expressed antagonism has accounted for most of the variance in this analysis.

**Neutral task area.** Bales (1951) defined this "metacategory" as being composed of six basic categories: gives suggestion or direction; gives opinion, which includes making an evaluation or analysis, or expressing a feeling or wish; gives orientation, which includes giving information, repeating, clarifying, and confirming; asks for orientation, which included asking for information, repetition, and confirmation; asks for opinion, which includes asking for evaluation, analysis, or expression of feeling; and asks for suggestion, which encompasses asking for direction or possible ways of action. The ANOVA performed on this "metacategory" found no significant results. However, one striking finding was that each of the types of juries demonstrated a relatively high rate of time interacting in this task area. Specifically, authoritarian juries spent 60% of their deliberation time interaction in this manner; egalitarian juries spent 66%; mixed juries spent 57%; and neutral juries spent 67%.

Of secondary importance to this study, in order to clarify some of the above findings, this investigation examined the effects that these process variables had on the change between pre- and postdeliberation confidence in verdict decision, weighted verdict, verdict, affective states, and recall of trial information. To analyze these data, a true score analysis (Cook & Campell, 1979) was employed. That is, essentially, for each variable, a regression was performed between pre- and postdeliberation jury averages. The
residuals or true scores obtained from these regressions were then correlated with the deliberation process variables. Only the significant findings are presented below.

For the charge of aggravated assault against Officer Rhodes, significant relationships were found between the change in confidence in verdict decision and the showing of tension release ($r = -.74$, $p < .006$), giving opinions ($r = -.57$, $p < .05$), and disagreements ($r = -.63$, $p < .03$). These findings suggested that for this charge, jurors who showed greater increases in the degree of confidence in their verdict decisions were more likely to come from juries who exhibited lower rates of giving opinions, disagreeing, and releasing tension.

No significant relationships were found between the change in confidence in verdict decision and the deliberation process variables for the charges of aggravated assault against Officer White, discharging a firearm in public, and improper exhibition of a weapon.

Changes in recall of trial information was also examined. Here, the only significant relationship found was between showing antagonism and changes in recall of the prosecution attorney's trial arguments ($r = -.60$, $p < .04$) suggesting that juries showing high rates of showing antagonism contained jurors who showed greater decreases in the amount of recall of the prosecution attorney's trial arguments.

No significant relationships were found between the deliberation process variables and the change in weighted verdicts, juror verdicts, and jury verdicts for any of the four charges.

With respect to affective states, it was shown that disagreements during the deliberation were significantly associated with changes in
the state of anxiety \( (r = .70, p < .01) \) and changes in the state of hostility \( (r = .64, p < .02) \). These findings suggested that juries who showed higher rates of disagreement during deliberation were more likely to contain jurors who showed greater increases in the amounts of hostility and anxiety.

**Comparison of Jurors' Pre- and Postdeliberation Verdicts with the Jury's Verdicts**

An attempt was made to present the relationship between jurors' predeliberation verdict preferences and the actual verdict rendered by the juries on which they serve as well as the differences in jurors' postdeliberation verdict preferences as compared to their predeliberation verdicts and their jury's verdict for each charge.

To illustrate majority effects, a comparison was made between the number of juries with a predeliberation majority (greater than 50%) faction\(^1\) and the number of juries which rendered verdicts in accordance with this majority. For the charge of Aggravated Assault against Officer White, the predeliberation majority faction predicted the jury's verdict in 70% of the instances. For the charge of Aggravated Assault against Officer Rhodes, this occurred 83% of the time. For the charge of Discharging a Firearm in Public, the majority effect occurred 100% of the time. Regarding the charge of Improper Exhibition of a Weapon, the predeliberation majority faction predicted

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\(^1\) Juries with no predeliberation majority faction (i.e., 50-50 split) were excluded in these comparisons.
the jury's verdict 60% of the time. For all charges combined, the majority effect was observed 80% of the time.

To illustrate whether the observed majority effects were due to compliance to normative group pressure or actual attitude change, a comparison was made between the number of times the predeliberation\(^1\) proportion of the majority to minority factions increased for each jury and charge at postdeliberation assessment of verdict preferences. Here, for the charge of Aggravated Assault against Officer White, this attitude shift was observed for the same 70% of the juries in which a majority effect was noted. For the charge of Aggravated Assault against Officer Rhodes, this phenomenon was observed in 92% of the cases. For the charge of Discharging a Firearm in Public, the shift appeared to occur in 100% of the cases. For the charge of Improper Exhibition of a Weapon, 60% of the cases appeared to demonstrate the shift in attitudes. For all charges combined, a shift in attitudes in the direction of the majority appeared to occur 79% of the time.

To illustrate a jury's reversal of decision, the number of times a jury's verdict was opposite that of its members' predeliberation majority faction\(^2\) with respect to verdict preferences was examined. For the charge of Aggravated Assault against Officer White, 30% (3/10, consisting of either a neutral or mixed jury) of the juries with a majority faction of a unanimous predeliberation faction were excluded in these comparisons.

\(^1\) Juries with no predeliberation majority faction and juries with a unanimous predeliberation faction were excluded in these comparisons.

\(^2\) Juries with no predeliberation majority faction (i.e., 50-50 split) were excluded in these comparisons.
predeliberation majority faction rendered an opposite verdict of this majority. (In 2/3 of these cases, the direction was from guilty to not guilty.) Reversal of decision was not observed for the charges of Aggravated Assault against Officer Rhodes or Discharging a Firearm in Public. Forty percent (4/10) of the juries showed a reversal of decision for the charge of Improper Exhibition of a Weapon. (In all of these cases the direction was from guilty to not guilty.)

At postdeliberation assessment of the jurors' verdict preferences, jurors could privately note that they were dissatisfied the jury verdict even though they supported it publicly. Comparison of the jury's verdict to the postdeliberation faction pattern of verdict preferences yielded an index of juror satisfaction with his jury's verdict.¹ Here, for the charge of Aggravated Assault against Officer White, only one authoritarian juror expressed a postdeliberation dissenting verdict. For the charge of Aggravated Assault against Officer Rhodes, there were two discontented jurors (one authoritarian; one egalitarian). One egalitarian juror expressed a postdeliberation dissenting verdict for the charge of Discharging a Firearm in Public. For the charge of Improper Exhibition of a Weapon, three authoritarian jurors and one neutral juror expressed dissenting verdicts at postdeliberation. Combining jurors' postdeliberation verdict preferences across all four charges, only 3% of the jurors expressed dissatisfaction with their jury's verdicts. Sixty-three percent of those dissatisfied jurors were authoritarians.

¹ The hung jury was excluded from this comparison. That is, only unanimous voting juries were used.
Jurors' Perceptions

By measuring the responses by jurors and juries on several different variables, this investigation was able to illuminate some of the factors which might influence their verdict decisions. An attempt was also made to ascertain the jurors' own perception as to what aspects of the trial process had the most influence on their verdicts by asking jurors this question immediately after the end of their deliberations. The results of this survey are presented in Table 45. As can be seen, jurors most frequently reported some aspect of the evidence or testimony (36%) as being most influential to their decisions. The defense attorney's trial arguments (16%) and the judge's instructions regarding the definitions of the law (15%) were reported with the next highest frequency. Surprisingly, only 5% of the jurors reported the deliberation as most influencing their verdict decision. Chi square analyses were performed to determine if the frequencies of jurors from the four different types of juries or different sexes differed with respect to these categories; however, no significant differences were found.
Table 45
Jurors' Perceptions at the End of the Trial of the Aspects of the Trial Process Which Had the Greatest Influence on Their Verdicts (n=70)

<table>
<thead>
<tr>
<th>Jurors' Perception of Influence</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence/Testimony</td>
<td>36%</td>
</tr>
<tr>
<td>Defense Attorney's Trial Arguments</td>
<td>16%</td>
</tr>
<tr>
<td>Judge's Instructions of the Definitions of the Law</td>
<td>15%</td>
</tr>
<tr>
<td>Testimony from the Witnesses for the Defense</td>
<td>6%</td>
</tr>
<tr>
<td>Defendant's Testimony</td>
<td>6%</td>
</tr>
<tr>
<td>Deliberation</td>
<td>5%</td>
</tr>
<tr>
<td>Prosecution Attorney's Trial Arguments</td>
<td>4%</td>
</tr>
<tr>
<td>Prosecution Attorney's Failure to Establish the Burden of Proof (i.e., Guilt Was Not Proven Beyond a Reasonable Doubt)</td>
<td>4%</td>
</tr>
<tr>
<td>Testimony from the Witnesses for the Prosecution</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
</tr>
<tr>
<td>Don't Know</td>
<td>3%</td>
</tr>
</tbody>
</table>

100%

Note: It was not uncommon for jurors to report more than one aspect of the trial process as having the greatest influence on their decisions. In such cases, responses were given equal weight. That is, if a juror reported two aspects each was assigned a frequency value of .5, three reported aspects were assigned a frequency value of .33, etc., on which the percentages were calculated.
CHAPTER IV
DISCUSSION

The results of this investigation served to highlight the effects of jurors and juries with verdict-relevant on important aspects of the decision-making process and the outcome of the trial. Specifically, it was demonstrated that these biases, as well as the sex of the juror and the different time periods in the trial process, affected jurors' confidence in their verdict decisions, confidence in their specific verdicts, recall of trial information, affective state, deliberation process, and verdict. The effects on confidence ratings of juror verdict decisions will be discussed first.

Confidence Ratings of Juror Verdict Decisions

The first variable examined was the jurors' confidence ratings in their verdict decisions. This index assessed confidence in whatever their verdict was and made no distinction between whether the verdicts were guilty or not guilty. With respect to this variable, it was found that different time periods in the trial showed consistent effects. This served to illustrate the impact that the different aspects of the trial process had on the jurors' confidence in their verdict decisions.

For all four charges (see Tables 4, 7, 9, and 11), a significant increase in confidence was observed following the testimony. This
makes conceptual sense in that the testimony included presentation and examination of the evidence. It would be expected that jurors would be able to be more confident their decisions after being able to weigh the "facts" of the case, particularly if the evidence was strong. It was also found that for the two aggravated assault charges (against Officers White and Rhodes), the judge's instructions on how the law applied to the factual issues of the case appeared to enhance significantly the jurors' confidence again.

Surprisingly, an increase in confidence was observed following deliberation for only one of the four charges (Aggravated Assault against Officer Rhodes). Additional analyses indicated that for the charge of Aggravated Assault against Officer Rhodes, an increase in jurors' confidence in their verdict decision between pre- and postdeliberation was associated with serving on juries which demonstrated lower rates of giving opinions, disagreements, and releasing tension during their deliberations. This suggested that for this charge, the lowered rates of jurors offering different opinions left less room for disagreements and less need for tension reduction, which may have created a congenial atmosphere and fostered an increased sense of confidence in their verdict decision. This hypothesis, however, can only be considered speculative in that it is based on correlational analyses, which cannot assume cause and effect relationships.

The fact that the deliberation process was followed by an increase in confidence in verdict decision for only one out of the four charges suggested that, in most cases, the process by which the
jurors come together to reach unanimous decisions did not necessarily increase their confidence in those decisions.

It is interesting that throughout the different time periods in the trial, the jurors' confidence ratings of verdict decisions were much greater for the weapons charges (Discharging a Firearm in Public and Improper Exhibition of a Weapon) than the two assault against police officer charges. This was probably reflective of the fact that the defense rested on the premise that the defendant mistook the officers' identity as that of his in-laws.

More importantly, the type of jury bias was shown to have a significant interaction with the time period of the trial for the charge of Aggravated Assault against Officer White. Here, following deliberation, jurors on authoritarian juries showed an increase in confidence while those on mixed juries showed a decrease. The difference between these jurors was significant, as was illustrated in Figure 3. It appears that out of the three homogeneous types of juries, the authoritarians showed a greater increase in confidence through this process of reaching a consensus. Perhaps authoritarians were more susceptible to the influence of those sharing similar opinions. This is consistent with the prediction of this study and the findings of Lamberth et al. (1982) that authoritarian jurors are more likely to accept, and be more confident about, the arguments of the perceived power structure (i.e., the consensus of opinions in the group deliberation). Jurors on mixed juries showed the lowest level of confidence in their verdict decisions following deliberation. This suggested that the diverse and perhaps conflicting viewpoints
expounded during the deliberation of such juries served to reduce the jurors' confidence in their own decisions.

**Weighted Juror Verdicts**

The increase in jurors' confidence in their verdict decisions illustrated that, as the trial progressed, jurors become more certain of their decisions about the defendant's guilt or innocence. Although this information is useful, it may be misleading because it does not reflect changes in the direction of the verdict in which the jurors are confident. For example, a juror's confidence might increase throughout the trial, but at one point the verdict might be guilty and, at a later point, it might be not guilty. Therefore, the weighted index of jurors' verdicts (i.e., confidence in their specific verdicts) was analyzed to illustrate the differences in confidence with a given verdict.

Different time periods in the trial were shown to effect the jurors' responses to this variable. For the charge of Aggravated Assault against Officer Rhodes, jurors changed their verdicts from guilty to not guilty after the testimony. This finding was presented in Table 15 and suggested that the testimony was able to persuade the jurors to change their verdicts and report more confidence in these changed verdicts. The data suggested that this might have been due not only to the strength of the evidence presented by the defense but to the fact that the jurors' showed almost no confidence in their guilty verdicts following the opening arguments. As with the results reported earlier for confidence in verdict decisions, this finding
suggests that the presentation of the "facts" of the case had a significant impact on the type of verdict rendered by jurors as well as their confidence in this verdict.

These data also indicated that deliberation was a potent influence on the jurors' confidence in their specific verdicts. In two of the four cases (Aggravated Assault against Officer Rhodes and Discharging a Firearm in Public) the deliberation process was shown to solidify the jurors' confidence in their verdicts although the verdicts were not guilty and guilty, respectively. These data were presented in Tables 15 and 17. Additionally, for these two charges all of the juries showed a high degree of agreement (i.e., same verdict in 11/12 and 12/12 juries, respectively) in their final verdicts. Perhaps confidence was high because the jurors' verdicts were commensurate with the majority opinion. Other authors have also found majority influences on the decisions of jurors (Freundlich, 1983; Kalven & Zeisel, 1966; Nemeth, 1977).

However, the fact that in only two of the four charges, confidence in verdict increased following deliberation, suggested that this process did not consistently serve to increase jurors' certainty in their decisions. Juries were relatively split on their verdicts for the charges of Aggravated Assault against Officer White and Improper Exhibition of a Weapon (i.e., seven juries voting not guilty and five juries voting guilty for each charge). One might speculate that, for these charges, an overwhelming majority did not exist. Perhaps for these charges, a variety of interpretations as to what had really happened were being considered. As Holstein (1985) had shown,
these types of deliberations are likely to be more complex and majority effects are less likely to be observed. Under such conditions one might expect that jurors would not be as confident in their verdicts.

Of greater interest to the present investigation was that, for the charge of Improper Exhibition of a Weapon, jurors serving on egalitarian juries differed greatly from jurors on all three other types of juries with respect to this index. This finding was presented in Table 19. These egalitarian jurors, although reporting very little confidence in their decisions, rendered not guilty verdicts; whereas juries on the other types of juries showed moderate levels of confidence in their guilty verdicts. However, this main effect for type of jury can be explained more parsimoniously by examining the interactions found between type of and time period in the trial. These interaction effects will now be discussed.

Significant interactions between time period in the trial and type of jury on jurors' weighted verdicts were observed in two of the four charges (Aggravated Assault against Officer White and Improper Exhibition of a Weapon) at postdeliberation. Specifically, for the charge of Aggravated Assault against Officer White, Figure 4 illustrated that following deliberation only the jurors on neutral and authoritarian juries rendered guilty verdicts in which their confidence was minimal. Following deliberation, jurors on egalitarian juries rendered not guilty verdicts with minimal confidence. Interestingly, jurors serving on mixed juries, following deliberation, not only rendered not guilty verdicts, but reported relatively high
confidence in their verdicts. At first glance, this does not make sense as one would expect that deliberations of mixed juries could contain a greater variety of interpretations and arguments about what really happened and that this might serve to reduce confidence. However, the results of this investigation provide support for the findings of Bray and Noble (1978) and Lamberth et al. (1982). That is to say, these authors found that authoritarian jurors were more likely to change their opinions during deliberations when serving on juries that contained egalitarian jurors. Perhaps, as these authors postulated, authoritarians were susceptible to the influence of the egalitarians' arguments and changed their opinions from guilty at predeliberation to not guilty at postdeliberation. To take this interpretation a step further, the authoritarians in these mixed juries might have shown increased confidence, knowing that their changed verdicts were supported by the group; additionally, the egalitarians on these juries, upon seeing the effect that their arguments had in persuading the authoritarians, also showed an increase in confidence in their verdicts. It must be cautioned, however, that this interpretation of these data are inferential and retrospective and can only be taken as tentative support for the findings of Lamberth et al. (1982) and Bray and Noble (1978).

For the charge of improper exhibition of a weapon, Figure 5 illustrated that jurors on egalitarian juries made a dramatic shift in opinion from predeliberation to postdeliberation. That is, before deliberation, egalitarians rendered guilty verdicts with relatively low confidence, as did jurors serving on other juries. However,
following deliberation, the jurors on the egalitarian juries shifted their verdicts to not guilty and reported high confidence in this verdict. The verdicts and confidence levels of jurors on the other types of juries remained essentially the same. This finding appears to have supported the notion that the phenomenon of group polarization (Myers & Kaplan, 1976; Myers & Lamm, 1976) occurred in these egalitarian jurors. In other words, for these jurors, deliberation appeared to result in a stronger commitment (i.e., higher confidence) to not guilty verdicts. These response tendencies have also been reported in previous investigations using low dogmatism juries (Vidmar, 1972b), low authoritarians (Bray & Noble, 1978), and egalitarians (Buckhout et al., 1979). Indeed, the juries comprised of egalitarians in the study of Buckhout et al. (1979) were classified using the LAQ and were found to shift more toward leniency than authoritarian or mixed juries. It was interesting that, at predeliberation, the egalitarians in the present study tended to render guilty verdicts. It was possible that the egalitarians' biases towards leniency were hidden at predeliberation assessment, but were influential in that confidence in guilty verdicts was very low. The deliberation process might have elicited these biases, resulting in group polarization. Similar findings were reported in low dogmatism juries (Vidmar, 1972b). These findings taken together suggest that

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1 This dramatic shift was probably responsible for the main effects for time period (where jurors' confidence in their guilty verdicts decreased dramatically after deliberation) and type of jury (in which egalitarian juries were the only juries to acquit even though their confidence in this verdict was quite low).
not only are egalitarians likely to be more lenient, but that these tendencies might become intensified through the process of deliberation.

Of methodological interest, it was noteworthy that these egalitarians reported confidence levels in their not guilty verdicts at the 2-week follow-up which were similar to those following deliberation, but not to those before deliberation. This suggested that research employing methods which assess jurors' opinions about their predeliberation tendencies are likely to obtain responses which have been contaminated by the effects of deliberation.

Verdict

Through the investigation of the confidence in specific verdicts of jurors, we have been able to gain a greater understanding of the processes which operate during the course of a trial. Nevertheless, the verdicts rendered, are unquestionably the most important aspect of the trial. These decisions determine the fate of the defendant and the efficacy of our judicial system.

As was done with the other dependent variables, the changes in proportion of guilty verdicts within each jury over the course of the trial were investigated. Significant effects for time period were found in two of the four charges for which the defendant was tried (Aggravated Assault against Officer Rhodes and Improper Exhibition of a Weapon). For the charge of Aggravated Assault against Officer Rhodes, Table 23 showed significant decreases in the proportion of guilty verdicts following testimony and deliberation. Recall that
significant increases in confidence, in these not guilty verdicts, were observed at these same time periods for this charge. This clearly suggested that, for this charge, the effects of testimony and, subsequently, deliberation served to decrease the proportion of guilty verdicts within juries and that the mechanism through which this operated was probably by increasing jurors' confidence in not guilty verdicts.

Similarly, for the charge of Improper Exhibition of a Weapon, Table 27 showed significant decreases in the proportion of guilty verdicts following the judge's instructions and deliberation. As reported previously, a significant increase in confidence in not guilty verdicts was observed following deliberation for this charge. The effects of the judge's instructions and deliberation apparently served to decrease the proportion of guilty verdicts; and although increased confidence in not guilty verdicts may have influenced the decrease in proportion of guilty verdicts following deliberation, this was probably not associated with the decrease in proportion of guilty verdicts following the judge's instructions. One might speculate that perhaps those aspects of the instructions, that called upon the jurors to acquit if they believed that guilt was not proved beyond a reasonable doubt or that the defendant was acting in self-defense, had a strong impact and influenced a reduction in the proportion of guilty verdicts.

The above findings suggested that the proportion of guilty verdicts within juries changed over the course of a trial, particularly following testimony, the judge's instructions, and
deliberation. One mechanism that appears to be associated with these changes is the jurors' confidence in their specific verdicts. Additionally, although with less certainty, there is reason to believe that definitions of the law might also influence the changes in proportion of guilty verdicts. What is clear, however, is the fact that these different aspects of the trial process appear to have a cumulative impact on jurors' decisions about the defendant's guilt (or in these cases, the defendant's innocence). That is to say, these results suggested that these aspects of the trial process were all necessary to assure the defendant of his due process.

While it is encouraging to know that the trial process can successfully function to provide a defendant with his due process, these findings must be examined more closely. First, was the fact that for the two charges in which the proportion of guilty verdicts changed across the different time periods in the trial, following the opening arguments, the average proportion of guilty verdicts was greater than 50%, indicating that for these charges, the defendant was not "innocent until proven guilty, but rather "guilty until proven innocent." Clearly, this was not the way due process was intended to be administered.

Secondly, the results from this investigation showed that in two of the four charges (Aggravated Assault against Officer White and Discharging a Firearm in Public), the proportion of guilty verdicts in each jury remained essentially the same from the end of the opening arguments to following deliberation. Similar findings were reported previously by Freundlich (1983) for four out of the six charges he
studied. Additionally, both studies found that although the proportion of guilty verdicts did not vary over the course of the trial for some of the charges, confidence levels in verdict decisions were shown to increase during the trial. That is to say, in both of these studies, there were several charges in which the jurors appeared to be deciding upon the defendant's guilt or innocence after the opening arguments (i.e., before any evidence is presented) and that the different aspects of the trial process served to increase their confidence in their initial verdict decisions. The findings of this study clearly supports those of several previous investigations, which suggested that jurors constructed a "thematic framework" or organizing theme early in the trial process into which subsequent trial information was evaluated (Freundlich, 1983; Pyszczynski & Wrightsman, 1981; Sherrod, 1985; Vinson, 1982, 1983; Weld & Danzig, 1940). It would also appear that these organizing schemas remain stable throughout the trial in these cases. On the other hand, it could be argued that in these cases the evidence presented supported the jurors' initial opinions.

For the charge of Aggravated Assault against Officer Rhodes, an interesting interaction was shown in Figure 6 between the effects of type of jury and time period in the trial. Following the opening arguments, egalitarian juries showed comparably lower proportions of guilty verdicts (under 50%) than the other jury types (see Figure 6), suggesting that egalitarians tended to adhere to the process of assuming innocence until guilt was proven. Additionally, these egalitarian juries showed more fluctuation in the proportion of guilty
verdicts over time, increasing after the testimony and decreasing following the judge's instructions and again after deliberation. This might be taken to suggest that egalitarian juries show a type of open-mindedness in which they are influenced differentially by different aspects of the trial process than other types of juries. There does not appear to be a logical explanation for why mixed juries showed a major decrease in the proportion of guilty verdicts following testimony.

Perhaps the most important finding of this study, however, was that for the charge of Aggravated Assault against Officer Rhodes (despite wide variances in the proportion of guilty verdicts by different jury types following the opening arguments, testimony, judge's instructions, and follow-up), after the deliberation, all different jury types showed almost identical proportions of guilty verdicts. This finding is widely supported by numerous studies, which have concluded that the deliberation process is an effective mechanism for reducing extra-legal juror biases (Carretta & Moreland, 1983; Foss, 1976; Goldman et al., 1975; Hastie et al., 1983; Holstein, 1985; Izzet & Leginski, 1974; James, 1959; M.F. Kaplan & Miller, 1978; Kessler, 1973). Additionally, this finding is commensurate with those of Sealy (1982) and Hastie et al. (1983) who showed that extra-legal biases have little-to-no influence on their final decisions.

Furthermore, inspection of Figure 6 illustrates an important methodological point. That is, when verdicts of jurors are assessed after a brief summary (written, audio, or audio-visual) of a trial (equivalent to the opening arguments and/or testimony) without having
them deliberate as a group or jurors serving on juries are assessed through posttrial polling weeks after the trial, investigators are not likely to obtain an accurate picture of what verdicts jurors serving on juries are likely to render. Certainly, the results of studies which have used such methodology must be taken as tenuous at best and misleading at worst.

Finally, a major finding was observed for the charge of Improper Exhibition of a Weapon. Here, a main effect for type of jury showed that egalitarian juries showed a lower proportion of guilty verdicts (less than 50%) than the other three types of juries (greater than 50%). This finding raises several important issues. Most of the literature cited in this review, which compared authoritarian to egalitarian jurors, suggested that authoritarians were biased in a manner that made them prone to convict. Egalitarians, on the other hand, have been considered impartial and unbiased (Boehm, 1968; Mahoney, 1982). However, these studies did not employ control groups which made it difficult to assess whose responses were really biased. By comparing responses of authoritarians and egalitarians to two different types of control juries (i.e., juries with a mixture of authoritarians and egalitarians, neutral jurors), the findings of the present investigation indicated that jurors on egalitarian juries were biased in their responses--biased towards lenience. That is, they were the only juries to acquit, even though their confidence for this verdict was quite low. Jurors serving on authoritarian juries, in contrast, responded similarly to jurors in the mixed and neutral control juries--suggesting that their responses were commensurate with
the prevailing consensus, which included theoretically neutral jurors. This interpretation would suggest that researchers in this area change their conceptualization of egalitarians representing neutral viewpoints.

Alternatively, this finding could be interpreted to indicate that egalitarians were, indeed, the least biased and that the other three types of juries were conviction-prone. Two arguments support this other interpretation. First, the definition of the law requires that the juries must be convinced "beyond a reasonable doubt" that the defendant was guilty before rendering a guilty verdict. Inspection of the level of confidence in the guilty verdicts (see Table 26) suggested that authoritarian, mixed, and neutral juries were only moderately confident in the defendant's guilt. In other words, this would appear to indicate that these juries voted guilty in the presence of some doubt which they equated with reasonable doubt about the defendant's guilt. Secondly, a recent study by J.P. Levine (1983) indicated that federal court verdicts have shown an increased rate of jury convictions over the past 30 years. J.P. Levine argued that society, over the recent years, has taken a conservative stand on criminal justice issues and that the decisions of juries reflect these values and prejudices, which view due process and protection of the innocent as less important than concepts of law and order and controlling crime. These latter arguments lead to the conclusion that authoritarians were biased towards conviction, as has been shown by several previous studies (Alexander & Licker, 1975; Boehm, 1968;
Goldman et al., 1983; "Juror Bias," 1980; Jurow, 1971), and that this bias represents the vox populi.

Whichever of these alternative interpretations one accepts would depend on their convictions about what justice is. That is to say, in accepting the former interpretation that egalitarians appear to be biased towards leniency, one's personal philosophy would be that justice is a dynamic concept which represents the changing views of society at large; for example, if the vox populi favors the control of crime, then justice would be served by convicting more alleged criminals and those who do not are seen as biased. In accepting the latter interpretation that egalitarians were not biased, but were the only juries to give the defendant his due process, one's personal philosophy would be that justice is an ideal that remains unchanged as the views of society change; for example, regardless of the views of society, justice would be served if the defendant was considered innocent until proven guilty beyond a reasonable doubt. It is left to the reader to decide which is right.

The literature has suggested that differences in recall of trial information (Berg & Vidmar, 1975; M.F. Kaplan & Miller, 1977; Sherrod, 1985), transient affective states (Freundlich, 1983; Freundlich & Goldman, 1982; Goldman & Casey, 1980; Goldman et al., 1975), and deliberation processes (Carretta & Moreland, 1983; Freundlich, 1983; Goldman et al., 1975; Hastie et al., 1983; James, 1959; Kessler, 1973) may be relevant to decisions about verdict. As the present study was interested in the effects of jury bias on different trial-related variables, these particular variables were examined more closely.
This discussion now turns toward the results of the effects of jury bias on these variables.

Recall of Trial Information

A great deal of information is presented throughout the course of a trial and jurors are expected to remember the arguments, testimony, evidence, and definitions of the law (without the benefit of being able to take notes). Jurors must then draw from the information they recall from the trial to make a decision about the defendant's guilt or innocence. However, it had been suggested that systematic biases can and do effect jurors' recall of trial information (Pyszczynski & Wrightsman, 1981; Sherrod, 1985) and that memory may also be reconstructive and unreliable (Loftus, 1979a; Penrod et al., 1982; Sherrod, 1985). Therefore, it was important to investigate jurors' ability to recall different aspects of trial information (i.e., recall of situational evidence, the defendant's character, the defense and prosecution attorney's trial arguments) and, in particular, how different biases effect the recall of trial information.

Recall of trial information was examined at predeliberation, postdeliberation, and at the 2-week follow-up to test the efficacy of methodologies that use posttrial polling of jurors, weeks after the conclusion of the trial. Additionally, this allowed for testing the hypothesis that informational exchange was an important part of the deliberation process. Here, for three out of the four types of recall of trial information assessed (situational evidence, defendant's character, and prosecution attorney's trial arguments), recall
remained essentially the same between pre- and postdeliberation and showed a significant decrease at the 2-week follow-up. These findings indicated that the passage of time after the trial curtails jurors' ability to recall several different aspects of trial information and suggested that studies which employed retrospective methods to understand juror and jury behavior during the trial have obtained less accurate results than reported. In addition, the recall of the defense attorney's trial arguments significantly decreased following deliberation, suggesting that the exchange of this type of trial information did not appear to be a major aspect of the deliberation process. Indeed, given this latter finding, it might be postulated that some other process occurred which might have interfered with recalling information after deliberation.

Regarding the effects of jury bias on recall, Figure 7 showed that jurors on authoritarian juries recalled less situational evidence than other jurors both before and after deliberation. This predicted finding was supported by the data of Berg and Vidmar (1975), which showed that authoritarians, as classified by the LAQ, recalled less situational evidence than egalitarians. This may be taken to suggest that authoritarian jurors relied on some variable(s) other than the situational evidence, which might include biases, to reach their verdicts.

The present study also showed differences between sexes with respect to recall. Specifically, females recalled significantly more of the defense attorney's trial arguments than males. Here, it was possible that females found something appealing about this attorney
and/or his arguments which resulted in their attending to his arguments better than males. Of course, this explanation is speculative.

Since the investigation of recall of trial information was an important aspect of this study, its association with verdict was analyzed. For three out of the four charges (Aggravated Assault against Officers White and Rhodes and Improper Exhibition of a Weapon) the recall of situational evidence was positively associated with guilty verdicts at predeliberation; while for the charge of Discharging a Firearm in Public, recall of the defendant's character was positively associated with guilty verdicts. Perhaps, for the former charges, certain aspects of the situations of the case pointed towards the defendant's guilt; while for the latter charge, aspects of the defendant's character were more important in making attributions about the defendant's guilt. More importantly, however, was the fact that for all of the cases recall of certain types of trial information are associated with jurors' verdict choices as they entered the deliberation process. Following deliberation, recall of the defense attorney's trial arguments appeared to be positively associated with not guilty verdicts--suggesting that when the defense attorney was successful in getting the jurors to remember his arguments, he was also more successful in having his client acquitted.

The implications of these findings was that for the prosecution to increase the changes of a conviction, he needed to influence the jurors to remember the evidence and information pertaining to the defendant's character; for the defense attorney to increase his
chances of an acquittal, he needed to influence the jurors to remember his arguments regarding the defendant's innocence and the weakness of the prosecution's case. Although these findings may serve as a potential guide for attorneys, it must be cautioned that causality cannot be inferred from these correlational relationships, which, in addition, were very low and accounted for only a small percentage of the variance. Furthermore, the retrospective nature of these interpretations can only be considered tenuous until further research is performed in which these findings are replicated.

Affective State

Evidence has shown that different affective states are associated with the verdicts of jurors (Freundlich, 1983; Freundlich & Goldman, 1982; Goldman et al., 1975; Simon, 1967). More specifically, higher levels of anxiety and hostility have been associated with jurors who tended to convict and give harsher penalties, while lower levels of emotionality were associated with innocent-deciding juries. However, the primary objective of the present investigation was to study the effects of jury biases, not affective states, on jury behavior. Therefore, the effects of jury biases on different affective states were explored. Here, although no effects for type of jury were found, there were some interesting sex differences which interacted with time periods in the trial. This was presented in Figure 8. Here, it was shown that following the testimony, females reported significantly higher levels of hostility than males. Perhaps this was related to the fact that during this part of the trial, there was testimony
presented in which the defendant reportedly slapped his wife and that she testified that "it was no big deal." One would expect that such statements would particularly anger the average college woman. Other nonsignificant trends showed that females tended to be more depressed than males throughout the trial and that at follow-up males showed higher levels of emotionality (i.e., anxiety, hostility, depression). Although differences in sex across time periods were found, this study found that affective state was not associated with verdict for any of the four charges. This suggested that although different types of jurors may react disparately to different parts of the trial, contrary to the findings of other studies, this does not appear to have an impact on their decisions regarding verdict.

**Deliberation Process**

The jury deliberation has probably been the most widely discussed aspect of the trial process because of its importance at the symbolic and practical levels of the American system of criminal justice. Indeed, the results reported in the present investigation have indicated that, depending on the charge, deliberation may have strong effects on verdict and confidence in verdict for certain types of juries, as well as serving as an effective means of reducing jurors' biases. The processes of these deliberations were an important aspect of this study and it is to this that the discussion now turns to eludicate the above findings.

Regarding time of deliberation, there were no significant differences between jury types indicating that jury biases did not
appear to operate through the mechanism of increasing or shortening the length of deliberation.

Surprisingly, jury types only differed significantly on one of the 12 Bales (1951) categories: shows antagonism. It was shown that juries with a mixture of egalitarians and authoritarians showed higher rates of antagonism than any of the other types of juries. Other nonsignificant trends were also commensurate with this finding. Mixed juries also tended to show higher rates of disagreement, tension, and giving opinions. These data clearly suggested that the deliberations of juries, comprised of jurors with largely disparate attitudes about the criminal justice system, were likely to entail heated discussions and disagreements about alternative viewpoints and interpretations of the law and evidence. Foss (1976) had also previously found that mixed juries were likely to offer more interpretations which were representative of different points of view.

Results discussed earlier in this chapter suggested that, for the charge of Improper Exhibition of a Weapon, jurors serving on egalitarian juries demonstrated a polarization of their confidence in not guilty verdicts following deliberation. Although the analyses of the deliberation process revealed no significant findings in which egalitarian juries differed from others, a trend was found in which egalitarian juries exhibited higher rates of agreements than other juries. One must exercise caution when making interpretations based on nonsignificant results; however, this finding might be taken to indicate that when egalitarian jurors deliberated with others who share similar viewpoints (i.e., high agreements) this process was
likely to result in a stronger commitment to their initial inclinations. This is precisely the process through which Myers and his associates (Myers & Kaplan, 1976; Myers & Lamm, 1976) postulated the group polarization phenomenon operates.

Despite differences between different types of juries with respect to deliberation styles, these data revealed that different types of juries spent approximately the same amount of time (Mean = 62.5%) on task-related matters. That jury deliberations are primarily a task-oriented group has also been shown by previous studies (Carretta & Moreland, 1983; Goldman et al., 1975; Hastie et al., 1983; James, 1959; Kessler, 1973). These findings probably account for the fact that, for the charge of aggravated assault against Officer Rhodes, the deliberation process appeared to eliminate jury bias (see Figure 6). These results taken together can serve to reassure us of the usefulness of trial by jury as a means of administering criminal justice.

Of secondary interest to the present investigation, additional analyses were performed to illustrate effects, which deliberation had on other trial processes. First, intercorrelations between the 12 Bales (1951) interactional process categories indicated that certain processes were likely to be associated with each other during the deliberations. It was found that juries who showed higher rates of solidarity were more likely to show higher rates of offering opinions and orientation suggesting that an atmosphere of unity, which is often nonthreatening, was associated with the sharing of opinions and guidance. Alternatively, juries showing higher rates of antagonism
were also likely to show higher rates of tension suggesting that negative actions were associated with negative reactions. In addition, it was shown that when jurors make a request, such as asking for a suggestion or guidance, they are likely to be reciprocated by receiving a suggestion or orientation. These latter findings suggested some degree of complementarity of the deliberation process.

Second, it was shown that juries exhibiting high rates of antagonism contained jurors who showed poorer recall of the prosecution attorney's trial arguments. Remember, that this chapter previously discussed that mixed juries showed higher rates of antagonism; they also showed relatively high levels of confidence in not guilty verdicts, for the charge of Aggravated Assault against Office White, after deliberation (see Figure 4). A tentative hypothesis could be made, in which the antagonism exhibited in the deliberations of these mixed juries interfered with the recall of the prosecuting attorney's arguments, resulting in higher levels of confidence in not guilty verdicts for this charge. Again, however, this is only speculative.

Third, it was shown that juries who showed higher rates of disagreements were more likely to report an increase in levels of anxiety and hostility between pre- and postdeliberation. Goldman and Casey (1980) had previously reported that the deliberation process was an anxiety-producing experience. The results of the present study suggested that strong emotions, such as anxiety and hostility, are aroused during deliberation particularly when the jurors express discordant opinions.
**Deliberation Effects**

By comparing jurors' predeliberation and postdeliberation verdicts and the jury's verdicts, the effects of deliberation on juror and jury decisions was possible. These data indicated that for all four charges against the defendant, the opinion of the predeliberation majority faction predicted the jury's verdict in 80% of the instances where a predeliberation majority faction existed. This figure approximates the 90% estimate of the occurrence of majority effects reported by Kalven and Zeisel (1966) and Nemeth (1977). The present study showed that the opinions of the predeliberation majority factions not only influenced the jury's verdict, but also the jurors' postdeliberation verdicts. That is, for all four charges, there was an increased number of postdeliberation verdicts in the direction of the predeliberation majority factions in 79% of the instances where a predeliberation majority faction (excluding a unanimous predeliberation majority) existed. These results suggested that jurors did not just comply with the majority during deliberation because of normative pressures, but actually appeared to experience attitude change. After all, there was no apparent normative pressures for completing individual postdeliberation ballots. Additionally, the fact that these postdeliberation ballots revealed a stronger commitment to the predeliberation majority opinion provides further support for the group polarization phenomenon (Myers & Kaplan, 1976; Myers & Lamm, 1976) occurring in jury deliberations.

Although the effects of the majority were predominant, they were not pervasive. Indeed, the present study demonstrated that for all
four charges, an average of 35% of the instances where a predeliberation majority faction existed the jury's final verdict was in the opposite direction. Eighty-four percent of these reversals switched from guilty to not guilty. Kalven and Zeisel (1966) had previously reported that 14% of their juries showed reversals toward not guilty and Hastie et al. (1983) reported that over one-third of their juries showed reversals of verdict. The results of the present investigation are comparable. Perhaps, as Nemeth (1977) proposed, minorities holding not guilty positions have an advantage in swaying the proconviction majority because it is easier to persuade other members of the jury that they might have a reasonable doubt than to convince them beyond such a doubt. Because of this reasonable doubt, jurors holding a position of not guilty are probably less likely to give in which may be important in convincing the majority. Other authors (Hastie et al., 1983) explained reversals in terms of a bellwether effect in which one juror shifted and several others were drawn to him or her, especially if the juror presented cogent and valid reasons for his or her shift. These two explanations are not incompatible in that the presence of reasonable doubt might well be considered a valid reason.

Another interesting phenomenon is the hung jury which is deadlocked because the jurors cannot reach a unanimous decision. Although Kalven and Zeisel (1966) described the hung jury as an indication of the absence of bias, others (Hastie et al., 1983) have described this phenomenon as a failure of the jury system. In the present investigation, for one out of the four charges (aggravated
assault against Officer Rhodes), 1 out of the 12 juries was a hung jury. This jury happened to be neutral, which would appear to support the argument of Kalven and Zeisel (1966). However, closer inspection of the data on deliberation style revealed nonsignificant trends for neutral juries. Specifically, these juries showed the highest rates of asking for and giving orientation. These categories comprised Bales' (1951) "metacategory" of problems of decisions. Although nonsignificant data must be interpreted with caution, these findings suggested that perhaps this jury was hung because its members had difficulties communicating their ideas to each other. If this was the case, it would support the contention of Hastie et al. (1983) that hung juries represent a failure in the jury system; in this case a failure to effectively communicate. Clearly, further research on the reasons for hung juries and their implications is needed.

By comparing the jurors' postdeliberation verdict to his or her jury's verdict this study was able to demonstrate that for all four charges an average of 3% of the jurors expressed dissatisfaction with their jury's unanimous verdicts. Similar low rates of juror discontent were reported by Hastie et al. (1983). It is hypothesized that if juror satisfaction with the trial outcome reflects that of the population at large, then one could conclude that our society is satisfied with the jury system. What was also interesting was the fact that a large percentage of these dissatisfied jurors were authoritarians. This suggested, as mentioned earlier in this chapter, that authoritarians might have been more persuadable to vote in
accordance with the majority even though they did not favor such a verdict. This notice was also postulated by Lamberth et al. (1982).

**Jurors' Perceptions**

Finally, an attempt was made to illustrate what jurors perceive as most influencing their decisions. As was shown in Table 45, at the end of the trial, over 50% of the jurors reported the testimony and the judge's instructions as being most influential. These results are commensurate with the increases in confidence in verdict decision observed following these aspects of the trial. It was most interesting, however, that given the strong impact of the deliberation process on several variables including verdict, only 5% of the jurors reported the deliberation process as being most influential. This would suggest that either the influence of the group deliberation was denied or operated at a level out of the jurors' awareness.
CHAPTER V
SUMMARY

The results of the present investigation have demonstrated that different biases along the authoritarian continuum, as assessed by the Legal Attitudes Questionnaire (Boehm, 1968), affected jurors' and juries' verdicts, confidence in verdicts, recall of trial information, and the deliberation process. Additionally, different aspects of the trial process also affected these variables.

Authoritarian jurors appeared to recall less of the situational evidence from the trial. Evidence was also presented that, for one of the charges, authoritarians tended to respond in accordance with the perceived general consensus or power structure (Lamberth et al., 1982) during the deliberation, suggesting that the opinions of these jurors might be more malleable in the presence of group pressure to conform. It was also shown that, for another charge authoritarian juries rendered the same relatively high proportion of guilty verdicts as both mixed and neutral juries.

In contrast, for one charge, egalitarian jurors appeared to be more open to influence during aspects of the trial before deliberation such as the testimony and the judge's instructions. These jurors also appeared more likely to give the defendant his due process; that is to say, they were more likely than other types of jurors to believe that the defendant was innocent until proven guilty beyond a reasonable
doubt. Similar findings were reported by Boehm (1968) and Mahoney (1982). During the deliberation process, egalitarians appeared to be more able to persuade authoritarian jurors on the same jury. Additionally, for one charge, egalitarian juries demonstrated the group polarization phenomenon by drastically increasing their confidence in not guilty verdicts following deliberation. That these juries tended to show relatively high rates of agreement during the deliberation, suggested that this variable might have contributed to the jurors' stronger commitment (i.e., higher confidence) to their verdicts. Similar phenomena have been observed in studies using low dogmatism juries (Vidmar, 1972b), low authoritarians (Bray & Noble, 1978), and egalitarians (Buckhout et al., 1979). One of the more interesting findings of this study showed that, for one charge, egalitarian juries showed a lower proportion of guilty verdicts than any of the other three types of juries.

The findings, that egalitarian juries were less likely to convict than any other type of juries and that authoritarian juries showed the same relatively high proportion of guilty verdicts as mixed and neutral juries, were discussed in terms of two alternative explanations. The first hypothesis suggested that, by employing the mixed type and neutral control juries, this study revealed that egalitarian juries were biased toward leniency and that authoritarian juries rendered more accurate verdicts in the sense that they were in agreement with the general consensus. However, confidence in the guilty verdicts rendered by authoritarian, mixed, and neutral juries was low. This suggested that to adhere to this hypothesis, one must
believe in justice as reflecting the changing views of the vox populi, which currently appear to be conservative and support the concept of law and order (J.P. Levine, 1983). The second explanation proposed that the egalitarian juries were the only juries not biased toward conviction, because the confidence levels in the guilty verdicts of the other juries were low (i.e., indicating the presence of a reasonable doubt). It was suggested that this indicated that the egalitarian juries were the only ones to give the defendant his due process and that, as had been shown in previous studies (Alexander & Licker, 1975; Boehm, 1968; Goldman et al., 1983; "Juror Bias," 1980; Jurow, 1971), the authoritarian juries were biased toward conviction and that this bias was reflective of the general consensus. Adherents to this second hypothesis, it was suggested, would hold the philosophy of justice as being an unchanging ideal (which is in accordance with the definitions of the law).

Interesting results were found during the deliberations of mixed juries (comprised of both authoritarian and egalitarian jurors). These juries showed highest rates showing antagonism, showing tension, giving opinions, and disagreeing. This supported Foss's (1976) hypothesis that juries comprised of members holding disparate views were likely to express and discuss interpretations representative of the different interpretations of the case. He had suggested that this might be one means of reducing the possibility of biased verdicts. However, it was cautioned that this type of heated deliberation process might interfere with certain types of recall as it was shown
that such deliberation processes were associated with less recall of the prosecution attorney's trial arguments.

The only remarkable finding for neutral juries was that one of these juries comprised the only hung jury. Data were presented to tentatively suggest that neutral juries appeared to have higher rates of problems of decision which might have been associated with the inability to reach a unanimous decision.

Different aspects of the trial process also were shown to affect jury and juror behavior. Across all four charges, the testimony appeared to enhance the jurors' confidence in their verdict decisions. Indeed, for one of the assault charges, testimony was followed by a significant decrease in the proportion of guilty verdicts within each jury, illustrating the importance in which the facts of the case had in influencing the jurors' decision process.

The judge's instructions to the jurors regarding the definitions of the law also were shown to be influential in increasing jurors' confidence in verdict decision for the two assault charges. Additionally, for one weapon charge, the judge's instructions resulted in a significant decrease in the proportion of guilty verdicts. Here, it was suggested that the instructions guiding the jurors to acquit if they held a reasonable doubt about the defendant's guilt might have been influential in decreasing the proportion of guilty verdicts.

Examination of the jurors' perceptions of what influenced them the most concurred with the findings that the testimony and the judge's instructions had a strong impact on the jurors' decisions. Interestingly, only a small percentage of the jurors reported that the
deliberation process had a strong influence on their decisions. Whether this was due to denial or lack of awareness on behalf of the jurors, the data clearly suggested potent deliberation effects. For one of the assault charges, despite a wide variance in the proportion of guilty verdicts by different jury types throughout the trial, following deliberation this proportion was virtually identical across jury type. It was suggested that this finding was commensurate with Sealy's (1981) postulation that bias might be influential in how evidence is remembered or considered but has little influence on the final decision. The fact that all jury types showed equal relatively high rates of being task-oriented during deliberation may have been a strong factor in the ability of the deliberation process to reduce the effects of bias. It was also discussed that several other studies reported that juries are primarily task-oriented groups (Carretta & Moreland, 1983; Goldman et al., 1975; Hastie et al., 1983).

It was noteworthy that, for two charges (including the above charge), deliberation resulted in a significant decrease in the proportion of guilty verdicts with each jury and an increase in confidence in not guilty verdicts, again, suggesting a strong impact of deliberation on jury decisions.

The potency of the deliberation process was also illustrated by demonstrating that a very large percentage of the juries on all four charges showed evidence of majority effects and group polarization. In contrast, but just as potent, for all four charges, juries reversed the verdict decisions of their predeliberation majority factions over
one-third of the time, indicating that the group does not always succumb to the pressures to conform.

That effects on verdict and confidence in verdict decision were observed after testimony, the judge's instructions, and deliberation suggested that these different aspects of the trial process might have a cumulative impact on juror and jury decisions. It must be cautioned, however, that the results of this study also showed that for two of the four charges jurors' verdicts after the opening arguments predicted their final verdicts and the only thing that changed was an increase in their confidence over time. Here, it was discussed that, as Freundlich (1983) had found, jurors often decided on the defendant's verdict before any evidence was presented and the different aspects of the trial served to increase their confidence in these verdicts.

Recall of trial information and affective state were also examined. It was discussed that recall of situational evidence and the defendant's character were associated with higher proportions of guilty verdicts within each jury. Although some sex differences were found with respect to affective states, these variables did not appear to be associated with verdict.

A final finding about juror behavior was discussed. That was, for the most part, jurors appeared to be satisfied with their jury's decisions.

An important objective of this investigation was to illustrate methodological considerations. At the 2-week follow-up, it was shown that recall of all types of trial information decreased and the
proportion of guilty verdicts within each jury changed. It was discussed that these findings suggested that studies relying on posttrial polling of jurors several weeks after the trial might be inaccurate. Also, the fact that weighted verdicts at follow-up were similar to those at postdeliberation suggested that posttrial assessment of jurors' decisions before deliberation might be contaminated by the deliberation process and, therefore, be misleading. This investigation also demonstrated the necessity of employing a deliberation process when investigating jury behavior as postdeliberation responses often differed from those at other times in the trial and because it appeared to be an essential part of process by which verdicts are decided.

One must be cautioned when considering the findings of this investigation. Variables were assessed on four different charges and most of the findings were not consistent across charges. This suggested that the results of this study (and probably others) interacted with the type of charge. Research which clarifies the nature of the interaction between these types of variables and charges seems warranted. Second, the present investigation was an analogue study, which utilized college students as mock jurors and a videotape presentation of the trial. Although this helped to maximize internal validity (i.e., experimental control) of the study, its external validity (i.e., generalizability) was limited. This investigation had supported previous research as well as revealed several new and interesting findings; however, their application to jury selection is clearly premature. Two types of studies would be useful to
cross-validate these findings. First, using the LAQ to classify mock jurors who were drawn from actual jury pools, would allow for the generalizability of actual jury behavior while still retaining experimental control over the trial stimuli. Second, external validity can be further enhanced by using the LAQ to classify actual jurors who are to serve in actual juries. In order to prevent jury tampering, juries can be classified into egalitarian, authoritarian, mixed, and neutral shadow juries (Vinson, 1982, 1983; Zeisel & Diamond, 1978) and their responses throughout the trial and after deliberation can be monitored. Furthermore, collecting data on demographic variables (e.g., sex, age, socioeconomic status) and a greater number of juries of each type of bias is warranted. Successful cross-validation across different populations of mock and actual jurors using simulated and actual trials would increase one's confidence in employing scientific jury selection (Hans & Vidmar, 1982; Mahoney, 1982; Saks, 1976; Saks & Hastie, 1978) in actual trial situations.
APPENDIX
RECALL QUESTIONNAIRE

NAME ___________________________ SUBJECT # ___________ JURY # ___________

INSTRUCTIONS: Please be sure to answer every one of the following questions. Your answers should range between 1-2 words and a sentence long. If there is a particular question that you cannot answer then please indicate "Don't Know."

S* 1. What incident brought the marital dispute to the police's attention?

C 2. What were the defendant's sources of employment?

D 3. How many times had the defendant's in-laws reportedly shot at him in the past?

P 4. What was the reason reported by Officers White and Rhodes for having the lights of their cars off when they drove by the defendant's house?

S 5. At what time did the incident for which the defendant was tried occur?

C 6. How many hours per week did the defendant reportedly work?

D 7. What was the defendant's reasons for not dropping his shotgun when ordered to do so by the police officers?

P 8. What argument did the prosecuting attorney put forth to prove that the defendant did not believe that shooting was the only way to protect himself from danger?

S 9. What type of cars were Officers White and Rhodes driving?

C 10. How many children did the defendant have?

D 11. What was the defendant's stated motive for firing his shotgun?

P 12. What feelings in Officers White and Rhodes, argued the prosecuting attorney, were elicited by the defendant's actions?
13. How far was the telephone pole from the defendant's front porch?

14. What was the extent of the defendant's education?

15. What did the defense attorney claim was the major flaw in the prosecution's case?

16. What action by the defendant, according to the prosecuting attorney, proved that he intended to fire the rifle?

17. What did the defendant request that Officers White and Rhodes do in order to prove who they were?

18. With which specific in-laws did the defendant not get along?

19. What skill of the defendant, did the defense attorney argue, made it unlikely that the act of firing the rifle was an act of aggravated assault?

20. How many times did Officer White state he verbally identified himself as a police officer?

21. How far above the ground was the bullet lodged in the telephone pole?

22. What were two of the defendant's hobbies?

23. What point were the defense's witnesses, William Highsmith and Jane Highsmith Smith, trying to prove by reenacting the alleged crime one week after it occurred?

24. According to the prosecuting attorney, what specifically happened with respect to the defendant's marriage which helped prove that the defendant could not have acted as a "reasonable, cautious, and prudent individual" at the time of the alleged crime?

25. Where was Officer White when the defendant fired the rifle?

26. Who else did the defendant give financial support to besides his wife and children?

27. What single event, according to the defense attorney, proved that the defendant did not know it was the police calling to him to drop his weapon?

28. According to the prosecuting attorney, what behavior had the defendant engaged in earlier that evening which helped prove that he could not have acted as a "reasonable, cautious, and prudent individual" at the time of the alleged crime?
29. How was the defendant finally apprehended by the police?

30. How old was the defendant when his parents split up?

31. The defendant admitted that he fired the rifle and hit the telephone pole. What, therefore, was the defense attorney's major argument for the defendant's innocence?

32. According to the prosecuting attorney, what general aspect of the defendant's life helped prove that the defendant could not have acted as a "reasonable, cautious, and prudent individual" at the time of the alleged crime?

33. What aspects of this trial had the greatest influence on your verdicts?

* Scale Key:

S = Recall of Situational Evidence
C = Recall of Defendant's Character
D = Recall of Defense Arguments
P = Recall of Prosecution Arguments
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BIOGRAPHICAL SKETCH

Arthur Howard Brand was born in Jersey City, New Jersey, on January 2, 1958. He was the oldest of two children and was raised in Jersey City, attending Alexander D. Sullivan Elementary School and subsequently Henry Snyder High School, from which he graduated in 1975 with honors. He attended Rutgers--The State University in New Jersey, from which he graduated in 1979, cum laude, with a B.A. in psychology. Arthur attended graduate school at the University of Florida where he received his M.S. in clinical psychology in 1982 and his Ph.D. in clinical psychology with a specialization in child clinical psychology in 1985. Arthur had completed a 1-year American Psychological Association's accredited predoctoral child clinical psychology internship at the Michael Reese Hospital and Medical Center in Chicago, Illinois, in 1984-1985. On January 12, 1985, Arthur married his sweetheart and former fellow graduate student from his days at the University of Florida. The Brands are employed as clinical psychologists in the southeastern portion of Florida, where they would like to settle and raise a family.
I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Jacquelin Goldman, Chairman
Professor of Clinical Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Hugh Davis
Professor of Clinical Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

James Johnson
Associate Professor of Clinical Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Franz Epting
Professor of Psychology
I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Sandra Damico
Professor of Foundations of Education

This dissertation was submitted to the Graduate Faculty of the College of Health Related Professions and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

December, 1984

Richard D. Hartmann
Dean, College of Health Related Professions

Madelyn Stackhart
Dean, Graduate School