

**THE ROLE OF IMPLICIT RACE BIASES ON JUROR DECISION-MAKING**

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By  
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**ABSTRACT**

The Role of Implicit Race Biases on Juror Decision-Making

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Most efforts to identify juror bias rely on explicit measures, which have been subject to criticisms concerning validity. The following studies attempt to better understand juror bias through the use of an indirect measure, the Single Category Implicit Association Test (SC-IAT). The goal of these studies was to investigate whether jurors have implicit biases regarding the guilt or innocence of a defendant, even before trial begins. Also, to investigate whether this bias varies as a result of extra-legal factors, such as defendant race and juror race. A final goal was to investigate the predictive validity of the indirect measure of guilt bias, with regard to juror decision-making and verdicts. Results from the following studies demonstrate that participants do have significant implicit guilt biases before a trial, and these biases vary based on participant race and defendant race. Furthermore, pre-trial implicit bias is a good predictor of juror decision-making. The implications of implicit biases on the legal system and ideas for future research are discussed.

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## CHAPTER 1

## INTRODUCTION

*Voir dire* (or, “jury selection”) is one of the most important aspects of any trial. The ultimate objective of *voir dire* is to obtain a fair and impartial jury by identifying the prejudice and bias of potential jurors. Attorneys are allotted challenges during *voir dire*, which can be used to object to the inclusion of a juror who is thought incapable of impartiality. Legal commentators have argued that it is perhaps the most important stage of any trial and is often essential to the final outcome of the case (Dayan, Mahler, & Widenhouse, 1989).

A central tenant of the Sixth Amendment is an accused rights to a trial by an *impartial* jury. The goal of many social science researchers has been to determine a jurors’ ability to remain impartial throughout a trial. In one particular naturalistic study of four felony trials, judges explicitly reminded jurors that they were to set aside their personal beliefs, feelings, and life experiences for the duration of the trial. Of the 15 retained jurors who were asked about their impartiality post-trial, seven said they had been able to remain impartial, but an equal number said that they had not (and one did not recall receiving those instructions). Furthermore, of the 29 excused jurors who were asked this question, 19 predicted that they could *not* have acted impartially (Johnson & Haney, 1994).

Of the many reasons why a juror may act biased, there is strong support that jurors make inferences based on extralegal information (such as race, gender, or

attractiveness of the defendant). And again, instructions from judges on which information to consider and which to ignore appear to have a negligible influence. For example, although judges instruct jurors not to reach a verdict until all of the evidence has been presented, research suggests that this is not always the case (Weld & Danzig, 1940). When mock jurors were asked to report their verdict at various points throughout the trial, at least 25% formed their opinions early in the trial, with little change occurring as more evidence was presented. Furthermore, few subjects were willing to alter their personal decisions during jury deliberations (Weld & Danzig, 1940).

A fundamental contention of the American legal system is that jury verdicts are based solely on the evidence and the relevant law. It is presumed that jurors will act without bias to accurately and completely process and retrieve trial relevant information, and will suspend judgment until all available evidence is presented. Most legal scholars and experts are skeptical toward the assumption that jurors begin the trial as a "tabula rasa", without preconceptions of guilt or innocence (Wrightsmann, Neitzel, & Fortune, 1994).

In selecting jurors, attorneys rely on prospective jurors' explicit, verbally articulated knowledge, as well as their own successes and failures with jury trials. However, Supreme Court opinions have conveyed concern about jurors' subtle, less consciously held racial attitudes (*Turner v. Murray*, 1986), as well as the likelihood that conscious and unconscious racism can affect the way White jurors perceive a minority defendant, and may even determine the verdict of guilt or innocence (*Georgia v. McCollum*, 1992).

## Evidence of Bias in the Legal System

### *Defendant Race*

The legal system in the United States has a history of biased treatment of Black defendants. Archival data suggest that contemporary discrepancies in conviction rates and sentencing for White and Black defendants are smaller than they were earlier this century (Bureau of Justice Statistics, 2006). However, minority defendants are convicted more often than White defendants, receive longer sentences and have a greater likelihood of receiving the death penalty (Baldus, Woodworth, Zuckerman, Weiner, & Broffitt, 1998). Even if the racism that once dominated the legal system has subsided, it appears that an undercurrent of prejudice continues to influence juror decisions. Therefore, judges and attorneys cannot assume that defendants always receive a fair trial regardless of the color of their skin. Jurors may make biased decisions; even without realizing they are doing so.

The race of the defendant has been one of the most widely examined extralegal variables in jury research. However, the impact of defendant race can vary from study to study, leading to confusion over the issue of race as it relates to juror decision-making. For instance, a number of studies have indicated that Black defendants are treated significantly more harshly than White defendants, especially in cases involving murder or rape (Sommers & Ellsworth, 2001). In contrast, some studies have found the opposite, with White defendants being treated more harshly than Black defendants (Poulson, 1990). And finally, several studies and archival research has found that defendant race did not influence juror decision-making (e.g., Pfeifer & Ogloff, 1991).

In an attempt to summarize and clarify the racial bias literature, three meta-analyses have been conducted (Mazzella & Feingold, 1994; Mitchell, Haw, Pfeifer, & Meissner, 2005; Sweeney & Haney, 1992). The Sweeney and Haney (1992) meta-analysis focused on racial bias, defined as the disparate treatment of Black defendants, in sentencing decisions made by White mock juror participants. The authors found a small, but significant, effect of racial bias across studies ( $d = .17$ ), indicating that White participants give Black defendants longer sentences than White defendants.

A second meta-analysis conducted by Mazzella and Feingold (1994) involved a much broader investigation of extralegal factors that could influence juror decisions. In addition to race, these authors also examined physical attractiveness, socioeconomic status, and gender of the defendant and victim. Unlike the Sweeney and Haney meta-analysis (1992), Mazzella and Feingold included studies that used Black participants as jurors. Overall, the authors did not find a significant effect of racial bias on either judgments of guilt ( $d = .01$ ) or sentencing decisions ( $d = .06$ ). Despite these non-significant effect sizes, the authors did find that the type of crime committed played a significant role in decision-making, such that Black defendants were given longer sentences for crimes of negligent homicide, while White defendants were given longer sentences for crimes of fraud. These results suggest that racial bias may vary as a function of the stereotypicality of the crime.

The most recent meta-analysis found a small, but significant, effect for racial bias in both verdict ( $d = .092$ ) and sentencing ( $d = .185$ ) decisions (Mitchell et al., 2005). It is worth noting that, although small, these effects were somewhat larger than those

observed in the two previous meta-analyses (Mazzella & Feingold, 1994; Sweeney & Haney, 1992). These results are consistent with various archival studies that indicate Black defendants are treated more harshly than White defendants (Bowers, Steiner, & Sandys, 2001).

### *Victim Race*

The effect of victim/plaintiff characteristics has begun to attract considerable attention in recent years. The race of the victim has been shown to be somewhat predictive of jury verdicts (Baldus et al., 1998). The race-of-victim effect shows that, in general, juries are more likely to find mitigating evidence (i.e. evidence supporting acquittal) when the victim is Black compared to when the victim is White.

While victim race is predictive of verdicts, the effect on sentencing decisions is even stronger. The victims of intentional homicide are equally divided between Blacks and Whites, yet the chances of a death sentence are much greater for criminals who kill Whites than those who kill Blacks (U.S. General Accounting Office, 2006). In a study of murder convictions, offenders who murdered Whites were eleven times more likely to receive the death penalty than those who killed Blacks (Baldus, Woodworth, & Pulaski 1990).

Archival data show a tremendous racial disparity in when capital punishment was sought by prosecutors and imposed by juries. There is a strong interaction between the race of the defendant and the race of the victim. In particular, death sentence rates in Black-defendant/White-victim cases far exceeded those in cases where offender and victim were of the same race (Blume, Eisenberg, & Wells, 2004). Black defendants who

kill Black victims and White defendants who kill White victims are largely underrepresented on death row.

To summarize, the pattern suggests that defendant race and victim race are strongly related to jury decision-making in verdicts and sentencing. In addition to strong main effects, the two variables also appear to interact such that Black defendants who kill White victims are especially likely to receive the death penalty relative to White defendants and Black defendants convicted of killing Black victims.

Assuming that most juries in the United States over the last 75 years have had White majorities, these findings are also consistent with a jury-defendant similarity bias that is exacerbated when the victim is similar to the jury and the defendant is not. In general, juries either realize they are acting with bias and do not explicitly report so, or they are unaware that they act with bias. Regardless of which scenario is accurate, it is clear that examining the role of implicit bias in jurors is a direction researchers should pursue.

### Modern Racism in the Legal System

The issue of prejudice in the legal system cannot be fully separated from the issue of prejudice in society as a whole. Overt expression of racist beliefs has greatly subsided in recent years, giving way to new, more covert, expressions (Gaertner & Dovidio, 1986). The theory of modern racism suggests that all Americans are aware of anti-Black stereotypes and beliefs, but many Whites embrace egalitarianism and attempt to behave in a non-prejudiced manner (McConahay, 1986). Unfortunately, Whites' outward acceptance of an egalitarian value system has not led to the end of racial bias. Today,

many Whites express their anti-Black sentiment through more subtle, symbolic, or “acceptable” means, such as through opposition to social policies (e.g. affirmative action).

In a series of experiments, Whites who claimed to have a strong egalitarian motivation were nevertheless quicker to associate negative personality traits with Blacks and positive personality traits with Whites (Gaertner & Dovidio, 1986). Even Whites who sincerely believe themselves to be non-prejudiced tend to harbor anti-Black sentiment that can influence their behavior (Devine, 1989; Greenwald, McGhee, & Schwartz, 1998).

Moreover, there are situational factors that are likely to lead Whites to express bias. When race is made salient or when cues to avoid bias are strong, egalitarian motivation is activated and people are generally successful at avoiding prejudice. However, when Whites are not reminded or pressured by situational cues to avoid prejudice, they often let down their guard and demonstrate bias.

In general, modern racism provides a useful theoretical framework for the hypothesis that White juror bias is more likely in cases that are not racially charged. When race is an obvious issue at trial, White jurors may be on guard against racial bias. However, in trials without salient racial issues, White jurors may be less likely to monitor their behavior for signs of prejudice, and therefore more likely to render judgments tainted by racial bias.

Consistent with the idea that modern racism will only manifest itself in subtle ways, studies using trial scenarios with salient racial issues have often failed to reveal

prejudice among White mock jurors. For example, Skolnick and Shaw (1997) found no evidence of White racism in mock jurors' responses to a murder case designed to resemble the criminal trial of O. J. Simpson. This is particularly the type of trial likely to elicit White jurors' defenses against the appearance of prejudice. Other research has similarly failed to find evidence of White juror bias among mock jurors in racially charged trials (Sommers & Ellsworth, 2000). What these studies have in common is that each utilized trials in which race was a major factor, thereby activating defenses against bias in the White jurors. In general, these results suggest that race-salient trials are not more likely to elicit White juror prejudice.

On the other hand, support for modern racism comes from mock juror trials without blatantly racial issues, which are more likely to reveal White bias. Sommers and Ellsworth (2000) manipulated the trial's racial content (i.e. race-salient or not race-salient). White mock jurors were given a written summary of a domestic assault trial in which the defendant was accused of slapping his girlfriend in a bar and knocking her down. Half of the participants read about a White defendant who slapped his Black girlfriend, and the other half read the same case with a Black defendant who slapped his White girlfriend. The race-salience manipulation in the trial materials involved what the defendant reportedly said to his girlfriend before slapping her. In the race-salient condition, the defendant's statement explicitly brought up the issue of race. In the non race-salient condition, the defendant's race was identified in the demographic information provided to participants before the trial, but no mention of race occurred at any point during the trial proceedings (Sommers & Ellsworth, 2000).

In the race-salient condition, mock jurors were equally punitive against the White and Black defendant. However, in the non race-salient condition, mock jurors gave higher guilt ratings and longer sentence recommendations to the Black defendant than to the White defendant. Furthermore, in the non race-salient trial, the prosecution's case against the Black defendant was rated as stronger than the case against the White defendant, and the defense presented on behalf of the Black defendant was rated as significantly weaker than the White defendant's (Sommers & Ellsworth, 2000). These differences emerged despite the fact that the prosecution and defense cases were identical in all versions of the trial summary.

Finally, race salience had a significant effect on White jurors' perceptions of the defendant himself. In the non race-salient condition, White jurors rated the Black defendant as significantly more violent and aggressive than the White defendant. This pattern was reversed for positive personality characteristics; the White defendant was perceived to be more honest and moral than the Black defendant (Sommers & Ellsworth, 2000). Mock jurors were also less willing to make excuses for the behavior of the Black defendant. Jurors were more prone to agree that, compared with the White defendant, the Black defendant likely would be arrested for a similar crime in the future and that the Black defendant's behavior resulted from a criminal personality type. None of these differences emerged when racial issues in the trial were salient (Sommers & Ellsworth, 2000). These findings highlight the importance of considering situational factors in investigations of juror bias.

Research has shown that defendant race can also have an unconscious influence on the impact of other aspects of a trial, such as inadmissible material. In general, jurors are not able to disregard inadmissible evidence (Kassin & Sukel, 1997). Moreover, when race is a factor, research has found that mock jurors were more willing to use prosecution evidence that was ruled inadmissible if the defendant was Black rather than White, although the jurors in the former situation rated themselves as *less* affected by the inadmissible evidence than did the jurors in the latter situation (Johnson, Whitestone, Jackson, & Gatto, 1995).

In the absence of inadmissible evidence, White mock jurors do not exhibit bias in their judgments of the White and Black defendants (Gaertner & Dovidio, 1986). However, when an incriminating statement allegedly made by the defendant was introduced and ruled inadmissible, White mock jurors expressed greater certainty of guilt for Black defendants compared to White defendants. Presumably, White jurors who heard incriminating hearsay evidence about the Black defendant were able to rationalize their judgments of guilt as a product of their desire to consider all the relevant trial evidence, and not as a result of prejudice. However, mock jurors did not use the same inadmissible evidence against a White defendant.

Another common form of inadmissible material is pretrial publicity. An extensive scientific literature has documented the generally adverse effects of pretrial publicity on juror decision-making (Otto, Penrod & Dexter, 1994; Studebaker & Penrod, 1997). In the case of criminal trials, for example, there is a significant association between guilty verdicts and the amount of evidence known to jurors prior to trial. Pretrial information

appears to provide extensive facts (or alleged facts) supporting the assumption of guilt and to set up initial schemas, trial stories and/or attitudes toward the defendant through which new information is filtered (Hope, Memon, & McGeorge, 2004). Furthermore, jurors may be unable or unwilling to explicitly identify and accurately report their biases, making their representations of impartiality during jury selection unreliable.

Modern racism also has been shown to play a role in the influence of pretrial publicity (Fein, Morgan, Norton, & Sommers, 1997). Newspaper articles that were read before the trial influenced White jurors' verdicts against a Black defendant. On the other hand, mock jurors who were also given information suggesting that the media's treatment of the defendant was racially motivated were not influenced by the negative pretrial publicity. Explicitly reminding White jurors of the pervasiveness of racism in society and of their own desire to avoid prejudice yielded unbiased decisions based only on the admissible facts of the case.

Other research has begun to investigate the role of facial feature-based bias in the criminal system. While there seems to be less of a disparity in criminal sentencing between races, a disparity within Black defendants based on facial features has emerged (Blair, Judd, & Chapleau, 2004). When controlling for the seriousness of the crime and past criminal history, inmates with more stereotypical Black facial features were given longer sentences than those with less stereotypical Black facial features. Furthermore, this was true for both White and Black inmates (Blair, Judd, & Chapleau, 2004).

To reduce or eliminate racial bias from jury decisions, one approach of research has been to focus on the characteristics of the juror. By examining the demographics and

personality traits associated with particular verdicts, biased jurors can presumably be identified prior to trial. The following section reviews characteristics of the juror that could influence decisions, as well as some common measures used to assess juror bias.

## The Juror

### *Demographics*

The prospect of relying on demographic features in evaluating jurors is appealing to attorneys precisely because many of these characteristics (e.g. age, race, gender, etc.) are easily observable (Kovera, Dickinson, & Cutler, 2002). However, research on individual difference variables as they relate to verdict prediction has been a divisive issue among legal scholars. Some take the position that considering individual differences in demographics may be effective in predicting verdicts (Davis, Bray, & Holt, 1977). Others argue that demographics, personality, and general attitudes play no role in trial outcomes (MacCoun, 1989).

Overall, research has shown weak and inconsistent demographic effects, but there are a few instances when demographics may predict verdicts. For example, women are more likely than men to convict perpetrators of sex crimes (Kovera, Gresham, Borgida, Gray, & Regan, 1997). However, this gender effect is not particularly large in these cases, and is not a reliable predictor of verdicts in any other types of cases (Kovera, Dickinson, & Cutler, 2002).

The similarity-leniency hypothesis states that jurors who are demographically or socially similar to a litigant will be predisposed to favor that litigant (Kerr, Hymes, Anderson, & Weathers, 1995). Studies have found that male-dominated juries tended to

award higher damages to male plaintiffs, whereas female-majority juries tended to award larger sums to female plaintiffs and are more likely to convict a male defendant (Fischer, 1997). Primary support for similarity-lenience effect comes from studies that observed interactions between the racial composition of the jury and the defendant's race. Several studies have yielded interactions between the jury's racial composition and defendant race (as reviewed above), generally finding that White-majority juries were more likely to convict a Black defendant and were more severe in their sentence than a Black-majority jury (Chadee, 1996).

### *Personality*

A number of studies have concluded that enduring aspects of personality may influence a person's courtroom decisions, but usually only to a modest degree. Research suggests that personality factors typically do not predict more than 10% of the variance in jury verdicts, but in certain cases, these variables can account for as much as 30% of the variance (Moran, Cutler, & Loftus, 1990).

Although a few efforts have measured personality traits associated with the Big Five (Moran & Comfort, 1986; Rotenberg, Hewlett, & Siegart, 1998), most studies of jury personality composition have focused on authoritarianism. High-authoritarian individuals tend to be rigid, conventional, conservative, power-oriented, and deferential to authority (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950). Given this description of authoritarianism as a construct, it is reasonable to predict that authoritarianism is positively related to the tendency to convict in criminal trials.

Narby, Cutler, and Moran (1993) conducted a meta-analysis of studies that measured juror verdict preferences and two forms of authoritarianism: traditional and legal. Traditional authoritarianism measures personality traits associated with conservatism and high regard for authority. Legal authoritarianism applies traditional authoritarianism to a legal setting, and measures personality aspects such as likelihood to convict, respect for judges, and a strict interpretation of the law (Boehm, 1968). Both forms of authoritarianism were reliably but modestly associated with juror verdict preferences across 20 studies, with legal authoritarianism a somewhat better predictor than traditional authoritarianism ( $r = .19$  vs.  $.11$ ; Narby, Cutler, & Moran, 1993).

Jury-level authoritarianism has been linked consistently to jury outcomes. Specifically, juries containing a high proportion of authoritarian jurors have tended to convict more often (Shaffer & Case, 1982) and impose longer sentences (Shaffer, Plummer, & Hammock, 1986) than juries with a low proportion of such individuals. Juries voting to convict had a significantly higher percentage of authoritarian jurors (61%) than juries voting to acquit (33%; Shaffer & Case, 1982). Furthermore, research showed that the mean authoritarian score within juries was correlated strongly with sentence length ( $r = .54$ ), with authoritarian juries recommending sentences over twice as long on average as non-authoritarian juries (Shaffer, Plummer, & Hammock, 1986).

Some researchers (e.g., Boehm, 1968) have argued that high authoritarian jurors reach verdicts early in a trial (e.g., after hearing the prosecution's arguments) and are more resistant to change in the face of new information than are low authoritarian jurors. Therefore, in a group, high authoritarians should hold firmly to their initial position and

not readily alter their verdicts. Research shows that subjects high in authoritarianism, in addition to being more likely to convict, gave higher estimates of the defendant's probability of guilt throughout a trial (Werner, Kagehiro, & Strube, 1982). Furthermore, authoritarian jurors recall more evidence from the prosecution than from the defense and are more likely to draw direct inferences from incriminating evidence (Garcia & Griffin, 1978).

#### *Explicit Measures of Juror Bias*

Two measures of juror bias have been developed to assess the construct of legal authoritarianism (Boehm, 1968; Kassin & Wrightsman, 1983). Legal authoritarian items are similar to classic authoritarianism items in character but their content focuses on beliefs about the legal system. Measures of legal authoritarianism contain items that assess the respondent's tendency to disregard the civil liberties and rights of the accused person (e.g., the presumption of innocence, the burden of proof by the prosecution, and various constitutional procedural safeguards) in order to convict a defendant (Fitzgerald & Ellsworth, 1984).

The first systematic measure developed to assess juror biases was the Legal Attitudes Questionnaire (LAQ; Boehm, 1968). The LAQ measures a jurors' level of *authoritarianism*, *equalitarianism*, and *antiauthoritarianism*. According to Boehm (1968), authoritarian items express general right-wing philosophy and are essentially punitive in nature. Antiauthoritarian items express general left-wing sentiments and imply that the structure of society is to blame for antisocial acts. Finally, equalitarian items measure traditional, liberal, non-extreme positions on legal questions. It is

hypothesized that authoritarianism is positively associated with the tendency to convict, antiauthoritarianism is negatively associated with the tendency to convict, and equalitarianism is not associated with the tendency to convict. In the original mock jury study, these predictions were generally supported (Boehm, 1968).

Kravitz, Cutler, & Brock (1993) revised Boehm's LAQ by scaling items separately and deleting unreliable or ambiguous items. These revisions make for a more reliable and valid measure than the original LAQ. In general, both the original and revised versions of the LAQ have been shown to be reliable predictors of prospective jurors' relative biases for and against defendants in criminal trials (Kravitz, Cutler, & Brock, 1993).

The Juror Bias Scale (JBS; Kassin & Wrightsman, 1983) is designed to assess an individual's pro-prosecution or pro-defense bias. This instrument is based on the assumption that juror verdicts involve the comparison of two beliefs: (1) probability of commission (PC), or the belief that the defendant committed the crime with which he/she has been charged and (2) reasonable doubt (RD), or the certainty threshold one must surpass to vote for conviction. The JBS requires participants to rate their agreement with statements such as "A suspect who runs from the police most probably committed the crime" (PC) and "Too often jurors hesitate to convict someone who is guilty out of pure sympathy" (RD), using a 5-point scale ranging from *strongly disagree* to *strongly agree*, with higher scores on either scale indicating a bias toward the prosecution (i.e., a bias to convict).

Although the LAQ was the first self-report instrument designed to measure attitudes relevant to verdicts, the JBS was the first to directly measure the theoretical constructs that are consistent with existing models of juror decision-making (Pennington & Hastie, 1981). Kassin and Wrightsman's (1983) initial goal was to create a measure of general pretrial bias and to identify what may influence judgments of guilt as well as sentencing. The JBS was significantly correlated with subjects' verdicts in four videotaped mock trials ( $r = .31$ ; Kassin & Wrightsman, 1983). While the JBS was not originally intended to be a measure of legal authoritarianism, many of the items are similar in content to those of the LAQ.

Findings regarding the validity of the JBS in predicting verdicts have been inconsistent with respect to the crime being investigated. For example, for trials involving auto theft, conspiracy, and assault, JBS scores significantly predicted verdicts (Kassin & Wrightsman, 1983). In a follow-up study, JBS scores failed to predict verdicts for a rape trial (Kassin & Garfield, 1991). Furthermore, the rape trial resulted in a reversal of the expected pattern, such that prosecution biased subjects were *less* likely to vote guilty.

Inconsistent findings with regard to the predictive validity of the JBS (Dexter, Cutler, & Moran, 1992; Kassin & Garfield, 1991) suggest two possible conclusions: First, it is possible that the general theory upon which the JBS was built (i.e., how jurors come to decisions of guilt/innocence) is problematic. That is, the constructs that are hypothesized to support juror decision-making may in fact be an inaccurate depiction of the actual juror decision-making process. Alternatively, it is possible that the scale developed to assess the constructs of interest is faulty.

In support of the first alternative, despite the fact that the PC and RD constructs are accepted by many researchers as independent theoretical dimensions concerning how jurors reach decisions of guilt (Pennington & Hastie, 1981), no data have been published that empirically support this theoretical model. This suggests that the original, theoretical constructs of PC and RD may not be an accurate reflection of the decision-making process of jurors. In support of the second alternative, Myers and Lecci (1998) evaluated the factor structure of the JBS and found it to be inconsistent with the theoretical framework on which it was based, thereby bringing its construct validity into question.

Overall, demographic variables may not be reliable as predictors of juror decision-making. Also, no particular personality type or combination of types has been found to predict juror decisions across all criminal or civil cases (Kressel & Kressel, 2002). A general tendency toward conviction among authoritarian jurors has been identified, but most relationships are weak and may vary depending on other aspects of the trial (Penrod, 1990). Researchers may benefit from shifting their focus from explicit measures of demographic and personality variables to a focus on implicit biases in an attempt to better understand the juror.

#### Implicit Race Bias

While explicit measures of juror bias (e.g. JBS, LAQ) are designed to assess general juror tendencies, they fail to account for specific nuances involved in the trial. For instance, legal authoritarianism may predict a general inclination to convict in criminal cases, but may predict a tendency to acquit in civil cases. Furthermore, explicit measures do not inform us about biases that are socially sensitive. There are a number of

implicit biases that could affect a jurors' decision, such as gender bias or age bias.

However, given the history of racial discrimination in the legal system, implicit race bias may be the most influential upon juror decision-making.

Implicit, or unconscious, mental processes can have a significant impact on the legal system. Whereas explicit attitudes are those that an individual is consciously aware of and can directly express, implicit attitudes reside outside of awareness and conscious control (Greenwald & Banaji, 1995). For socially sensitive issues (e.g. race, gender, sexuality), implicit and explicit measures often reveal divergent results. With regards to racial attitudes, White racial bias against Blacks is more often displayed implicitly as opposed to explicitly (Greenwald, McGhee, & Schwartz, 1998; Hofmann, Gawronski, Gschwendner, Le, & Schmitt, 2005). Implicit bias should be particularly disconcerting in the justice system, where jurors are presumed to be unaffected by extralegal information, especially the race of any individual involved.

Contrary to the findings from self-report measures, investigations of implicit racial attitudes generally reveal a White bias against Blacks (e.g., Dasgupta, McGhee, Greenwald, & Banaji, 2000; Greenwald, McGhee, & Schwartz, 1998; Hofmann et al., 2005). These biases can lead to behaviors that are counter to what a particular person's explicit results would suggest (Greenwald, Poehlman, Uhlmann, & Banaji, in press). Implicit bias is problematic in a situation such as a trial, where jurors are presumed to be unaffected by extralegal information, especially including the race of any individual involved.

A potential problem with relying on explicit attitudes to predict behavior is that people may be motivated to give socially desirable responses on self-report measures, such as juror screening questionnaires (e.g., Dovidio, Smith, Donnell, & Gaertner, 1997; Nosek & Banaji, 2002). It is unclear whether social desirability pressures cause people to hide their undesirable attitudes from others or if they cause people to hide these attitudes from their own awareness (Greenwald et al., 2002). Regardless, given the likelihood of social desirability pressures associated with juror impartiality, the predictive validity of juror questionnaires (which are exclusively self-report) may not be entirely effective.

Researchers have sought to identify differences in how explicit and implicit attitudes drive behavior. Dual process models explain that explicit attitudes are most likely to influence responses that are controllable and less likely to influence more automatic responses (Dovidio et al., 1997; Wilson, Lindsey, & Schooler, 2000). However, some implicit measures have been shown to predict both those responses that are automatic and those that are controllable (e.g., Rudman, 2004). Furthermore, research has shown that even the most deliberate choices that are driven by explicit attitudes also contain an automatic component (Bargh & Chartrand, 1999).

Of particular importance to the current studies is the predictive validity of indirect measures. In general, the predictive validity of explicit measures is weakened for socially sensitive domains (Greenwald et al., in press). In the domains of stereotyping and prejudice, indirect measures are more successful than explicit measures for predicting behaviors such as perceived friendliness and hostility (Egloff & Schmukle, 2002; Greenwald et al., in press).

A primary advantage of employing indirect measures of juror bias rather than explicit measures of juror bias is found in the specificity of the two approaches. The explicit measures previously discussed are broad assessments of attitudes about the legal system in general. They fail to account for specific nuances of individual cases and trials. Explicit measures are susceptible to social desirability, and individual jurors may be unlikely to voice their biases against particular defendants based on the demographics of the defendant, for example. On the other hand, indirect measures can be adjusted and aimed at understanding an individual's attitude regarding features of the defendant or the trial.

For instance, attractive defendants are more likely to be acquitted than unattractive defendants (MacCoun, 1990). Explicit measures, such as the JBS and LAQ, are not designed to assess a juror's attitudes concerning the attractiveness of a defendant. Furthermore, directly asking a juror about his or her attitudes toward attractive or unattractive defendants may elicit a socially desirable response, whereby the juror indicates that the defendant's attractiveness has no bearing on the juror's decisions. However, an indirect measure can be designed to specifically investigate an individual's bias for attractive defendants (or bias against unattractive defendants). This characteristic of indirect measures makes them especially appealing for use in the legal system, where numerous extraneous variables are likely to influence a juror's decision.

### Goals

Stereotypes and biases do not only act as explicit beliefs that are consciously applied in decision-making. Biases can also function implicitly. The research reviewed

above suggests that juror decisions may be influenced by implicit, unconscious (or at least, unreported) biases. Implicit biases can influence the way information is processed and used. Implicit biases can also shape the interpretation of evidence, influence the way in which evidence is encoded and stored in memory, and influence the way evidence is retrieved from memory and used in decision-making. What is particularly disconcerting about implicit biases is that a juror may make decisions based on race, gender, or age biases, yet believe that he or she is acting entirely on the basis of legitimate and sound reasoning.

The first goal of these studies is to identify pre-trial implicit guilt biases. Indirect measures, such as the Single Category Implicit Association Test (SC-IAT; Karpinski & Steinman, 2006), can be useful in attaining an indication of a juror's pre-trial leaning. An accused person is guaranteed the right to a fair and impartial jury, and implicit biases are potentially contaminating that constitutional right. Indirect measures can assist legal scholars in a number of ways; the most important of which is by providing an estimation of the fairness of juries before the trial begins.

Upon identifying implicit guilt biases, the second major goal of this proposal is to investigate the relationship of these biases to juror decision-making. Studies indicate that implicit bias does correlate with real-world behavior in a number of domains (Dovidio, Kawakami, & Gaertner, 2002; Hugenberg & Bodenhausen, 2004; Sekaquaptewa, Espinoza, Thompson, Vargas, & von Hippel, 2003). However, no research has yet examined the impact of implicit biases on juror behavior and decision-making. Studies on juror decision-making have previously focused on the predictive validity of explicit

measures of juror bias. Implicit guilt biases may be better predictors of how jurors process and organize information related to a trial, and ultimately how jurors reach a verdict.

CHAPTER 2  
PILOT STUDY 1

In order to advance the understanding of nonconscious processes in a legal setting, a reliable and valid instrument of juror bias is needed. Direct measures that rely on self-report are unlikely to capture any implicit components of bias. The recently developed SC-IAT (Karpinski & Steinman, 2006) is flexible and has been used to measure implicit self-esteem, racial prejudice and consumer attitudes. An overarching goal of the following studies is to investigate the utility of the SC-IAT in measuring implicit guilt biases (i.e., do jurors have a pre-trial bias against the defendant).

The SC-IAT is a two-stage procedure designed to measure associations (e.g., guilty or not guilty) with a single category or attitude object (e.g., the defendant). The SC-IAT is a modification of the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998). The IAT is the most widely used measure of implicit associations. However, the IAT is limited to measuring comparative associations between two attitudinal objects while the SC-IAT can assess the evaluative associations with a single attitudinal object (Karpinski & Steinman, 2006). The comparative nature of the IAT makes it unsuitable for the current study, in which attitudes toward a single attitudinal object are desired. Thus, the SC-IAT permits a more precise analysis than the IAT in this situation.

Pilot Study 1 was primarily exploratory. The main goal was to investigate whether jurors do in fact have implicit pre-trial biases related to the guilt or innocence of

the defendant. In doing so, this study examined implicit guilt biases as they relate to the race of the defendant, the stereotypicality of the crime, and the race of the participant. In general, race is stereotypically linked with certain crimes. For example, Black men are perceived as more likely to engage in assault, murder and grand theft auto, while White men are perceived as more likely to commit embezzlement, child molestation and fraud (Sunnafrank & Fontes, 1983). Research has shown that in general, Black defendants are punished more severely than White defendants, regardless of the type of crime. However, punishment is more severe for all defendants when they are charged with a crime that is congruent with their race as opposed to a race-incongruent crime (Gordon, Bindrim, McNicholas, & Walden, 1988; Jones & Kaplan, 2001). It is predicted that implicit pre-trial biases will vary as a function of defendant race, participant race, and type of crime.

It is important to investigate pre-trial biases because everyone in the American legal system is entitled to a fair trial by an impartial jury. In an ideal situation, all jurors will be entirely unbiased. If jurors are shown to exhibit equal bias to all defendants, regardless of race or other extra-legal factors, they would not truly meet the constitutional standards of an “impartial” jury. However, equal bias would nevertheless be preferable to disparate bias against defendants. It is predicted that participants in the current study will demonstrate disparate bias against defendants based on race (of the juror and the defendant).

A secondary goal of Pilot Study 1 was to examine the relationship between implicit guilt associations and self-reported attitudes about the defendant. It is predicted that implicit guilt associations will not correlate with the self-reported assessment of guilt

(e.g., “How guilty do you find the defendant?”). As is particularly true with socially sensitive issues such as race, implicit and explicit attitudes are often divergent (Hofmann et al., 2005). However, implicit guilt associations should correlate with a less personal explicit assessment of guilt (e.g., “How likely is it that a jury will convict?”).

The current study was designed to replicate the process a juror goes through before a trial begins. Participants first answered a short series of questions regarding the legal system. When in-court jury selection begins, potential jurors are in the presence of the defendant and informed of the charges brought against him or her. The current study investigated whether participants would demonstrate implicit bias against the defendant at this point, before the actual trial begins (i.e., before evidence is presented and cases are argued). Therefore, participants then were given a short description of the crime involved and shown a photograph of the defendant. Finally, participants completed an indirect measure of their guilt bias against the defendant.

## Methods

### *Participants*

One-hundred and thirty-five participants (102 females, 33 males) from Temple University completed the experiment. All participants received research credit for their participation. After removing participants with error rates greater than 20% on the indirect measure, the final sample included 129 participants (98 females, 31 males). The racial identity of the final sample of participants was fairly diverse (71 White, 27 Black, 16 Asian, 5 Hispanic and 10 identified as “Other”).

*Procedure*

The current study employed a 2 (defendant race) x 2 (stereotypicality of crime) between-subjects design. Each participant was randomly assigned to one of four conditions. Participants were recruited to participate in a study about the legal system. Participants were tested in groups of up to four at a time. Each participant was seated at a desk with a desktop computer using Medialab and Direct RT software. All questions and tasks were performed on the computer and each participant completed the tasks in the same order.

First, participants completed a demographic questionnaire and answered a short series of questions regarding the legal system. Included were questions assessing their previous experience with the jury system, their feelings regarding the death penalty, and their ability to act without bias as a juror (see Appendix A). This questionnaire was modeled after common juror questionnaires given during jury duty and was used to bolster the ecological validity of the current study.

Participants read a short description of the crime and saw a color photograph of the defendant. A previous study used a comparable sample to rate various photographs of black and white men for attractiveness, perceived age, and hostility. The two defendant photographs used in the current study were matched on these three criteria (see Appendix B for defendant photographs). The stereotypical crime for the Black defendant was the counter-stereotypical crime for the White defendant (“This defendant has been charged with several counts of assault, attempted murder, and drug possession in a gang-related incident”), while the stereotypical crime for the White defendant served as the counter-

stereotypical crime for the Black defendant (“This defendant has been charged with several counts of fraud, illegal insider trading, and embezzling company funds”).

Participants then completed a Guilt SC-IAT.

*Guilt SC-IAT.* The SC-IAT procedure followed the procedure developed by Karpinski and Steinman (2006). Participants were told that they were to complete a computer based task of reaction time. Participants were asked to quickly and accurately classify words and pictures into one of three categories (*guilty*, *not guilty*, and *defendant*).

The Guilt SC-IAT consisted of two stages, which were counterbalanced for all participants. Each stage consisted of 24 practice trials immediately followed by 72 test trials (three blocks of 24 trials each). In the first stage (defendant + guilty), a picture of the defendant and guilty words were categorized on the *z* key, and not guilty words were categorized on the *2* key on the numeric keypad. In an attempt to prevent a response bias from developing, the defendant picture, guilty words, and not guilty words were not presented at equal frequency, but rather were presented in a 7:7:10 ratio so that 58% of correct responses were on the *z* key and 42% of correct responses were on the *2* key. In the second stage (defendant + not guilty), guilty words were categorized on the *z* key, and a picture of the defendant and not guilty words were categorized on the *2* key on the numeric keypad (see Table 1 for procedure). The defendant picture, guilty words, and not guilty words were presented in a 7:10:7 ratio so that 42% of correct responses were on the *z* key and 58% of correct responses were on the *2* key. The evaluative dimension was labeled *guilty* and *not guilty* and the object dimension was labeled *defendant*. For each trial, participants viewed a stimulus word or picture, selected randomly from one of three

categories: *defendant* (photograph; see Appendix B), *guilty* (convict, criminal, prison, condemn, sentence), and *not guilty* (innocent, free, liberated, pardon, release).

Table 1. Single Category Implicit Association Test (SC-IAT) Procedure

SC-IAT				
Block	Trials	Function	Left key response	Right key response
1a	24	Practice	Defendant + Guilty	Not Guilty
1b	72	Test	Defendant + Guilty	Not Guilty
2a	24	Practice	Guilty Words	Defendant + Not Guilty
2b	72	Test	Guilty Words	Defendant + Not Guilty

Each stage was preceded by a set of instructions concerning the dimensions of the categorization task and the appropriate key responses. Each target word or picture appeared centered on the screen. Category reminder labels were appropriately positioned on the bottom fourth of the screen. The target word remained on the screen until the participants responded or for 1500ms. If participants failed to respond within 1500ms, a reminder to “Please respond more quickly!” appeared for 500ms. Following each response, participants were given feedback regarding the accuracy of their response. A green *O* in the center of the screen for 150ms followed correct responses; a red *X* in the center of the screen for 150ms followed each incorrect response.

To determine the reliability of the SC-IAT, the measure was divided into thirds (blocks of 24 critical trials), and a SC-IAT score was calculated separately for each third of the trials (without dividing by the standard deviation of correct response times). A Cronbach's alpha measure of reliability was computed to assess the internal consistency of these three SC-IAT scores ( $\alpha = .77$  for the Black defendant and  $\alpha = .82$  for the White defendant).

A SC-IAT scoring algorithm was modeled on the *D*-score algorithm used for IAT data (Karpinski & Steinman, 2006; Greenwald, Nosek, & Banaji, 2003). Data from the practice blocks (e.g. Blocks 1a and 2a) were discarded. Also, responses less than 350ms were removed, nonresponses were removed, and error responses were replaced with the Block mean plus an error penalty of 400ms. The average response times from Block 1b (e.g. Defendant + Guilty) were subtracted from the average response times from Block 2b (e.g. Defendant + Not Guilty). This quantity was divided by the standard deviation of correct response times within those two blocks. Therefore, Guilt SC-IAT *D* scores indicate more *guilty* than *not guilty* associations with the defendant.

*Explicit Questions.* Finally, participants were asked to explicitly indicate their assessment of the guilt or innocence of the defendant on a scale from 1 to 9 (where 1 = *Not at all guilty* and 9 = *Very guilty*) and the likelihood that a jury would convict the defendant (where 1 = *Very unlikely* and 9 = *Very likely*). These ratings were included after initial data collection had begun and therefore the first 40 participants in the current study did not provide these data. At the conclusion of the study, participants were completely debriefed and given credit.

## Results

In order to increase power for analyses that included participant race as a factor, participants were categorized as White (i.e. Caucasian) or non-White (i.e. Black, Asian, Hispanic, etc.). A 2 (defendant race) x 2 (participant race: Black vs. non-White/non-Black) ANOVA on implicit guilt bias was conducted to determine if Black and other non-White participants significantly differed from each other. The results do not indicate a significant interaction,  $F(1, 54) = .55, p = .46, \eta^2 = .01$ . An additional 2 (defendant race) x 2 (participant race: White vs. non-White/non-Black) ANOVA on implicit guilt bias was conducted to determine if White participants significantly differed from non-White/non-Black participants. The results indicate a significant interaction,  $F(1, 98) = 4.68, p = .03, \eta^2 = .05$ . Therefore, non-White/non-Black participants differed from White participants but not Black participants, and all future analyses will collapse non-White participants into one group.

The 2 (participant race: White vs. non-White) x 2 (defendant race) x 2 (stereotypicality of crime) interaction for implicit guilt bias was not significant,  $F(1, 121) = 2.07, p = .15, \eta^2 = .02$ . The interaction between defendant race and stereotypicality of crime was not significant,  $F(1, 121) = 1.28, p = .26, \eta^2 = .01$ . There was, however, a significant interaction between participant race and defendant race,  $F(1, 121) = 4.43, p = .04, \eta^2 = .04$ . For the Black defendant, White participants displayed significant implicit guilt bias,  $t(35) = 4.53, p < .01, d = .76$ , but non-White participants did not,  $t(26) = .53, p = .60, d = .10$ . For the White defendant, White participants did not

display significant implicit guilt bias,  $t(34) = 1.34, p = .19, d = .23$ , but the non-White participants did,  $t(30) = 2.28, p = .03, d = .41$  (see Table 2 for means and differences).

Table 2. Pilot Study 1 Descriptive and t-Test Statistics for the Indirect Measure of Guilt Bias

	White Participants (n = 71)			Non-White Participants (n = 58)			Difference		
	<i>M</i>	<i>SD</i>	<i>d</i>	<i>M</i>	<i>SD</i>	<i>d</i>	<i>d</i>	<i>t</i>	<i>p</i>
Guilt SC-IAT									
Black Defendant	.222	.294	.76	.038	.371	.10	2.2	2.20	.03
White Defendant	.075	.330	.23	.145	.354	.41	-.83	-.829	.41

*Note:* SC-IAT = Single Category Implicit Association Test

The 2 (participant race) x 2 (defendant race) x 2 (stereotypicality of crime) interaction for the explicit assessment of guilt was not significant,  $F(1, 81) = 1.09, p = .30, \eta^2 = .01$ . The lower order interactions were not significant either (all  $ps > .50$  and  $\eta^2 < .01$ ). This individual explicit assessment of guilt was not significantly correlated with the indirect measure of guilt,  $r(89) = .15, p = .16$ .

The 2 (participant race) x 2 (defendant race) x 2 (stereotypicality of crime) interaction for the likelihood that a jury will convict was not significant,  $F(1, 81) = .34, p = .56, \eta^2 < .01$ . None of the lower order interactions were significant (all  $ps > .10$  and  $\eta^2 < .03$ ). Participants in every condition indicated that a jury would be significantly likely to convict the defendant (all  $ps < .001$ ). Furthermore, this explicit rating was significantly

associated with the indirect measure of guilt,  $r(89) = .24, p = .02$ , such that the stronger the implicit bias, the more likely the participant thinks a jury will convict.

### Discussion

This pilot study indicates that jurors do have implicit pretrial biases that shift as a function of defendant race. Even though participants read only a short description of criminal charges and did not learn about any evidence related to the crime, participants did display significant implicit guilt bias against the defendants. White participants showed significant bias against the Black defendant, but not the White defendant. Non-White participants were biased against the White defendant, but not the Black defendant.

Implicit bias did not correlate with an individual's explicit assessment of guilt. Interestingly, however, implicit bias did correlate with the assessment of how likely it is that a jury will convict the defendant. That is, participants with strong implicit bias against the defendant thought that a jury would be more likely to convict the defendant. These findings indicate that while participants may not explicitly express their bias against the defendant, their bias does influence how they think a jury will see the defendant.

The question of what a juror thinks *others* believe about a defendant is potentially important. Research has shown that participants do tend to engage in a projective bias, in which they overestimate the degree to which personal beliefs are shared by others (Brown, 1996). Thus, a potential juror who believes that other jurors have negative feelings about a defendant, may him or herself share those negative feelings.

This study established that participants may in fact harbor significant implicit guilt biases against defendants, and that these biases vary as a result of the race of the defendant and the participant. The current study failed to find that the stereotypicality of the crime influenced implicit bias. This is possibly due to the lack of an in-depth trial. Participants only read a short description of the charges against the defendant, which may not have been a strong enough manipulation for eliciting bias. Future research should use a full-length trial to examine the influence that the type of crime can have on implicit biases.

While establishing that mock jurors do display significant implicit guilt biases before a trial is an important first step, it is also important to determine the predictive validity of these biases. Implicit biases may influence juror decision-making, just as implicit biases in other domains influence behavior. On the other hand, it is possible that jurors are able to overcome their implicit biases and make decisions based on the facts of the case. The following research will aim at understanding how implicit guilt biases influence the ways in which jurors process evidence and make decisions.

## CHAPTER 3

### MAIN STUDY

The primary hypothesis of the main study is that implicit biases will influence how jurors process and organize trial information, and reach a personal decision regarding the guilt or innocence of the defendant. Human judgment relies heavily on the use of prototypes, schemas, scripts, and other mental structures to simplify and speed decision-making. Likewise, jurors make sense of trial information through the use of cognitive schemas. Research on sentencing decisions indicates that mock jurors' schemas often differ greatly by defendant race. For instance, researchers have assessed the strength and meaning of mitigating evidence—that the defendant had psychological problems, that he was horribly abused as a child, that he had major substance abuse issues—depending on whether he was Black or White (Lynch & Haney, 2000). When the defendant was Black, mock jurors were much more likely to use evidence of substance abuse, child abuse victimization, and psychiatric problems against the defendant in support of a death sentence (i.e. aggravating evidence), even though such evidence is supposed to be considered mitigating.

#### Heuristic-Systematic Model

When people have expectations, they will seek to test it in ways that involve little effort; that is, they will seek less information and largely information that will not likely dispute the hypothesis and require reevaluation. Such behavior is consistent with the Heuristic-Systematic Model (HSM; Chaiken, Liberman, & Eagly, 1989). Heuristic

processing is less effortful and focuses on a subset of information that simplifies decisions. Systematic processing involves more effortful thought and reflection about information and the use of more complex decision rules.

The HSM also allows for the possibility of concurrent processing. Systematic and heuristic processing can operate simultaneously to yield either independent or interdependent effects on judgment (Eagly & Chaiken, 1993). When the two processes do not produce contradictory information they can occur simultaneously and exert independent effects on judgment. Specifically, when the evidence against the defendant is strong, and the defendant is from a stereotyped group, jurors may process both systematically and heuristically. Harsher sentences for the stereotyped defendant under such conditions, however, may arise because such sentences are easy to rationalize, safe, and socially acceptable. When content related cues are congruent with an available heuristic (stereotype), both systematic and heuristic cues exert interdependent or additive effects upon message persuasiveness (Eagly & Chaiken, 1993).

Heuristic cues can also bias the nature of systematic processing when message content is ambiguous. For example, when jurors are motivated to process systematically but find that equally clear cases exist for the prosecution and the defense, the perceived credibility of the victim or the defendant may influence subsequent processing of evidence. The direction of the heuristic bias (i.e. positive or negative) should depend upon individual expectancies about the heuristic. If a heuristic cue such as victim credibility is high, then systematic processing is biased in favor of the message. In contrast, if credibility is low, processing of the ambiguous message may be negative

(Eagly & Chaiken, 1993). Extralegal factors such as defendant race act as heuristic cues that induce additive or biased concurrent processing.

Indeed, the literature supports the contention that defendant characteristics (such as race and gender) influence the information processing by jurors through social stereotypes. Jurors process information heuristically by relying on stereotypical information, such as the defendant's race, when presented with a complex task (e.g. guilt judgment) as opposed to an easy task (e.g. trait judgment; Bodenhausen & Lichtenstein, 1987). The activation of a stereotype can lead to differential processing of the evidence, depending on its consistency with the stereotype. Discrimination, therefore, results from the systematic distortion in the level of processing contributed to each piece of evidence in a trial (Bodenhausen, 1988).

Jurors appear to use stereotypes as central themes when processing information. Specifically, evidence that confirms stereotypical beliefs receives more attention and rehearsal, and is more likely to be incorporated into the decision-maker's mental representation of the case (Bodenhausen, 1988). Furthermore, in trials involving Black defendants, White jurors recall less evidence than in trials with White defendants, suggesting juror reliance on stereotypes (FosterLee, FosterLee, Horowitz, & King, 2006).

#### Predecisional Distortion

It is possible that a juror's implicit bias toward one side or the other, no matter how tentative, may influence the interpretation and evaluation of subsequent trial evidence. Jurors, like decision-makers in other domains, are susceptible to predecisional distortion. Predecisional distortion is the biased interpretation and evaluation of new

information to support whichever alternative is currently leading during a decision process (Russo, Medvec, & Meloy, 1996). Individuals form an initial, tentative disposition toward an option, and subsequent information is systematically distorted to cohere with that preliminary decision. Predecisional distortion has been found in mock trial research, even despite juror instructions to suspend judgment until all evidence has been presented (Carlson & Russo, 2001). Jurors naturally establish a tentative favorite side (or leading verdict) early in the trial and then evaluate new evidence as overly supportive of that currently leading verdict.

While Pilot Study 1 did find evidence of implicit guilt bias, this bias was not related to an individual's explicit assessment of guilt. However, that study only presented participants with a short description of the charges brought against the defendant. Implicit guilt biases may be more likely to influence explicit assessments of guilt during a full-length trial, through predecisional distortion of evidence. Research has shown that people are largely unaware of predecisional distortion (Carlson & Russo, 2001). Therefore, jurors may distort trial evidences simply because they cannot correct an error they are not aware they are committing.

### Main Study Goals

The first goal of the Main Study is to replicate Pilot Study 1 by investigating implicit pretrial guilt biases as they vary in relation to defendant race and participant race. As in Pilot Study 1, White participants are expected to demonstrate more pretrial implicit bias against Black defendants, while non-White participants will display disparate bias against White defendants.

The second goal of the Main Study is to examine the influence of implicit pretrial guilt biases on subsequent information processing and organization. It is predicted that participants will engage in predecisional distortion throughout the presentation of trial information. And furthermore, implicit pretrial guilt biases will predict the direction and intensity of this distortion better than explicit measures of juror bias.

A final goal of the Main Study is to examine the relationship between implicit pretrial guilt biases and mock jurors' pre-deliberation verdicts. Pre-deliberation verdicts are highly predictive of final verdict decisions. Numerous studies have found that the verdict favored by the majority of the jury at the beginning of deliberations will be the jury's final verdict approximately 90% of the time (MacCoun & Kerr, 1988; Sandys & Dillehay, 1995). The indirect measure of guilt bias is expected to be a more valid predictor of pre-deliberation verdicts than the direct, explicit measures of juror bias.

## CHAPTER 4

### PILOT STUDY 2

An additional pilot study was needed to evaluate a trial for use in the main study. The first criteria is that the trial needs to be fairly ambiguous as to the guilt or innocence of the defendant. A trial that is ambiguous is more likely to be open to biasing influences than one that is unambiguous (Sommers & Ellsworth, 2000). In order to maintain the validity of the trial when the defendant's race is manipulated, the second criteria is that the nature of the crime should be race-ambiguous (i.e., not stereotypical of a Black man or a White man). For example, if the trial is for a crime that is stereotypically associated with White men (e.g. embezzling), a Black defendant will potentially stand out and make race a salient issue.

#### Methods

##### *Participants*

Thirty-six participants (18 females, 18 males) from Temple University completed the experiment. All participants received research credit for their participation. The racial identity of the sample of participants was fairly diverse (22 White, 9 Black, 3 Asian, 1 Hispanic, and 1 identified as "Other").

##### *Procedure*

Participants were recruited to participate in a mock trial study. Participants were tested in groups of up to six at a time. The study was completed in a paper-and-pencil format. First, participants completed a demographic questionnaire. Then, each participant

read the transcript from a criminal trial, which gave no indication as to the race of the defendant. Participants then reported their pre-deliberation verdict and answered a series of questions related to the trial (see Appendix C). At the end of the study, participants were completely debriefed and given credit.

*Mock Trial.* In the current study, the trial was presented as a written transcript. Researchers can feel comfortable using transcripts rather than videotaped or audio trials because modality has not been found to affect juror memory or juror decisions (Bornstein, 1999; Pritchard & Keenan, 1999). Furthermore, studies have shown that trial modality does not alter the effect of trial variables, such as witness testimony or the believability of the trial (Bornstein, 1999). In the current study, it was particularly useful to employ a written transcript, rather than videotaped or audio trials, because it is easier to manipulate the race of the defendant in this manner without introducing additional confounds.

The transcript used was modified from a trial (*New Jersey v. Bias*) that has been used in previous research (see Hope, Memon, & McGeorge, 2004; Pritchard & Keenan, 1999, 2002; Ruva, McEvoy, & Bryant, 2007). The trial depicted a man who pled innocent to murdering his wife. He claimed that while he was trying to prevent his wife from committing suicide by shooting herself, she accidentally pulled the trigger. Thus, the verdict choices allowed were not guilty or guilty of murder. All aspects of the trial were presented, including opening statements from the prosecution and defense, examinations of witnesses and evidence, and closing statements. The trial presents the testimony of 6 witnesses and the defendant. Previous research found that approximately

75% of jurors voted not guilty after this trial (Pritchard & Keenan, 2002). Slight modifications to the transcript were made in an attempt to lessen this disparity between not guilty and guilty votes.

### Results & Discussion

Overall, this trial was found to be ambiguous as to the guilt of the defendant and the race of the defendant. Participants were more likely to vote not guilty (64%) than guilty (36%). Importantly, this trial did not reveal a ceiling effect, and therefore leaves room for detecting bias in the main study. Results show that the strength of evidence in favor of the defendant ( $M = 5.33$ ,  $sd = 1.90$ ) and against the defendant ( $M = 5.06$ ,  $sd = 2.11$ ) was not significantly different,  $t(35) = -.49$ ,  $p = .63$ ,  $d = -.08$ . Participants also indicated that the crime was race-ambiguous ( $M = 4.75$ , where 5 = neither stereotypical of a White man or a Black man),  $t(35) = -.93$ ,  $p = .36$ ,  $d = -.15$ .

As expected, participants differed significantly on several measures depending on whether they voted guilty or not guilty. Participants who voted guilty indicated that the defendant was deserving of greater punishment, more likely to commit the crime again in the future, had more evidence against him and less evidence in favor of him, and was not credible as a witness (all  $ps < .001$ ). These results signify that nearly all aspects of the trial are interpreted differently based on the juror's ultimate verdict.

Because the primary study examined evidence processing and the influence of race bias, it is important to use a trial that is ambiguous with regard to the guilt or innocence of the defendant. This pilot study was used to pretest the trial transcript and

demonstrated it to be race-ambiguous (i.e. not stereotypical of Black men or White men) and containing an approximately equal amount of evidence for and against the defendant.

## CHAPTER 5

### MAIN STUDY

The current study is expected to replicate the findings from Pilot Study 1 and find that participants demonstrate implicit pretrial guilt bias. Furthermore, this bias is expected to vary by participant race and defendant race. White participants are expected to demonstrate greater implicit bias against the Black defendant, while non-White participants are expected to demonstrate greater implicit bias against the White defendant.

Secondly, participants are expected to show evidence distortion throughout the trial, based on their implicit pretrial bias. Furthermore, the indirect measure is expected to be a better predictor of evidence distortion than explicit measures. Finally, the measure of implicit bias will predict pre-deliberation verdicts with greater accuracy than the explicit measures.

The current study sought to replicate the processes a juror goes through during a trial, up until deliberation. Participants first answered questionnaires intended to measure general bias and attitudes toward the legal system. Many of the items in these questionnaires were similar to what a juror may be asked during jury selection. Next, as in Pilot Study 1, participants received a brief description of the charges brought against the defendant. The current study then investigated whether participants have implicit bias against the defendant at this point, before the actual trial starts. Next, participants read the trial transcript. In an effort to gauge how participants process the evidence, they were

asked questions following each testimony. Finally, participants indicated their pre-deliberation verdict at the conclusion of the trial.

## Methods

### *Participants*

The current study was a 2 (defendant race: White vs. Black) x 2 (participant race: White vs. non-White) between-subjects design. A power analysis performed prior to data collection revealed that with Power = .80 and a medium effect size of  $d = .5$ , a sample size of 34 participants per condition was needed (Cohen, 1988). To adjust for the possibility of high error rates, a sample of approximately 40 participants per condition was recommended (total  $N = 160$ ).

Two-hundred and twenty-one participants (146 female, 75 male) from Temple University completed the experiment. All participants received research credit for their participation. Participants with error rates greater than 20% on the SC-IAT were removed. The resulting sample included 203 participants (132 females, 71 males). The racial identity of this sample was diverse (116 White, 53 Black, 20 Asian, 8 Hispanic and 6 identified as “Other”).

### *Procedure*

Participants were recruited to participate in a study about the legal system. Participants were tested in groups of up to four at a time. Each participant was seated at a desk with a desktop computer using Medialab and Direct RT software and assigned to one of two conditions. All tasks were presented on the computer and all participants completed the following tasks in the same order: (1) two explicit measures of juror bias,

(2) read a short description of the crime (“This defendant is being charged with murdering his wife”) with an accompanying picture of the defendant (see Appendix D), and (3) a SC-IAT measure of implicit pretrial guilt associations. After these tasks were completed, participants proceeded with the trial and the follow-up questionnaire.

*Explicit measures of juror bias.* The Legal Attitudes Questionnaire (LAQ; Boehm, 1968) measures a jurors’ level of *authoritarianism*, *equalitarianism*, and *antiauthoritarianism*. According to Boehm (1968), authoritarian (A) items express general right-wing philosophy and are essentially punitive in nature. Antiauthoritarian (AA) items express general left-wing sentiments and imply that the structure of society is to blame for antisocial acts. Finally, equalitarian (E) items measure traditional, liberal, non-extreme positions on legal questions. It is hypothesized that authoritarianism is positively associated with the tendency to convict, antiauthoritarianism is negatively associated with the tendency to convict, and equalitarianism is not associated with the tendency to convict. A more reliable and valid version of the LAQ was used in the current study (R-LAQ; Kravitz, Cutler, & Brock, 1993). Overall, the original and revised versions of the LAQ have been shown to be a reliable predictor of prospective jurors’ relative biases for and against defendants in criminal trials (see Appendix E for questionnaire). A Cronbach’s alpha measure of reliability was computed to assess the internal consistency of the three subscales of the R-LAQ ( $\alpha = .59$  for A;  $\alpha = .56$  for E;  $\alpha = .50$  for AA).

The second explicit measure of juror bias that was used is the Juror Bias Scale (JBS; Kassin & Wrightsman, 1983). This instrument is based on the assumption that juror

verdicts involve the comparison of two beliefs: (1) probability of commission (PC), or the belief that the defendant committed the crime with which he/she has been charged and (2) reasonable doubt (RD), or the certainty threshold one must surpass to vote for conviction (see Appendix F for questionnaire). A Cronbach's alpha measure of reliability was computed to assess the internal consistency of the two subscales of the JBS ( $\alpha = .41$  for PC;  $\alpha = .54$  for RD).

*Guilt SC-IAT.* The Guilt SC-IAT followed the same procedures as described above in Pilot Study 1, with the defendant's name (Daniel Thompson) as an additional stimulus for the category *defendant*. A Cronbach's alpha measure of reliability was computed to assess the internal consistency of the SC-IAT scores ( $\alpha = .80$  for the Black defendant and for the White defendant). A SC-IAT scoring algorithm modeled on the *D*-score algorithm used for IAT data was employed (Karpinski & Steinman, 2006; Greenwald, Nosek, & Banaji, 2003).

*Mock trial.* Participants read the written transcript used in Pilot Study 2. The trial depicts a man who is pleading not guilty to murdering his wife. The defendant's race varied by condition. Participants were shown a color photograph of either a Black or White defendant (see Appendix D). Based on recommendations received in earlier stages of this study, two different photographs were used in the Main Study than were used in Pilot Study 1. As a measure of predecisional distortion, each of the seven testimonies in the trial was followed by a set of three questions. The first question instructed participants to consider only the information contained in that single testimony and then to rate whether that information had strongly favored either the prosecution or the

defense. This question used a 9-point scale, where 1 = *strongly favors the defendant's case* and 9 = *strongly favors the prosecution's case* (5 on the scale indicates a “neither party” response). The second question required participants to consider all of the information they had received in the trial up to that point and then identify the current “leader” (i.e., the prosecution or defense). For the third question, participants indicated how confident they were that the party currently leading would eventually win the case. This question used a 6-point scale in which circling 50% (anchored to the left of the scale) indicated that it is even between the two parties, whereas circling 100% (anchored to the right of the scale) identified the current leader as the clear likely winner. These questions appeared immediately after each testimony, with each new testimony clearly indicated.

After reading the trial transcript, participants determined their pre-deliberation preference (Guilty or Not Guilty), and answered several questions regarding the trial (see Appendix C).

## Results

In order to increase power for analyses that included participant race as a factor, participants were categorized as White (i.e. Caucasian) or non-White (i.e. Black, Asian, Hispanic, etc.). A 2 (defendant race) x 2 (participant race: Black vs. non-White/non-Black) ANOVA on implicit guilt bias was conducted to determine if Black and other non-White participants significantly differed from each other. The results do not indicate a significant interaction,  $F(1, 83) = .23, p = .63, \eta^2 < .01$ . An additional 2 (defendant race) x 2 (participant race: White vs. non-White/non-Black) ANOVA on implicit guilt

bias was conducted to determine if White participants significantly differed from non-White and non-Black participants. The results indicate a significant interaction,  $F(1, 146) = 5.73, p = .02, \eta^2 = .04$ . Therefore, non-White/non-Black participants differed from White participants but not Black participants, and all future analyses will collapse non-White participants into one group.

#### *Post-Trial Measure*

Similarly to the results of Pilot Study 2, participants in the current study were more likely to vote not guilty (65%) than guilty (35%). Also, post-trial measures indicate that this trial was generally ambiguous, particularly with respect to the perceived strength of evidence for and against the defendant. Results show that the strength of evidence in favor of the defendant ( $M = 5.52, sd = 1.76$ ) and against the defendant ( $M = 5.18, sd = 2.06$ ) was not significantly different,  $t(202) = -1.50, p = .13, d = .11$ .

As expected, participants differed significantly on several measures depending on whether they voted guilty or not guilty. Participants who voted guilty indicated that the defendant was deserving of greater punishment, more likely to commit the crime again in the future, had more evidence against him and less evidence in favor of him, and was not credible as a witness (all  $ps < .001$ ).

Overall, pre-deliberation verdicts were not significantly dependent upon participant race and defendant race,  $\chi^2(3) = 5.24, p = .15, \Phi = .16$  (see Table 3). Focused follow-up tests revealed no significant association between participant race and verdict,  $\chi^2(1) = 2.74, p = .10, \Phi = -.16$ , and no significant association between defendant race and verdict,  $\chi^2(1) = 1.89, p = .17, \Phi = -.10$ .

Other post-trial variables of interest besides the verdict decision were participant's ratings of their confidence in the verdict and the desired amount of punishment should the defendant be convicted. The 2 (participant race) x 2 (defendant race) interactions for ratings of confidence and punishment were not significant,  $F(1, 199) = 2.26, p = .26, \eta^2 < .01$  and  $F(1, 217) = 1.95, p = .16, \eta^2 = .01$ . The main effects for defendant race were

Table 3. Main Study Post-Trial Descriptive Statistics

	Guilty Verdicts	Verdict Confidence	Punishment
Black Defendant			
White Participants (n = 60)	17 (28.3%)	5.72	5.13
Non-White Participants (n = 42)	14 (33.3%)	5.95	5.33
White Defendant			
White Participants (n = 56)	18 (32.1%)	5.55	4.84
Non-White Participants (n = 45)	22 (48.9%)	6.44	5.98

not significant ( $ps > .5$ ), but the main effects for participant race reached significance. Non-White participants, compared to White participants, had more confidence in the verdict,  $F(1, 199) = 3.83, p = .05, \eta^2 = .02$ , and desired a greater amount of punishment for the defendant,  $F(1, 199) = 3.98, p < .05, \eta^2 = .02$  (see Table 3).

#### *Explicit Measures of Juror Bias*

The R-LAQ and JBS are both purported to measure an individual's general tendency to be pro-conviction. Therefore, in analyzing the data from these measures the

participants who voted guilty were compared to those who voted not guilty (see Table 4 for mean scores).

Table 4. Main Study Mean Scores for the Explicit Measures of Juror Bias

	Revised Legal Attitudes Questionnaire			Juror Bias Scale			
	A	E	AA	PC	RD	PP	PD
Guilty	4.77	2.80	-2.14	27.36	25.04	35.68	17.00
Not Guilty	1.41	3.69	-2.79	26.20	23.73	32.99	16.94

*Note:* A = Authoritarianism. E = Equalitarianism. AA = Antiauthoritarianism. PC = Probability of Commission. RD = Reasonable Doubt. PP = Pro-Prosecution. PD = Pro-Defense.

The R-LAQ is divided into three subscales: Authoritarianism, Equalitarianism, and Antiauthoritarianism. High authoritarian scores are expected to be associated with pro-conviction attitudes, whereas antiauthoritarian scores are expected to be associated with pro-acquittal attitudes. Equalitarianism is not expected to be associated with conviction or acquittal attitudes. Participants who voted guilty had significantly higher authoritarianism scores ( $M = 4.77$ ,  $sd = 6.14$ ) than those who voted not guilty ( $M = 1.41$ ,  $sd = 8.00$ ),  $t(201) = 3.09$ ,  $p < .01$ ,  $d = 3.08$ . No significant differences were found in the other two subscales ( $ps = .40$ ).

The JBS is divided into two subscales: Probability of Commission (PC) and Reasonable Doubt (RD). It is hypothesized that higher scores on these subscales is indicative of a higher likelihood to convict. The JBS can also be scored so as to get Pro-

Prosecution (PP) and Pro-Defense (PD) scores. Participants who voted guilty had significantly higher PC and PP scores ( $M = 27.36$ ,  $sd = 3.51$  and  $M = 35.68$ ,  $sd = 4.43$ ) than those who voted not guilty ( $M = 26.20$ ,  $sd = 4.11$  and  $M = 32.99$ ,  $sd = 5.96$ ),  $t(201) = 2.50$ ,  $p = .01$ ,  $d = 2.50$  and  $t(201) = 3.33$ ,  $p < .01$ ,  $d = 3.32$ , respectively. No significant differences were found in the other subscales ( $ps > .05$ )

Some research has suggested that White jurors tend to be more pro-conviction on these explicit measures than non-White jurors. However, the current study did not find any meaningful differences to support this. The only significant difference between the races was found on the Equalitarianism subscale of the R-LAQ. Non-White participants showed significantly higher equalitarianism (which is hypothesized to be unrelated to the tendency to convict) scores ( $M = 4.64$ ,  $sd = 6.96$ ) than White participants ( $M = 2.43$ ,  $sd = 7.30$ ),  $t(201) = -2.18$ ,  $p = .03$ ,  $d = -2.19$ . No significant differences were found on the other subscales ( $ps > .10$ ).

As expected, many of the subscales for the explicit measures of juror bias correlated strongly with each other. The authoritarianism subscale of the R-LAQ had a positive significant correlation with the PC and RD subscales of the JBS (all  $r$ 's (203)  $> .45$  and  $ps < .01$ ). The authoritarianism subscale was significantly negatively correlated with the equalitarianism subscale ( $r(203) = -.18$ ,  $p < .01$ ), which in turn was significantly negatively correlated with the PC and RD subscales of the JBS (all  $r$ 's (203)  $< -.38$  and  $ps < .01$ ). The indirect measure of juror bias (SC-IAT) was not significantly correlated with any of the subscales of the explicit measures (all  $ps > .30$ ; see Appendix G for correlation matrix).

*Indirect Measure of Juror Bias*

The first goal of the main study was to replicate the primary implicit guilt bias results of Pilot Study 1. The 2 (participant race: White vs. non-White) x 2 (defendant race) interaction for SC-IAT implicit guilt bias was significant,  $F(1, 199) = 7.13, p < .01, \eta^2 = .04$ . For the Black defendant, White participants displayed significant implicit guilt bias,  $t(59) = 4.23, p < .01, d = .55$ , but the non-White participants did not,  $t(41) = .87, p = .39, d = .13$ . For the White defendant, White participants did not display significant implicit guilt bias,  $t(55) = .97, p = .34, d = .13$ , but the non-White participants did,  $t(44) = 3.12, p < .01, d = .46$  (see Table 5 for means and differences). These results replicate the findings of Pilot Study 1 and suggest that participants tend to show an implicit bias against the out-group.

Table 5. Main Study Descriptive and t-Test Statistics for the Indirect Measure of Guilt Bias

Guilt SC-IAT	White Participants (n = 116)			Non-White Participants (n = 87)			Difference		
	<i>M</i>	<i>SD</i>	<i>d</i>	<i>M</i>	<i>SD</i>	<i>d</i>	<i>d</i>	<i>t</i>	<i>p</i>
Black Defendant	.195	.356	.55	.055	.411	.13	1.8	1.82	.07
White Defendant	.041	.318	.13	.179	.384	.46	-1.9	-1.97	.05

*Note:* SC-IAT = Single Category Implicit Association Test

*Predecisional Distortion*

The second goal of the current study was to investigate participant's predecisional distortion during the trial. Following each of the 7 testimonies in the trial, participants were asked to indicate how favorable the preceding testimony was to the defense or prosecution, which party was currently leading the trial, and how likely was it that the current leader would win the trial. Predecisional distortion occurs when participants evaluate new testimony in favor of their current leader rather than evaluating the new information for its independent probative value.

Following Carlson and Russo (2001), distortion scores were calculated by subtracting an estimate of the probative value of each testimony from each participant's evaluation of the testimony. To get an estimate of the value of each testimony, I averaged the sum of the scores from participants who previously indicated the defendant was leading and those who indicated the prosecution was leading. Next, this estimate was improved by including the confidence that the current leader would win. In doing so, I estimated the probative value at each confidence level (50%, 60%, 70%, etc.). Confidence levels of 100% were omitted to avoid extreme scores. Finally, predecisional distortion was calculated by subtracting the estimated value of the testimony from the participant's actual value of the testimony. The first distortion score was calculated for the second testimony, based on responses gathered after the first testimony (which served as a neutral starting point). Mean distortion scores for each participant were calculated across the 6 testimonies. The distortion scores were positive if they were biased in favor of the defense and negative if they were biased in favor of the prosecution.

As expected, participants who voted guilty had predecisional distortion scores in favor of the prosecution ( $M = -.77$ ,  $sd = 1.12$ ), while participants who voted not guilty had predecisional distortion scores in favor of the defense ( $M = .26$ ,  $sd = .98$ ). SC-IAT scores were significantly negatively correlated with predecisional distortion,  $r(203) = -.15$ ,  $p = .03$ , which suggests that the more implicit bias displayed before the trial, the greater the predecisional distortion exhibited in favor of the prosecution. Predecisional Distortion was also significantly negatively correlated with the Probability of Commission subscale of the JBS,  $r(203) = -.16$ ,  $p = .02$ , suggesting that the higher the score on this particular subscale, the greater the distortion in favor of the prosecution. Predecisional distortion did not correlate significantly with any other explicit measures of juror bias subscales (all  $ps > .09$ ; see Appendix G for correlation matrix).

#### *Prediction of Verdict*

The conditions were dummy-coded in order to represent the 2 (participant race) x 2 (defendant race) design. For the first dummy variable, White participants who evaluated the Black defendant were assigned scores of 1 while members of the other conditions were assigned scores of 0. For the second dummy variable, non-White participants who evaluated the Black defendant were assigned scores of 1 while members of the other conditions were assigned scores of 0. For the third dummy variable, White participants who evaluated the White defendant were assigned scores of 1 while members of the other conditions were assigned scores of 0. The fourth dummy variable coded non-White participants who evaluated the White defendant with scores of 1 and the participants from the other conditions with scores of 0. The first dummy variable was left

out of all regression analyses in order to avoid redundancies, thereby acting as the baseline condition.

Stepwise logistic regressions were run to evaluate the validity of the indirect measure of juror bias (SC-IAT), the direct measures of juror bias (JBS and R-LAQ), and predecisional distortion as predictors of predeliberation verdicts. In the first step, the pre-existing conditions were entered together. Condition 1 served as the baseline comparison for the three other conditions. Overall, participant condition was not a significant predictor,  $\chi^2(3) = 5.11, p = .16$ .

In the second step, the predictors were entered separately. Table 6 shows the logistic regression coefficient (unstandardized regression coefficients are reported due to the use of a dichotomous outcome variable), Wald test, and significance level for each predictor. As expected, the measure of predecisional distortion was a strong predictor of predeliberation verdict ( $p < .01$ ). Implicit guilt bias, as measured by the SC-IAT, was also a significant predictor of predeliberation verdict ( $p = .02$ ). Of the explicit measures of juror bias, the Probability of Commission subscale of the JBS and the Authoritarianism subscale of the R-LAQ both were significant predictors ( $ps < .05$ ).

It was important to show that predecisional distortion predicted verdicts to ensure that the measure of distortion had validity. However, a primary goal of these studies is to investigate the predictive validity of measures that can be given to jurors before a trial begins. In an attempt to find the single best predictor of verdict from among the measures

Table 6. Main Study Logistic Regression for the SC-IAT, Predecisional Distortion, and Explicit Measures of Juror Bias as Predictors of Predeliberation Verdict

	Measure	b	$\chi^2_{\text{WALD}}$	<i>p</i>
Step 1	Baseline	.93	10.49	<.01
	Condition 2	-.23	.29	.59
	Condition 3	-.18	.20	.65
	Condition 4	-.88	4.56	.03
Step 2	Measures Entered Separately			
2a	Predecisional Distortion	.83	23.52	<.01
2b	SC-IAT	-1.03	5.76	.02
2c	JBS Probability of Commission	-.09	4.12	.04
2c	JBS Reasonable Doubt	-.04	1.05	.31
2d	R-LAQ Authoritarianism	-.07	7.70	.01
2d	R-LAQ Equalitarianism	.03	1.24	.26
2d	R-LAQ Antiauthoritarianism	-.03	.85	.36

*Note:* N = 203. SC-IAT = Single Category Implicit Association Test. JBS = Juror Bias Scale. R-LAQ = Revised Legal Attitudes Questionnaire. Baseline = White participants, Black defendant. Condition 2 = Non-White participants, Black defendant. Condition 3 = White participants, White defendant. Condition 4 = Non-White participants, White defendant.

of juror bias, both the explicit measures and the implicit measure were entered simultaneously into a single model to predict verdict. Again, a stepwise logistic regression was run, with the conditions entered in the first step (Condition 1 served as the baseline for comparisons with the other conditions).

Table 7 shows the logistic regression coefficient, Wald test, and significance level for these predictors. Of all the pre-trial measures of juror bias, implicit bias as measured by the SC-IAT appears to be the strongest predictor of pre-deliberation verdict ( $p = .01$ ). The only other significant predictor was the Authoritarianism subscale of the R-LAQ ( $p = .05$ ).

#### *Prediction of Predecisional Distortion*

As expected, the measure of predecisional distortion was a very strong predictor of verdicts. However, predecisional distortion is not a variable that can be assessed prior to the trial. Therefore, linear regressions were run to evaluate the validity of the indirect measure of juror bias (SC-IAT) and the direct measures of juror bias (JBS and R-LAQ) to predict predecisional distortion. The conditions were dummy coded as in the previously reported analysis. In the first step, the conditions were entered into the regression. Condition was not a significant predictor in this regression,  $F(3, 199) = 1.96, p = .12$ .

Table 8 shows the linear regression coefficient, t-test, and significance level for each predictor entered separately. The SC-IAT and the Probability of Commission subscale of the JBS both showed significant partial effects ( $ps < .05$ ). The Equalitarianism subscale and the Antiauthoritarianism subscale of the R-LAQ were near significant predictors of predecisional distortion ( $p = .06$  and  $.07$ , respectively).

Table 7. Main Study Logistic Regression Model for the Implicit and Explicit Measures of Juror Bias as Predictors of Predeliberation Verdict

	Measure	b	$\chi^2_{\text{WALD}}$	<i>p</i>
Step 1	Baseline	.93	10.49	<.01
	Condition 2	-.23	.29	.59
	Condition 3	-.18	.20	.65
	Condition 4	-.88	4.56	.03
Step 2	Measures Entered Simultaneously			
	SC-IAT	-1.10	6.01	.01
	JBS Probability of Commission	-.05	.81	.37
	JBS Reasonable Doubt	-.02	.31	.58
	R-LAQ Authoritarianism	-.05	3.97	.05
	R-LAQ Equalitarianism	.02	.43	.51
	R-LAQ Antiauthoritarianism	-.03	.60	.44

*Note:* N = 203. SC-IAT = Single Category Implicit Association Test. JBS = Juror Bias Scale. R-LAQ = Revised Legal Attitudes Questionnaire. Baseline = White participants, Black defendant. Condition 2 = Non-White participants, Black defendant. Condition 3 = White participants, White defendant. Condition 4 = Non-White participants, White defendant.

Table 8. Main Study Linear Regression Predicting Predecisional Distortion

Measures Entered Separately		b	<i>t</i>	<i>p</i>
Step 1	Baseline	-.13	-.93	.35
	Condition 2	<.01	.02	.99
	Condition 3	.12	.05	.58
	Condition 4	-.40	-.15	.07
Step 2	Measures Entered Separately			
2a	SC-IAT	-.43	-1.98	.05
2b	JBS Probability of Commission	-.05	-2.17	.03
2b	JBS Reasonable Doubt	<-.01	-.28	.77
2c	R-LAQ Authoritarianism	-.01	-1.04	.30
2c	R-LAQ Equalitarianism	.03	1.87	.06
2c	R-LAQ Antiauthoritarianism	-.03	-1.80	.07

*Note:* N = 203. SC-IAT = Single Category Implicit Association Test. JBS = Juror Bias Scale. R-LAQ = Revised Legal Attitudes Questionnaire. Baseline = White participants, Black defendant. Condition 2 = Non-White participants, Black defendant. Condition 3 = White participants, White defendant. Condition 4 = Non-White participants, White defendant.

*Mediation Analyses*

The relationship between implicit guilt bias and verdict decision was mediated by predecisional distortion. The results of the four Baron and Kenny (1986) steps, which are summarized in Table 9 (and illustrated in Figure 1; unstandardized regression coefficients are reported due to the use of a dichotomous outcome variable), are as follows. The effect of implicit bias on verdict (Path c) is significant ( $p = .02$ ; Step 1 passed). The effect of implicit bias on predecisional distortion (Path a) is significant ( $p = .03$ ; Step 2 passed). The effect of predecisional distortion on verdict controlling for implicit bias (Path b) is significant ( $p < .01$ ; Step 3 passed). The effect of implicit bias on verdict controlling for predecisional distortion (Path c') is not significant ( $p = .07$ ; Step 4 passed). A Sobel test was run to determine the significance of the indirect effect of the mediator by testing the difference between Path c and Path c'. The difference was significant, confirming the mediation,  $z = -1.97, p = .05$ .

Table 9. Main Study Mediation of Predecisional Distortion on Implicit Bias and Verdicts

Baron & Kenny Steps	Path	b	t	p
1	c	-1.01	-2.43	.02
2	a	-.47	-2.21	.03
3	b	.83	4.86	<.01
4	c'	-.79	-1.79	.07

*Note:* N = 203. c = Path from implicit guilt bias to verdict. a = Path from implicit guilt bias to predecisional distortion. b = Path from predecisional distortion to verdict. c' = Path from implicit guilt bias to verdict while controlling for predecisional distortion.

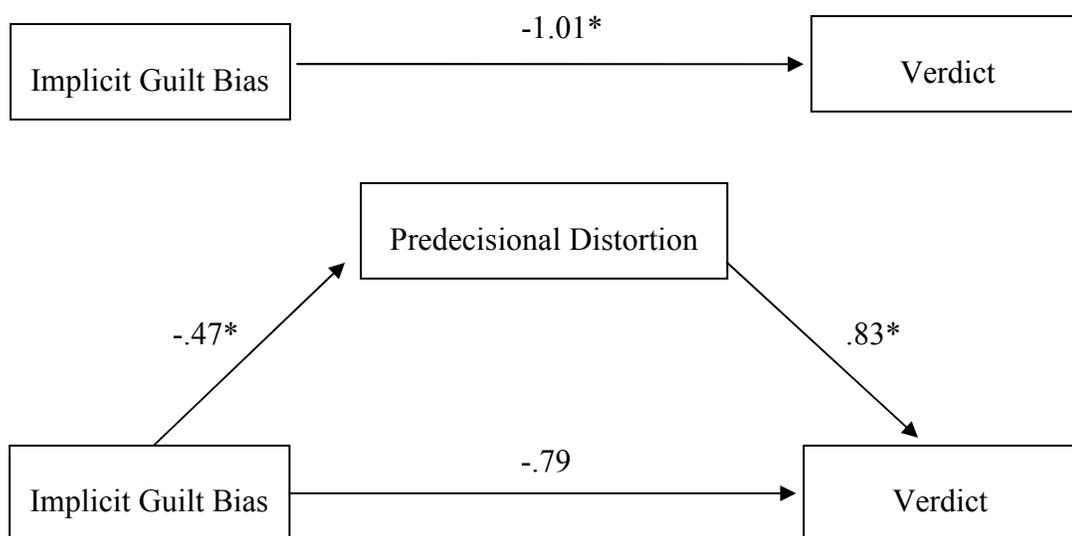


Figure 1. Unstandardized Regression Coefficients for the Relationship between Implicit Guilt Bias and Verdict as Mediated by Predecisional Distortion.

Note: N = 203.

\*  $p < .05$

The only other relationship between a measure of juror bias and verdict that was mediated by predecisional distortion was with the JBS subscale of Probability of Commission. The results of the four Baron and Kenny (1986) steps are summarized in Table 10 (and illustrated in Figure 2). A Sobel test was run to determine the significance of the indirect effect of the mediator by testing the difference between Path  $c$  and Path  $c'$ . The difference was significant, confirming the mediation,  $z = -2.11, p = .03$

Table 10. Main Study Mediation of Predecisional Distortion on Probability of Commission and Verdicts

Baron & Kenny Steps	Path	b	<i>t</i>	<i>p</i>
1	$c$	-.10	-2.43	.02
2	$a$	-.05	-2.35	.02
3	$b$	.81	4.74	<.01
4	$c'$	-.07	-1.54	.12

*Note:*  $N = 203$ .  $c$  = Path from Probability of Commission to verdict.  $a$  = Path from Probability of Commission to predecisional distortion.  $b$  = Path from predecisional distortion to verdict.  $c'$  = Path from Probability of Commission to verdict while controlling for predecisional distortion.

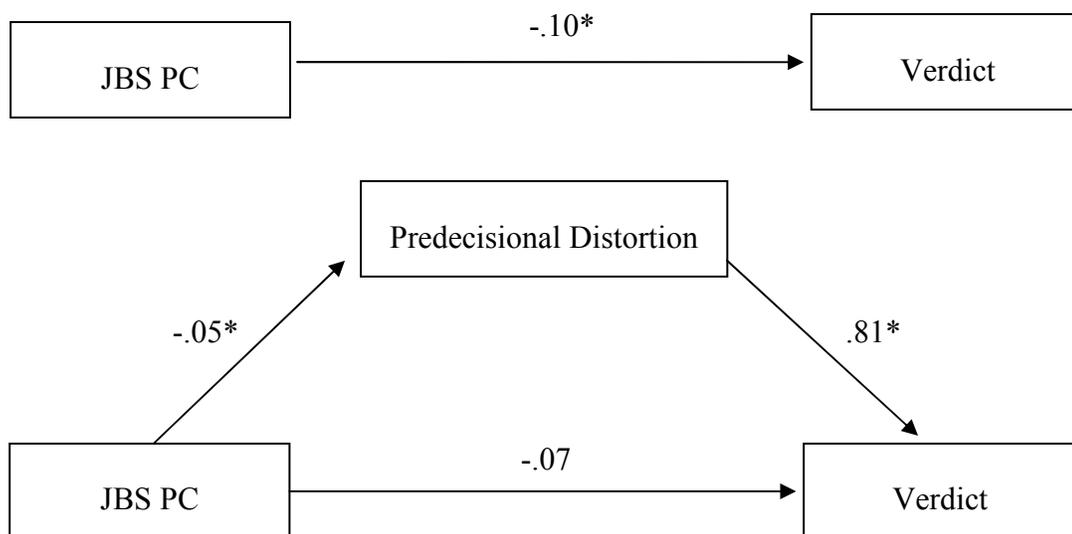


Figure 2. Unstandardized Regression Coefficients for the Relationship between Probability of Commission and Verdict as Mediated by Predecisional Distortion.

*Note:*  $N = 203$ . JBS = Juror Bias Scale. PC = Probability of Commission.

\*  $p < .05$

## Discussion

First, the Main Study did replicate the primary findings from Pilot Study 1. The SC-IAT was found to be a reliable measure of implicit pre-trial guilt biases. Furthermore, these implicit guilt biases varied in relation to the race of the participant and the race of the defendant. White participants exhibited greater implicit bias against Black defendants as opposed to White defendants. Non-White participants, on the other hand, exhibited greater implicit bias against White defendants as opposed to Black defendants.

Overall, the results did not show a bias against Black defendants in terms of convictions. The Black defendant was actually convicted less often than the White defendant. This result appears to be largely driven by the non-White participants, who disproportionately voted against the White defendant. Furthermore, non-White participants were more conviction-prone in general than White participants. White participants were no more likely to vote against the Black defendant than they were to vote against the White defendant.

The primary goal of the Main Study was to examine the predictive validity of the indirect measure of juror bias (SC-IAT), as well as that of traditional direct measures of juror bias (JBS and R-LAQ). Results showed that an individual's implicit bias against the defendant, as measured by the SC-IAT, was able to predict pre-deliberation verdicts. Two subscales from the direct measures (the Authoritarianism subscale of the R-LAQ and the Probability of Commission subscale of the JBS) also were predictive of verdicts, when each measure was evaluated separately. When the significant predictors were evaluated as a model, only the SC-IAT and the Authoritarianism JBS subscale remained significant.

A secondary goal of the Main Study was to examine the way in which jurors evaluate trial information and reach a decision. To that end, participants answered questions throughout the trial as a measure of predecisional distortion. As expected, participants did distort information from the trial in favor of the party with which they ultimately sided. That is, participants who distorted evidence in favor of the prosecution tended to vote guilty; those who voted distorted evidence in favor of the defense tended to vote not guilty.

Predecisional distortion was the strongest of all the variables used to predict predeliberation verdicts. Furthermore, predecisional distortion mediated the relationship between implicit bias (measured by the SC-IAT) and predeliberation verdicts. The results suggest that implicit biases direct the individual in how they evaluate evidence and information from the trial, which ultimately determines how they choose to vote prior to deliberations.

While a few of the subscales of the direct measures of juror bias (JBS and R-LAQ) were able to predict verdicts, they all showed somewhat poor internal consistency. The predictive validity of both of these measures may be improved through a reevaluation of the structure and content of the items. Also, both measures were constructed and validated over 20 years ago, which could contribute to the lack of reliability in the current study. The data from the Main Study suggest that both measures can be modified to focus more on the subscales that proved to be significant predictors (Probability of Commission and Authoritarianism). Furthermore, predecisional distortion

mediated the relationship between Probability of Commission scores and pre-deliberation verdicts.

Regardless of improvements on the reliability, both explicit measures used in the current study are measures of *general* tendencies to convict or acquit. As stated earlier, the predictive validity of these measures is likely to increase or decrease depending on any number of trial aspects (e.g. criminal vs. civil trial, violent vs. non-violent crime, etc.).

On the other hand, the implicit measure of juror bias is flexible, reliable, and can be modified to provide more accurate assessments of juror bias depending on specific nuances of a trial. For instance, had the trial used in the current study been a male-on-male crime, implicit biases against the defendant may have been quite different on an individual level. Across various situations, however, a juror's responses on the explicit measures of juror bias would not be expected to change.

## CHAPTER 6

### GENERAL DISCUSSION

The current studies were the first to directly examine the role of implicit biases on juror decision-making. First, these studies found that individuals can demonstrate significant levels of implicit bias against a defendant even before the trial begins. In fact, participants in the current studies exhibited significant levels of implicit bias based only upon seeing a photo of the defendant and reading a short, one-sentence description of the charges.

Secondly, these initial implicit biases tended to predict an individual's decision-making throughout the trial. An individual's implicit bias pre-trial predicted how he or she distorted and differentially interpreted evidence from the trial. How individuals evaluated the evidence, in turn, predicted their post-trial decision to convict or acquit the defendant.

The measure of implicit juror bias (SC-IAT) was compared with two traditional measures of explicit juror bias that have been the focus of much attention and past research (JBS and R-LAQ). The SC-IAT proved to be a more reliable measure than the explicit measures. Specific subscales of the explicit measures, while having moderate reliability, did also demonstrated predictive validity in the current studies. Based on these results, there does appear to be utility in measuring a juror's level of Authoritarianism (R-LAQ subscale) and his or her Probability of Commission (JBS subscale).

The primary advantage of using an indirect measures of juror bias rather than explicit measures is one of specificity. The explicit measures of juror bias are purported to uncover *general* proneness to convict or acquit. However, as was discussed earlier, the utility of such measures relies heavily on specific aspects of the trial. For example, authoritarian jurors are likely to convict in criminal trials, but side with the defense in civil trials. It is reasonable to suspect that a high authoritarian juror is influenced by other more specific aspects of a trial (such as type of crime, defendant race, victim race, etc.). The explicit measures are necessarily static, though, and an individual's score is expected to remain consistent over time and regardless of the situation.

For instance, a juror's responses to the statements "Accused persons should be required to take lie detectors" (an Authoritarian item on the R-LAQ) and "Out of every 100 people brought to trial, at least 75 are guilty of the crime with which they are charged" (a Probability of Commission item on the JBS) are unlikely to change based on a few details about the trial. However, the indirect measure of juror bias is flexible enough to account for differences between trials. For example, a juror's implicit bias is very likely to change based on defendant race (as was demonstrated here). Therefore, one may presume that implicit bias can be influenced by other factors, such as victim race and type of crime.

Additionally, the veracity of a juror's response to explicit questions, especially those involving race or other sensitive issues, should be carefully considered. Indirect measures are purported to uncover responses that are not controllable, and therefore these measures are not susceptible to the same social desirability demands of explicit measures.

Again, jurors may not report biases because of a lack of awareness that they possess any biases in the first place. Alternatively, a juror may know of his or her biases and choose not to report on them to others. Regardless of which is true, indirect measures are better equipped than explicit measures for the investigation of juror bias.

The current studies provide support that psycholegal research and theory would benefit from the introduction of the SC-IAT into the legal domain. These studies were also an initial step in establishing the validity of the SC-IAT specifically in the domain of juror decision-making. The SC-IAT proved to be a reliable measure in this previously unexplored area. Not only was the SC-IAT shown to be more reliable than established explicit measures of juror bias, but it also was a comparable predictor of juror decision-making and verdicts.

#### Practical Implications

An entire industry is being built around the claim that it is possible to predict juror behavior. Most jury consultants use explicit measures (e.g. questionnaires, verbal interviews, etc.) and intuition to discern “good” jurors from “bad” jurors. In trials involving socially sensitive issues, such as race, explicit attitude measures are expected to be poor predictors of behavior. However, implicit attitude measures are expected to outperform explicit measures.

Because there are many variables in a given trial that can influence verdicts, predecisional distortion is the best indicator of a juror’s verdict. However, this is not a variable that could be measured before the trial begins. The implicit measure of juror bias was a strong predictor of predecisional distortion, as was one subscale of the explicit

measures (Probability of Commission on the JBS). It is reasonable to expect that across different trials and with different samples, the implicit measure will continue to predict predecisional distortion. On the other hand, probability of commission, as well as the other subscales of the explicit measures, may lose or gain predictive validity depending on trial factors. A fruitful area for future research is to attempt to establish the validity of explicit and implicit measures in a variety of trial situations.

The primary advantage that the explicit measures of juror bias possess over the indirect measure is ease-of-use. During jury selection, “paper-and-pencil” questionnaires are used regularly. They are straightforward to administer and can be completed by many potential jurors simultaneously. The SC-IAT, on the other hand, is a sensitive measure of reaction time and requires the use of a computer. The adoption of this indirect measure in jury selection is unlikely for all trials in every jurisdiction. However, jury selection in high profile cases has been known to be a process spanning many days. With the advancement of computer technology and the growing concern about juror’s unconscious biases, the use of the SC-IAT as a pre-trial measure of juror bias should be strongly considered.

#### Study Limitations & Future Research

Pilot Study 1 failed to find meaningful differences in implicit pre-trial bias based on the stereotypicality of crime, which could be the result of a weak manipulation. Previous studies have found that defendants who are accused of committing race-stereotypical crimes are treated more harshly than those accused of crimes incongruent with the defendant’s race (Jones & Kaplan, 2001). It was expected that when the crime

was stereotypical of the defendant's race, participant's implicit guilt biases against the defendant would increase, as would explicit assessments of guilt. Neither was true in Pilot Study 1. It is possible that the manipulation was too weak to elicit the expected results. Participants were given a short statement of the charges brought against the defendant. Future research should explore this question using a stronger manipulation and a full-length trial.

A second limitation of the current studies is the use of a college sample. The sample used in the current studies is not representative of the average jury pool in terms of education and age, among other factors. However, previous mock jury studies tended to find that community samples and college samples yield similar results. When the two samples do diverge, community samples tend to be more punitive than college samples (Bornstein, 1999). One would expect the main findings from the current study to be replicated, and perhaps even exaggerated in a more diverse community sample (i.e. community samples may exhibit greater implicit and explicit bias against the defendant). Nevertheless, future research should examine the role of implicit biases on juror decision-making using a community sample.

Another limitation of the current studies was the use of the individual's pre-deliberation verdict as the primary dependent variable. While a juror's pre-deliberation verdict does tend to be a good indicator of a jury's post-deliberation verdict (Sandys & Dillehay, 1995), individual verdicts certainly can change throughout the deliberation process. Future research should expand upon the current studies by including a jury

deliberation in the procedure. One particularly interesting question to explore is whether strength of implicit bias predicts a juror's resistance to change his or her verdict.

Research should seek to understand how implicit biases shift throughout a trial. These studies only measured implicit biases before the trial. Researchers should investigate whether implicit biases are malleable during a trial, especially following the presentation of pertinent evidence or other trial information. An understanding of how and when implicit biases shift has significant practical implications for lawyers. For example, a lawyer might find that implicit biases against his or her client increase, decrease, or stay the same when the client takes the stand. Knowing how a witness can impact implicit biases could greatly influence how a lawyer presents the case.

Finally, as suggested earlier, one may expect implicit biases against a defendant to vary based on aspects of the trial other than the defendant's race (e.g. stereotypicality of the crime, civil vs. criminal trial, victim characteristics, defendant gender, etc.), whereas the explicit measures of juror bias remain static. For a true comparison of indirect and explicit measures of juror bias, both should be assessing attitudes at the same level of specificity. In the current study, juror bias about the legal system and criminals in general was measured explicitly, while juror bias against a specific defendant was measured indirectly. Implicit measures can be modified to assess implicit bias about the legal system in general. Or the explicit measures could be modified to assess biases against a specific defendant.

The indirect measure is expected to achieve more valid results at a more specific level than explicit measures. However, this should be investigated in the future. The

flexibility of the indirect measure is one of the primary proposed advantages over explicit measures. There is little doubt that there are situations in which explicit and indirect measures converge and are equally effective predictors of juror verdicts, just as there should be little doubt that there are situations in which the measures diverge and one out predicts the other.

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## APPENDIX A

## PILOT STUDY 1: JURY QUESTIONNAIRE

*Participants were asked to answer the following questions regarding the legal system and jury duty.*

1. Have you ever sued or been sued by anyone?
  - a. Yes
  - b. No
2. Have you or any family member or close friend been charged with a crime?
  - a. Yes
  - b. No
3. Have you or any family member or close friend appeared or testified as a witness?
  - a. Yes
  - b. No
4. Have you ever known anyone who was a homicide victim?
  - a. Yes
  - b. No
5. Have you ever known anyone who was a victim of a shooting?
  - a. Yes
  - b. No

6. Are you in favor of the death penalty?
  - a. Yes
  - b. No
7. Have you ever been in a jury?
  - a. Yes
  - b. No
8. If yes, was the trial criminal or civil?
  - a. Criminal
  - b. Civil
  - c. I have never been in a jury
9. Do you believe you could perform the duties of a juror without bias?
  - a. Yes
  - b. No
10. Generally, do you believe that defendants are innocent until proven guilty?
  - a. Yes
  - b. No

## APPENDIX B

## PILOT STUDY 1: DEFENDANT PHOTOGRAPHS

*The following photographs were shown to participants with a short description of criminal charges. These photographs were then used as stimuli to represent “Defendant” on the Guilt SC-IAT.*





6. Use the following scale to rate the strength of the evidence IN FAVOR of the defendant:

1-----2-----3-----4-----5-----6-----7-----8-----9  
 Very                      Somewhat                      Neutral                      Somewhat                      Very  
 Weak                      Weak                                           Strong                      Strong

7. Use the following scale to rate the credibility of the defendant:

1-----2-----3-----4-----5-----6-----7-----8-----9  
 Very                      Somewhat                      Neutral                      Somewhat                      Very  
 Weak                      Weak                                           Strong                      Strong

8. Use the following scale to rate the credibility of the police officers who investigated the crime:

1-----2-----3-----4-----5-----6-----7-----8-----9  
 Very                      Somewhat                      Neutral                      Somewhat                      Very  
 Weak                      Weak                                           Strong                      Strong

9. Use the following scale to rate the credibility of the doctors involved in this trial:

1-----2-----3-----4-----5-----6-----7-----8-----9  
 Very                      Somewhat                      Neutral                      Somewhat                      Very  
 Weak                      Weak                                           Strong                      Strong

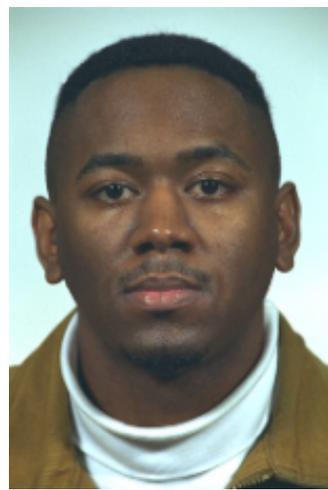
10. Use the following scale to indicate the stereotypicality of the crime:

1-----2-----3-----4-----5-----6-----7-----8-----9  
 Very                      Somewhat                      Neutral                      Somewhat                      Very  
 Stereotypical                      Stereotypical                                           Stereotypical                      Stereotypical  
 of a White Male                      of a White Male                                           of a Black Male                      of a Black Male

## APPENDIX D

## MAIN STUDY: DEFENDANT PHOTOGRAPHS

*The following photographs were shown to participants with a short description of criminal charges. These photographs were then used as stimuli to represent “Defendant” on the Guilt SC-IAT.*



## APPENDIX E

## MAIN STUDY: REVISED LEGAL ATTITUDES QUESTIONNAIRE (R-LAQ)

*Directions: Indicate your level of agreement or disagreement with each of the following statements, using this scale:*

-3 = strongly disagree, -2 = moderately disagree, -1 = slightly disagree,  
0 = neutral, +1 = slightly agree, +2 = moderately agree, +3 = strongly agree

1. Unfair treatment of underprivileged groups and classes is the chief cause of crime. *(AA)*
2. Too many obviously guilty persons escape punishment because of legal technicalities. *(A)*
3. The Supreme Court is, by and large, an effective guardian of the Constitution. *(E, Filler)*
4. Evidence illegally obtained should be admissible in court if such evidence is the only way of obtaining a conviction. *(A)*
5. Most prosecuting attorneys have a strong sadistic streak. *(AA, Filler)*
6. Search warrants should clearly specify the person or things being seized. *(E)*
7. No one should be convicted of a crime on the basis of circumstantial evidence, no matter how strong such evidence is. *(AA)*
8. There is no need in a criminal case for the accused to prove his innocence beyond a reasonable doubt. *(E)*
9. Any person who resists arrest commits a crime. *(A)*
10. When determining a person's guilt or innocence, the existence of a prior arrest record should not be considered. *(E)*
11. Wiretapping by anyone and for any reason should be completely illegal. *(AA)*
12. A lot of recent Supreme Court decisions sound suspiciously Communistic. *(A, Filler)*
13. Treachery and deceit are common tools of prosecutors. *(AA, Filler)*
14. Defendants in a criminal case should be required to take the witness stand. *(A)*
15. All too often, minority group members do not get fair trials. *(E)*
16. Because of the oppression and persecution minority group members suffer, they deserve leniency and special treatment in the courts. *(AA)*
17. Citizens need to be protected against excess police power as well as against criminals. *(E)*
18. Persons who testify in court against underworld characters should be allowed to do so anonymously to protect themselves from retaliation. *(A, Filler)*
19. It is better for society that several guilty men be freed than one innocent one wrongfully imprisoned. *(E)*

20. Accused persons should be required to take lie detectors. *(A)*
21. When there is a “hung” jury in a criminal case, the defendant should always be freed and the indictment dismissed. *(AA)*
22. A society with true freedom and equality for all would have very little crime. *(AA)*
23. It is moral and ethical for a lawyer to represent a defendant in a criminal case even when he believes his client is guilty. *(E)*
24. Police should be allowed to arrest and question suspicious-looking persons to determine whether they have been up to something illegal. *(A)*
25. The law coddles criminals to the detriment of society. *(A)*
26. A lot of judges have connections with the underworld. *(AA, Filler)*
27. The freedom of society is endangered as much by overzealous law enforcement as by the acts of individual criminals. *(E)*
28. There is just about no such thing as an honest cop. *(AA, Filler)*
29. In the long run, liberty is more important than order. *(E)*
30. Upstanding citizens have nothing to fear from the police. *(A)*

## APPENDIX F

## MAIN STUDY: JUROR BIAS SCALE (JBS)

*Directions: This is a questionnaire to determine people's attitudes and beliefs on a variety of general legal issues. Please answer each statement by giving as true a picture of your own position as possible. Please complete the survey by circling the number of the answer you select, using the following scale:*

1 = strongly agree, 2 = somewhat agree, 3 = neutral,  
4 = somewhat disagree, 5 = strongly disagree

1. Appointed judges are more competent than elected judges. *(Filler)*
2. A suspect who runs from the police most probably committed the crime. *(PC)*
3. A defendant should be found guilty if only 11 out of the 12 jurors vote guilty. *(RD)*
4. Most politicians are really as honest as humanly possible. *(Filler)*
5. Too often jurors hesitate to convict someone who is guilty out of pure sympathy. *(RD)*
6. In most cases where the accused presents a strong defense, it is only because of a good lawyer. *(PC)*
7. In general, children should be excused for their misbehavior. *(Filler)*
8. The death penalty is cruel and inhumane. *(RD)*
9. Out of every 100 people brought to trial, at least 75 are guilty of the crime with which they are charged. *(PC)*
10. For serious crimes like murder, a defendant should be found guilty if there is a 90% chance that he committed the crime. *(RD)*
11. Defense lawyers don't really care about guilt or innocence, they are just in business to make money. *(PC)*
12. Generally, the police make an arrest only when they are sure about who committed the crime. *(PC)*
13. Circumstantial evidence is too weak to use in court. *(PC)*
14. Many accident claims filed against insurance companies are phony. *(PC)*
15. The defendant is often a victim of his own bad reputation. *(PC)*
16. If the grand jury recommends that a person be brought to trial, then he probably committed the crime. *(PC)*
17. Extenuating circumstances should not be considered—if a person commits a crime, then that person should be punished. *(RD)*
18. Hypocrisy is on the increase in society. *(Filler)*
19. Too many innocent people are wrongfully imprisoned. *(RD)*
20. If a majority of the evidence—but not all of it—suggests that the defendant committed the crime, the jury should vote *not guilty*. *(RD)*

21. If the defendant committed a victimless crime, like gambling or possession of marijuana, he should never be convicted. (*RD*)
22. Some laws are made to be broken. (*Filler*)

## APPENDIX G

## MAIN STUDY: CORRELATION MATRIX

## Main Study: Measures of Juror Bias and Predecisional Distortion Correlation Matrix

Measure		A <sub>1</sub>	A <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	C <sub>1</sub>	D <sub>1</sub>
JBS								
Probability of Commission	A <sub>1</sub>	--						
Reasonable Doubt	A <sub>2</sub>	.42**	--					
R-LAQ								
Authoritarianism	B <sub>1</sub>	.47**	.45**	--				
Equalitarianism	B <sub>2</sub>	-.38**	-.39**	-.19**	--			
Antiauthoritarianism	B <sub>3</sub>	-.08	-.27**	.06	.57**	--		
SC-IAT	C <sub>1</sub>	.04	-.03	.03	.04	.07	--	
Predecisional Distortion	D <sub>1</sub>	-.16*	-.09	-.12	.06	-.08	-.15*	--

Note: N = 203. SC-IAT = Single Category Implicit Association Test. JBS = Juror Bias Scale. R-LAQ = Revised Legal Attitudes Questionnaire.

\*\* = Correlation is significant at the 0.01 level

\* = Correlation is significant at the 0.05 level