AN ANALYSIS OF JUROR BIASES IN TERRORISM-RELATED CASES: A TERROR MANAGEMENT THEORY APPROACH

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ABSTRACT

Verdicts, confidence that the crime was terrorist related, sentencing, and following judicial instructions were analyzed in a terrorism case with ambiguous evidence. The race of the defendant was manipulated to be Caucasian, Hispanic, or Middle-Eastern, as was mortality salience (MS). The PJAQ was used to analyze individual differences in pretrial juror biases and use them to predict dependent outcomes. Two different samples were used: one an undergraduate from the University of North Carolina Wilmington and the other a general adult sample recruited at the DMV. Though mortality salience effects were inconsistent between the groups, the Conviction Proneness (CP) subscale, a measure of authoritarianism, demonstrated significant predictive validity on all dependent measures except sentencing. Defendant race affected verdict tendencies in the general sample, and confidence in both. Theoretical and practical applications are discussed.
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INTRODUCTION

With the possibility of upcoming civilian trials for Guantanamo detainees and the prospect of additional criminal actions that could plausibly be considered terrorist activities (Major Hassan at Fort Hood and Umar Farouk AbdulMutallab on Northwest flight 253 to Detroit as recent examples), the likelihood of terrorism related trials is increasing. The United States Code has defined terrorism as, “[activities that] involve acts dangerous to human life that are a violation of the criminal laws of the United States or any State” and

“appear to be intended to intimidate or coerce a population, to influence the policy of a government by intimidation or coercion, or to affect the conduct of a government by mass destruction, assassination, or kidnapping” (18 U.S.C. § 2331).

Although initially, policy and practice appeared to favor designating such individuals as “enemy combatants” and subjecting them to military trials, more recently, there appears to be a movement towards civilian trials. Specifically, both legal opinions/decisions, such as Hamdan v. Rumsfeld, 2006, which ruled that military commissions did not have the legal authority to try Guantanamo detainees (see also Rasul v. Bush, 2004; Hamdi v. Rumsfeld, 2004; Boumediene v. Bush, 2008) and a shift in foreign policy with the new administration have suggested that many individuals previously designated as enemy combatants will now be tried in civilian courts with juries that are not comprised exclusively of military personnel. Moreover, the coming years will likely see a dramatic increase in such cases as there have been approximately 800 Guantanamo detainees. We have seen more defendants charged with terrorism violations in the past few years than in the 25 years prior to that combined, and, with approximately 300 more individuals awaiting trial, this issue is becoming even more important (Executive Order No. 13492, 2009;
U.S. DoJ, 2005). As a result, understanding the potential psychological issues and attitudes that may affect individual juror verdicts in these types of trials is essential to ensuring that fair trials occur.

What also makes these cases different is the amount of media attention each incident receives, and the fact that every terrorist act can, in theory, be seen as a threat to every individual citizen, thereby placing all potential jurors in an unusual situation where they themselves were potential targets of the alleged criminal behavior. This raises questions of the potential neutrality of any prospective juror, and the extent to which this undermines a fair trial. Indeed, it is noteworthy that when comparing sentencing between similar cases involving terrorism suspects tried in the criminal justice system (e.g., Richard Reid, 2003) and those tried by military tribunals (e.g., David Hicks, 2007; Salim Hamdan, 2008; Omar Khadr, 2005-2008), the sentences have been longer for the non-military trials. The potential neutrality of prospective jurors can be seen as even more at risk when the judges, who are expected to be neutral, are swept up in the nationalistic fervor such as in the Reid case when the judge stated after sentencing,

“Look around this courtroom. Mark it well. The world is not going to long remember what you or I say here. Day after tomorrow it will be forgotten. But this, however, will long endure. Here in this courtroom and courtrooms all across America, the American people will gather to see that justice, individual justice, justice, not war, individual justice is in fact being done… See that flag, Mr. Reid? That's the flag of the United States of America. That flag will fly there long after this is all forgotten. That flag stands for freedom. You know it always will.”

An overview of understanding legal bias in the criminal justice system

Although a consideration of bias in trials involving suspected terrorists is new, the broader consideration of the impact of pretrial juror bias is longstanding. For example, Wigmore (1937) presented the first attempt to analyze juror decision by generating models that indentified various factors that enter into the process. Bias is a critical factor in the analysis of evidence and the character of the witness. Theoretically, the juror would not consider a witness’ race or other characteristics when evaluating testimony, but expecting outside influences to always be excluded has been referred to as “legal fiction” (Marshall, 1980).

Pennington and Hastie (1981) examined various cognitive models for the evaluation of evidence and reaching verdicts. One of the primary points of this examination is how each model tends to deal with individual differences, which can range from how the juror views the defendant to how scrupled (i.e., principled or conscientious) the juror may be. Interestingly, Pennington and Hastie have stated that using a Bayesian model, non-scrupled jurors showed higher guilty judgments and greater negativity towards the acquittal of guilty defendants (Pennington & Hastie, 1981). These individual differences and biases detract from how well any of the juror decision making models may be followed, especially since some, such as the Bayesian approach, are considered more of an ideal of how a juror should act (Pennington & Hastie, 1981). Systematic prejudice could thus prove extremely problematic in trials.

The justice system has always struggled with the issue of discrimination in jury selection which then can carry over to prejudice in verdicts. In theory, the reduction of racial bias should occur in the voir dire, where the prosecution and defense are able to deselect individuals who demonstrate a tendency for bias, whether racial or otherwise. The Federal Civil Rights Act of
1875 (18 U.S.C. § 243) outlaws racial discrimination in jury selection; though the successfulness of the law was questionable at the time. It was not until *Powell v. Alabama* (1932) that the denial of counsel to minorities was outlawed, and not until *Batson v. Kentucky* (1986) that peremptory challenges (the dismissal of a juror without cause) could not be used to exclude jurors based on their race. Previous overtures to the idea had been made in *Swain v. Alabama* (1965), but the Supreme Court ruled that it “placed on defendants a crippling burden of proof… [leaving the prosecution’s challenges] largely immune from constitutional scrutiny” (*Batson*, 1986).

*Individual differences in juror bias after voir dire*

Racial bias continues to have an influential place in trials, though historically this research has emphasized biases that target African-Americans (e.g., Johnson, Whitestone, Jackson & Gatto, 1995; Sommers & Ellsworth, 2001), largely because this racial subgroup has suffered some of the more overt examples of bias in society. Research in this area has demonstrated not only that biases are present against targeted minorities, but that the nature of the bias may be subtle (e.g., implicit bias/attitudes) and it has been shown to impact verdict decisions (e.g., Willis-Esqueda, Espinoza & Culhane, 2008). However, given the above-mentioned circumstances resulting in a marked increase in foreigners (largely individuals of Arab decent and/or those having Islamic views/faith) suspected and subsequently charged with terrorism-related crimes, there is a need to broaden our understanding of this issue to include this outgroup.

Historically, research on discrimination against Arab-Americans was lacking, but since September 11th, this issue has received more attention. Bushman and Bonacci (2004) found that
prejudiced attitudes against Arab-Americans by European-Americans are significantly correlated with prejudiced attitudes against other ethnic groups, including African, Asian, and Hispanic-Americans. This suggests that at least some aspect of the biased attitudes towards a minority group may not be specific to the targeted group, but rather these attitudes may be a more generic/broad outgroup bias. For example, the researchers found that European-Americans high in a score of prejudice were more likely to not pass on an e-mail notifying an Arab-American of a scholarship (Bushman & Bonacci, 2004). Importantly, prejudiced attitudes against Arabs can significantly increase when individuals are presented with news stories involving terrorist-related attacks, as these represent stereotype consistent crimes. Moreover, this type of bias is a fluid construct, varying both over time and between individuals.

Importantly, bias is a reciprocal process, where both the minority and majority groups can hold prejudicial views against each other (e.g., for a discussion of Black-anti White attitudes see Johnson & Lecci, 2003). For example, news reports have also been shown to significantly increase prejudiced attitudes of Arabs against Europeans (Das, Bushman, Bezemer, Kerkhof & Vermeulen, 2008). Das and colleagues based their study off the ideas of terror management theory, which will be discussed in more detail later. Additionally, negative attitudes against Arabs have been shown to increase implicit bias (Dasgupta, DeSteno, Williams & Hunsinger, 2009). These findings may also support Das et al.’s findings (2008), as negative emotions would surface after reading about terrorism cases. These negative attitudes extend beyond those in the racial outgroup, as when reminded of one’s own mortality, negativity has been shown to increase towards anyone or anything that criticizes America (Pyszczynski, Solomon & Greenberg, 2002).

Racial bias can also be connected to crime types to further bias jurors. Previous research has demonstrated that participants judged defendants more harshly and were significantly more
likely to convict if the crime they committed was stereotype consistent (Gordon & Anderson, 1995; Jones & Kaplan, 2003). For the purposes of terrorism cases, all of the recent incidents (not relating to domestic terrorism groups, i.e., Hutaree militia) have involved either Middle Eastern defendants or defendants that had converted to Islam. The media’s constant discussion of Al’Qaeda risks the association of Middle Easterners as synonymous with terrorists which presents a serious issue. Gordon and colleagues (1996) found that participants overestimated the number of defendants that committed stereotype consistent crimes and underestimated the numbers non-stereotype consistent crimes.

Biases cannot simply be assessed along racial, ethnic, or religious lines—there are other relevant biases such as leniency versus harshness and pro versus anti-defendant biases that have been studied (Kaplan, 1977; Ostrom, Werner & Saks, 1978). Adorno’s (1950) F scale was created to measure authoritarianism and its influence in such situations as trials. Individuals high on the F scale have been described as “rigid and intolerant and as having the tendency to condemn, reject, and punish those who violate conventional values” (Mitchell & Byrne, 1973). Those high in authoritarianism are also both more certain of the guilt of those with dissimilar beliefs and are more likely to recommend longer sentences (Mitchell & Byrne, 1973; Pennington & Hastie, 1981; Kassin & Wrightsman, 1983). Those high in authoritarianism, “place trust in the system and have a strong need to identify and punish wrongdoers” and may see the presumption of innocence and burden of proof as unwanted obstacles to the efficiency of the criminal justice process”(Myers, 2008). These personalities also display significantly more support for restrictions on human rights (Crowson, 2007). Authoritarianism has been significantly correlated with racist attitudes as well, specifically against Arabs (Echebarria-Echabe & Guede, 2007; Napier & Jost, 2008). Moral intolerance, another component of
authoritarianism, has been significantly positively correlated with authoritarianism as well, further supporting the idea that those high in this belief are more willing to punish those who disagree (Napier & Jost, 2008).

Authoritarianism is not the only focus of biases—they can be in favor of the prosecution or the defense as well. Krauss and Bonora (1999) report heavy biases towards the prosecution in a few polls such as a 1986 San Francisco poll showing 64% of people believe, “defendants should be required to testify to demonstrate their innocence”, and a 1990 Texas poll reporting 41.6% of eligible jurors agreed that, “if the government brings someone to trial, that person is probably guilty of some crime” (Krauss & Bonora, 1999). While these biases seem pervasive, it should be noted that the presence of a significant percentage on both sides of the polled questions indicates that there is considerable individual variability in attitudes held by potential jurors.

One of the most salient of individual juror differences that will be the focus of this research is racial bias. Though some would argue that due to changes in the country’s racial makeup, the justice system no longer shows such bias (Reynolds, 1996), Kennedy (1997) argues that race is still an issue in most cases with African-American defendants. Johnson et al. (1995) demonstrated that white jurors are more likely to use inadmissible evidence against African-American defendants, resulting in higher conviction rates. The relevancy of race is empirically supported, as it emerged as one of six measures of juror bias in the development of one of the newest measures of bias that drew upon lay conceptions of bias (the Pretrial Juror Attitude Questionnaire; Lecci & Myers, 2008). Moreover, in subsequent research, racial bias has emerged as a powerful predictor of verdict tendencies (Lecci, Beck & Myers, under review). What may be a more accurate description of the current state of racial biases in the courtroom is that the days of overt racial discrimination pre-Batson are largely over. However, the absence of
more overt manifestations of bias does not mean that they no longer exist; instead it suggests the presence of a desire to appear egalitarian. Indeed, white jurors, “will be more likely to render judgments tainted by the racial stereotypes and prejudice that linger in the consciousness of even the least overtly prejudiced of individuals” (Devine, 1989; Sommers & Ellsworth, 2001).

Interestingly, if racial issues in a trial with a black defendant are made exceptionally apparent, white jurors seem to compensate by tempering their judgments. Sommers and Ellsworth (2000, study 2) used a racially salient versus non-salient case with different perpetrators and victims and found that in the racially salient condition, both white and black mock jurors assigned similar verdicts to both the white and black defendants. However, in the non-salient case, white jurors assigned significantly more guilt to the black defendants (Sommers & Ellsworth, 2000). These data definitely undermine the conclusions of Reynolds (1996) and others (e.g., Skolnick & Shaw, 1997) that discrimination by white jurors is a thing of the past. Instead, this sort of kneejerk response of conforming to societal condemnation of prejudice against African-Americans has led to discrimination simply being less overt. Previous studies (e.g., Dovidio & Gaertner, 1986) confirm the decline of explicit forms of prejudice despite implicit prejudice still being pervasive (see also Sommers & Ellsworth, 2000).

A theoretical model to understand bias in cases involving terrorism

Though biases are correlated with increased negativity, prejudiced attitudes, and intolerance of outgroups, they do not explain why it occurs. Terror management theory explains these reactions as a means of preserving “faith in a culturally derived worldview that imbues reality with order, stability, meaning, and permanence; and belief that one is a significant contributor to this meaningful reality” (Pyszczynski, Solomon & Greenberg, 2002; Greenberg,
Pyszczynski & Solomon, 1986; Solomon, Greenberg & Pyszczynski, 1991). Terrorism, as previously mentioned, acts to intimidate and coerce a change in this stable reality; thus, it can provoke a backlash. When one’s worldview is threatened, Pyszczynski warns that destroying members of another culture becomes a basis for elevating self-esteem, which was presumably lowered as a result of the threatened worldview (Pyszczynski et al., 2002). This destruction is typically seen through violent reactions, but less clear is whether this could also occur in juries. Previous research does show increased negative attitudes which translate in a higher likelihood to convict and punish those that disagree (which naturally those who perform terrorist actions would be perceived as “disagreeing” with our socially acceptable norms). Convicting a defendant would also act as a socially acceptable way to accomplish the destruction that has been discussed in the literature (e.g., Pyszczynski et al., 2002), and it would be by means of a “civilized and just” response (i.e., convicting those who commit crimes) rather than resorting to actions that are outside the bounds of acceptable behavior.

While previously researchers have examined self-esteem as a moderator in terror management theory, this study will focus on examining the effects of mortality salience. Previous studies have suggested that self-esteem acts as a buffer, by reducing anxiety when one is forced to contemplate his or her own mortality. One study (Greenberg, Simon, Pyszczynski, Solomon & Chatel, 1992) showed that higher self-esteem reduced anxiety when presented with thoughts of death, which were activated by showing videos of autopsies and electrocutions. Those who had their self-esteem boosted prior to seeing the videos reported less anxiety afterwards. This hypothesis was supported by measuring autonomic arousal which is highly correlated to self-reported anxiety (Greenberg et al., 1992; see Dawson, Schell & Filion, 1990 for a discussion of autonomic arousal).
The last major tenant of terror management theory involves mortality salience or thoughts of one’s own death (Pyszczynski et al, 2002). Mortality salience has previously been manipulated through questionnaires asking participants to describe death and their feelings about it (Rosenblatt et al., 1989; Greenberg et al., 1990). Rosenblatt et al. (1989) demonstrated that in hypothetical cases, actual judges who were divided into a mortality salience condition and a control condition asked for significantly different bonds for the defendant. Specifically, the judges in the mortality salience condition on average asked for $455 while those in the control group only asked for $50 (Rosenblatt, Greenberg, Solomon, Pyszczynski & Lyon, 1989). This finding suggests that if judges, who purportedly have a longer history of, and expertise in, suppressing their own biases, are unable to do so, then juries comprised of laypersons are even more likely to succumb to pretrial biases and make decisions that are driven by factors other than evidence in the case. When considered in concert with the broader literature, this strongly suggest that it must be mortality salience that potential jurors are primed with, as previous research has shown that simple negativity or anxiety-provoking events do not result in such strong responses (Greenberg, Simon, Harmon-Jones, Solomon, Pyszczynski, & Lyon, 1995; Florian & Mikulincer, 1997). Greenberg et al. (1990) demonstrated that manipulating mortality salience results in much more negative reactions towards those who criticize one’s culture. In addition, Florian & Mikulincer (1997) showed that this effect extends to judgment of legal violators as well. Figure 1 gives a good example as to how mortality salience can be activated: through testimony or arguments, capital case, or the charges themselves (Arndt et al., 2005). This issue could be tied back to the Richard Reid case, as he was vocal in his derision of America.
The main issue becomes how mortality salience can be manipulated in an ecologically valid way. Because attorneys would not be permitted in a court of law to employ Greenberg’s questionnaire asking jurors to think about death during a trial, it is important to determine if other practices used in the courtroom could activate mortality salience?

Previous research has examined the prejudicing effects of both victim impact statements and violent crime scene imagery on the jury. Myers and Arbuthnot (1999) found that juries post-deliberation were significantly more likely to recommend harsher sentences once they had heard victim impact statements than those that had not. Victim impact statements are usually performed after the actual trial though, so they would not be as valid to use since the main focus is to examine verdict tendencies. The victim impact statements used by Myers and Arbuthnot (1999) discussed emotional impact of the murder of a mother on a young child which would not qualify as a manipulation of mortality salience.

Thoughts of one’s own death could be manipulated through violent evidence presented during the trial. Kassin and Garfield (1991) examined the effects of introducing violent crime scene videos. Consistent with the previous literature, participants who saw the videos set significantly lower standards for convicting the defendant (Kassin & Garfield, 1991).

Furthermore, Arndt and colleagues (2005) discuss three major ways to activate mortality salience in the courtroom: charges or details of the case (e.g., murder), witness or attorney statements, and the option of the death penalty for the defendant. While the death penalty may be an effective way to bring about thoughts of mortality, death qualification can become a serious confounding issue in predicting sentencing. Moreover, death qualification and providing details of the crime
does not necessarily elevate the jurors’ mortality salience. Currently, a meta-analysis of the literature suggests mortality salience will increase sentencing but have mixed result on verdict tendencies (Arndt, Lieberman, Cook & Solomon, 2005). These mixed results could be due to the fact that while the introduction of mortality occurs with some frequency, there have not been systematic attempts at personalizing that experience (i.e., making it salient to the jurors’ own mortality).

*Mortality salience and procedural justice*

Evidence that is obtained illegally or does not have relevancy or reliability may be deemed inadmissible by a judge. Previous research has shown that judicial instructions are not taken into account (Lieberman & Arndt, 2000) or may even make the evidence more influential in the juror’s mind (Cox & Tanford, 1989). Cook and colleagues found that when paired with mortality salience, participants high in nullification tendencies (those that have strong beliefs in procedural justice) are actually more likely to acquit when inadmissible evidence is used (Cook, Arndt & Lieberman, 2004). However, in the case Cook used, the jurors themselves are not threatened at all. It is possible they would act differently when primed by mortality salience, being more willing to use inadmissible evidence to convict, or in the case that it exonerates the defendant, be more likely to ignore it. The nullification process would then allow the juror to convict and punish the defendant.

*The present research*

The goal of the present research is to determine the impact of defendant race/ethnicity (focusing on Middle-Eastern males) when considering a crime that could be construed as terrorist in nature. It is hypothesized that middle-eastern men would more likely be convicted of
a crime that could plausibly be considered a terrorist act. A second variable of interest will be pretrial juror bias and how it plays out in terrorism trials, as the literature does not contain any examples of this issue. It is predicted that higher scores on bias will result in greater conviction tendencies and a greater probability that the crime will be construed as terrorist in nature. Lastly, the literature is void of examples where mortality salience is primed in an ecologically valid manner for the courtroom. Thus, it is important to determine if its impact (i.e., with a stronger tendency to convict when activated) remains intact under such circumstances. The impact of defendant ethnicity, juror bias, and mortality salience will be examined with respect to verdict tendencies, the likelihood that the crime will be interpreted as an act of terrorism, and jurors’ nullification tendencies.

In order to ensure that the trial stimulus is producing a reliable effect with respect to the ethnicity of the defendant, a pilot study was conducted to validate the race/ethnicity manipulation and the impact of pretrial bias, along with examining the time needed to complete the inventory. The case summary to be employed was also piloted to ensure that it will result in a relatively equivocal (i.e., near 50%) conviction rate.

**Pilot Study**

An initial study was conducted to facilitate the development of a case summary (see Appendix A) to determine overall conviction rates (the closer to an equivocal outcome, the more likely that biases will manifest and influence the verdict outcome; see Kalven & Ziesel, 1966 for a review of liberation hypothesis.) and to ensure the manipulation of the defendant’s race actually impacts verdict tendencies. 367 subjects from various undergraduate psychology classes, with additional males recruited from around campus, took part in the study. 109 of the
participants were removed due to the Conviction Proneness scale initially not being included in the survey, resulting in 262 participants, who were largely Caucasian (90%, n = 225) and male (51.8%, n = 130) with a mean age of 19.95 (SD = 2.79), ranging in age from 18 to 47. The survey included a verdict (coded as -1 for not guilty and 1 for guilty) and confidence in one’s verdict (ratings ranged from 1 “not at all confident” to 10 “completely confident). Verdict tendency was calculated by multiplying one’s verdict by confidence rating. A confidence rating was also obtained measuring the participant’s confidence in whether the bombing should be considered an act of terrorism, with 1 denoting complete certainty that the act is not terrorism and 10 denoting complete certainty that it is a terrorist act.

Participants were randomly assigned to one of two conditions: one in which the defendant was Richard Hughes, an ostensibly Caucasian defendant or Amin El-Hamarna, an ostensibly Middle-Eastern defendant. The case did not specifically mention the race of the defendant. Participants were also asked whether or not they had a driver’s license and were registered voters, to determine if they were eligible for jury duty in the county in which they were recruited.

The Conviction Proneness scale was included due to its links to authoritarianism (Lecci & Myers, 2008) and its significant prediction of verdict tendencies (e.g., Lecci & Myers, 2008, 2009). Initial predictions were that those in the experimental condition (with the Middle Eastern defendant) would be more likely to both convict the defendant and be more confident that the attack should be considered as terrorist-related in nature. It was also hypothesized that the Conviction Proneness scale would significantly predict overall verdict tendencies.

**Pilot Results**
Overall, the trial resulted in a higher percentage of not guilty verdicts (63.4%, $n = 166$ vs. 36.6%, $n = 96$ guilty). A breakdown of verdicts by condition revealed a 67.9% acquittal rate for the White defendant (91 out of 134), whereas for the Middle-Eastern defendant, there was a 58.6% acquitted rate (75 out of 128). Overall verdict tendencies, which could potentially range from -10 (completely certainty in a verdict of not guilty) to 10 (complete certainty in a guilty verdict), likewise reflected a mild acquittal bias, with a mean of -1.34 ($SD = 6.60$), though the data demonstrate considerable variation in verdict tendencies.

The first hypothesis, that participants would be more likely to convict the Middle Eastern defendant relative to the Caucasian defendant, was supported, as an independent samples t-test yielded a modest, but significant effect; $t(257) = -1.73, p < .05$.

The second hypothesis, suggesting that participants in the experimental condition would be more confident that the bombing was terrorism related, was also supported; $t (260) = -2.04, p = .02$. The third hypothesis, that the PJAQ Conviction Proneness scale would predict verdicts, was also supported. In fact, not only did the PJAQ significantly predict verdict tendencies, $R^2 = .15, F(1, 260) = 46.10, p < .001$, it was also shown that the magnitude of the explained variance was commensurate with figures commonly observed in the literature with the PJAQ (e.g., Lecci & Myers, 2008; for a review see Lecci, Beck, & Myers, under review). Interestingly, the Conviction Proneness scale demonstrated differential predictive validity for males and females, and this led to some exploratory investigations into gender differences for the trial. For males, Conviction Proneness explained 9.8% of the variation in verdict tendencies, $F(1, 128) = 13.93, p < .001$, while for females it explained 21.3% of the variation, $F(1, 119) = 32.24, p < .001$. Using a Fisher’s $z$ transformation, these $R$-squared values were shown to be significantly different (for
the PJAQ CP, $z'$ of .32 for males and .50 for females), indicating that conviction proneness was a modestly stronger predictor for females, $z = -1.41, p = .08$.

An analysis of verdict tendency by gender also revealed significant differences, with males being more confident in a not guilty verdict; $t(245) = -2.01, p < .05$ (male $M = -2.22, SD = 6.42$; female $M = -.55, SD = 6.78$). Using a Fisher’s $z'$ transformation, these differences were also shown to be significant (for condition -.24 for males and -.02 for females) indicating that males had a higher acquittal tendency, $z = -1.72, p < .05$ (Cohen & Cohen, 1983). Further examination of verdict tendencies for those able to serve by gender revealed significant differences for males $t(126) = -2.64, p < .01$ with the Caucasian defendant having a higher acquittal rate (verdict tendency $M = -3.71, SD = 5.66$) than the Middle-Eastern defendant ($M = - .82, SD = 6.82$). This effect was not found in females $t(119) = -.04, p = .97$. When looking at possible interactions between the variables, it was found that there is a significant two way interaction between the PJAQ Conviction Proneness scale and gender, $B = -.42, t(243) = -1.88, p = .06$.

_Pilot Discussion_

One of the more interesting and unexpected results of the pilot study was the gender differences. Previous data that has employed undergraduates for research have had been disproportionately female, so gender differences are often not easily studied. However, the finding that females are significantly more likely to convict is not unusual based off previous studies looking at gender in terrorism cases. For example, Lambert (2003) found that females were more afraid of being victims of a terrorist attack. Females also were significantly more likely to agree with statements such as, “I am willing to give up some freedoms to be safer from
future terrorist attacks” and “We need to make terrorists pay for their crimes” (Lambert, 2003). Similarly, Traugott (2002) in his examination of attitudes emerging from 9-11, reported gender differences, with females stating that they were more “shaken” after the September 11th attacks relative to males. Lemyre, Turner, Lee, and Krewski (2006) reported that amongst Canadian citizens, females were more concerned about potential terrorist attacks and felt more threatened. Lerner and colleagues (2003) also found gender differences between emotions reported shortly after September 11th. Specifically, females reported more fear and perceived risk for both themselves and the average American while males reported more anger (Lerner, Gonzalez, Small & Fischhoff, 2003). Interestingly, this finding may suggest that fear may be responsible for the gender differences in verdict tendencies, as the effect of fear on verdicts would be consistent with the reported effects of mortality salience. Though anger would seemingly be a strong motivator as well, it may be mitigated somehow in the trial process, perhaps through sentencing.

The sole manipulation in the pilot study (the name being either that of a Caucasian defendant or a Middle Eastern defendant) was successful though could potentially be problematic later. Previous studies that changed a defendant’s name as a racial manipulation have had inconsistent results when paired with mortality salience (see Cook, Arndt & Lieberman, 2004 footnote 4). The differences may be due to the emergence of different emotions by gender, with fear ultimately causing the higher conviction rates for females. Due to the similarity of male verdict tendencies in the experimental condition to overall female verdict tendencies (male $M = -.82$, female $M = -.52$ and -.57 for experimental and control conditions respectively, see Figure 2), perhaps males may be showing fear as well towards the Middle Eastern defendant.
There were some changes to the case from the pilot to the next study. First, the Caucasian named was changed to Mark Hughes to avoid connections to Richard Reid, and the Middle-Eastern name was changed to Achmed Hussein for the purpose of increased ease of identification. Second, a third ethnicity (Hispanic) was added to test for stereotype-consistent versus ingroup-outgroup effects.

The next study will attempt to replicate the pilot study findings, extend the findings to examine potential differences in sentencing and nullification, and most importantly, determine whether an ecologically valid and theoretically meaningful (i.e., see TMT) manipulation of mortality salience can enhance the effects. In addition to a main effect for mortality salience, it is further hypothesized that the Middle Eastern defendant in the mortality salience condition will result in the strongest conviction rates, harshest sentencing, and the greatest tendency to ignore judicial instructions that might undermine a conviction (i.e., an interaction between mortality salience and defendant race/ethnicity for all outcome variables). Finally, it is hypothesized that pretrial juror biases (conviction proneness and racial bias, in particular), as assessed by the PJAQ, will be a within subjects variable and will predict verdict tendencies, sentencing, and adherence to judge’s instructions under all conditions. It should be noted that no hypotheses will be made regarding gender differences; however, they will be examined to determine if the pilot study findings are replicated.

STUDY 1

METHOD

Participants
303 participants were recruited from University of North Carolina Wilmington introductory psychology classes. A manipulation check was used to remove students that could not correctly identify the defendant’s race, reducing the number of remaining participants to 199 (i.e., 65.7% of the original sample). Participants were mostly female (n = 106, 53.3%) and Caucasian (n = 166, 83.4%) with a mean age of 20.72 (SD = 5.1).

Materials

Before the case, either a mortality salient opening or non-salient opening statement by the prosecution will be given. Then the case, which includes a manipulation of defendant race (see Appendix A) will be presented along with a verdict and confidence level (on a 1-10 scale) and a confidence that the attack was terrorism-related (on a 1-10 scale). After demographic information, they will give sentencing for the defendant as well.

Measures

PJAQ. The PJAQ is a 29-item measure that yields six subscale scores: five items for conviction proneness (e.g., “Criminals should be caught and convicted by any means necessary”), six items for system confidence (e.g., “When it is the suspect’s word against the police officer’s, I believe the police”), seven items for cynicism towards the defense (e.g., “Defense lawyers are too willing to defend individuals they know are guilty”), four items for social justice (e.g., “Rich individuals are almost never convicted of their crimes”), four items for racial bias (e.g., “Minority suspects are likely to be guilty, more often than not”), and four items for innate criminality (e.g., “Once a criminal, always a criminal”). Confirmatory factor analyses demonstrate that it is a replicable factor structure even when using a demographically diverse sample matching the US Census (Lecci & Myers, 2008). All items are scored on a Likert scale
with 1 representing “strongly disagree” and 5 “strongly agree.” Higher scores on each scale represent a pro-prosecution bias. For example, a high score on social justice implies that the individual believes that justice is not dispensed in an equal manner for all individuals and that they are endorsing that this as an appropriate stance. The PJAQ has been shown to significantly outpredict other measures of juror bias and is resistant to issues such as order of presentation (Lecci, Beck & Myers, under review).

Procedure

First participants were randomly assigned to either a control condition or a mortality salience condition through the manipulation of the prosecution’s opening statement that asks people to imagine themselves as a victim of a terrorist attack. Participants then receive one of three defendant race conditions (Caucasian, Middle-Eastern, or Hispanic). After rendering a verdict and confidence rating, the participants assigned a sentencing recommendation without the death penalty as an option, due to potential issues with death qualification and assessed the likelihood that the crime was terrorist in nature.

After reading the case summary and rendering verdicts and sentencing, the participant received a second scenario based on the verdict they rendered. Those that convicted the defendant were given notification that a key piece of evidence (in this case the ANFO and bomb-making supplies used) were recovered via an illegal search and seizure and must therefore be disregarded as evidence. Those that acquitted will hear that a videotaped confession and calls for further attacks on the federal government was found on the defendant’s computer but was recovered during an illegal search. In both cases, the subjects were asked to ignore the evidence, as the judge ruled it inadmissible. We examined whether the defendant’s race, mortality salience
condition, and pretrial biases affected participants’ ability to follow the judge’s order. Lastly, participants will complete the PJAQ so as not to influence the manipulated variables. Importantly, research indicates that whether the PJAQ is administered before or after a case summary, has no impact on verdicts, evaluation of evidence, or scores on the PJAQ (Morris & Lecci, 2005).

RESULTS

Trial results

Across all conditions, 53.3% (n = 106) of participants convicted the defendant. The mean confidence value given was 6.78 (SD = 1.73), and the mean verdict tendency was 1.31 (SD = 6.89). Females were not found to be more likely to convict than males, \( \chi^2(1) = 1.64, p > .05 \).

Verdict tendencies

A multiple regression was used to analyze verdict tendencies with the PJAQ subscales entered. Together they significantly predicted verdicts, \( R^2 = .18, F_{(6, 191)} = 6.91, p < .001 \). With all subscales entered simultaneously, the System Confidence (\( B = .21, t(191) = 2.64, p = .009 \)) and Conviction Proneness (\( B = .26, t(191) = 3.37, p = .001 \)) emerged as significant predictors. Mortality salience did not have a main effect when regressed against verdict tendencies, nor did defendant race influence verdict tendencies when assessed using a one-way ANOVA, \( Fs < 1, p = ns \), nor was it significant in any interactions.

However, when analyzed with gender and conviction proneness in a multiple hierarchical regression, a three-way interaction emerged between mortality salience (MS), gender, and the Conviction Proneness (CP) subscale, \( B = .84, t(187) = 3.01, p = .003 \) (see Figure 3) qualified by
a two-way interactions between MS and CP, $B = -.62$, $t(194) = -2.26$, $p = .03$, with a main effect for CP, $F_{(1, 196)} = 28.46$, $p < .001$. For females in the non-salient condition, the CP subscale alone explains 45.1% of the variance in verdicts, $F_{(1,40)} = 32.88$, $p < .001$, and once mortality salience is primed, CP fails to explain any of the variance, $F_{(1,62)} < 1$, $p = ns$. For males in the non-salient condition, CP explains 19.2% of the variance, $F_{(1,35)} = 8.30$, $p = .007$ and priming mortality salience increases this to 27.5% of the variance, $F_{(1,43)} = 16.29$, $p < .001$.

A similar three-way interaction emerged between Innate Criminality (IC) subscale, MS, and gender, $B = .54$, $t(180) = -1.99$, $p = .05$, qualified by a main effect for IC, $F_{(1, 196)} = 13.8$, $p < .001$. For males in the non-salient condition, IC does not predict shifts in verdict at any level; however, for females, higher IC scores lead to shifts towards a guilty verdict. In the salient condition, males do experience similar shifts to females, actually evidencing even greater shifts to guilty verdicts (see Figure 4).

Perceiving the crime to be terrorist in nature

Confidence in the crime being terrorist-related was analyzed through a simple regression. Two models were tested: ingroup-outgroup effects versus stereotype-consistent effects. The ingroup-outgroup effect was tested by combining both the Middle Eastern and Hispanic defendants and contrasting them to the Caucasian defendant. The stereotype consistent effect was tested by combining the Hispanic and Caucasian defendant in one group with the Middle-Eastern defendant in the other. When examining the ingroup-outgroup model, no significant differences were found, $B = .11$, $t(197) = 1.45$, $p > .05$. However, when using the stereotype-consistent model where Hispanics and Caucasian defendants are compared with Middle-Easterners, participants were significantly more confident that the crime was terrorist-related.
with the stereotype consistent group, $B = .25$, $t(197) = 3.58$, $p < .001$. To ensure that this effect did not simply appear by including participants of other ethnicities, the test was run once more with only Caucasian participants, and the effect remained, $B = .24$, $t(197) = 3.22$, $p = .002$. (Note: One would expect the effect to get smaller due to the decrease in sample size.)

Though the PJAQ did not predict differences in verdict confidence, the CP subscale emerged as a marginally significant predictor, with higher conviction proneness participants being more likely to perceive the crime to be terrorist in nature; $B = .16$, $t(197) = 1.93$, $p = .06$.

**Sentencing**

Sentencing was a problematic variable due to minimal variability and none of the hypothesis were supported, $F$’s $< 1$, $p = ns$. Even when transforming the variable into a logarithmic-based scale to examine differences at the higher end, none were found, $F$’s $< 1$, $p = ns$. This result is likely due to a large ceiling effect—51% of participants ($n = 101$) chose the harshest sentence with a combined total of 72.2% ($n = 143$) choosing either life with or without parole. As previously mentioned, the death penalty was removed due to possible problems with death qualification.

**Judicial instructions**

For judicial instructions, participants should be moving towards the opposite verdict than what they originally rendered (more towards not guilty if originally guilty and vice versa) when asked by the judge to ignore evidence supportive of their original verdict decision. To clarify the interpretation of the findings, shifts in verdict tendencies were recorded as positive if they were in the correct direction (i.e., indicating that mock jurors were adhering to the judge’s instructions to ignore the relevant evidence) and negative if they were not.
Of the 93 participants that voted not guilty, only 50.5% \((n = 47)\) correctly followed instructions, and 30.1% \((n = 28)\) did not change their verdict at all. Though the PJAQ as a whole did not predict this shift in verdicts, \(R^2 = .10, F(6, 86) = 1.61, p > .05\), the CP scale did in the expected direction with a one-tail test, \(B = .28, t(86) = 2.38, p = .01\). This means that more conviction prone individuals are more likely to follow judicial instructions about ignoring potentially exonerating evidence and move to a guilty verdict. The lack of explanation by the overall PJAQ is likely due to the fact that 4 of the 6 scales (Cyn, SJ, IC, and RB) do not yield any predictive validity, \(t'\)'s < 1, \(p = ns\).

106 participants voted guilty with 55.7% \((n = 59)\) changing their verdicts, and 34% \((n = 36)\) not adjusting. The PJAQ did significantly predict verdict changes, explaining a similar amount of variance as for the participants rendering not guilty verdicts; \(R^2 = .13, F(6, 98) = 2.45, p = .03\). The CP scale was marginally significant in the expected direction, \(B = -.17, t(98) = -1.57, p = .06\). When examining just the CP scale, it does emerge as significant, \(B = -.28, t(103) = -2.97, p = .004\). Thus, its decreased predictability is due to overlapping variance between the PJAQ subscales. The negative beta means that higher conviction proneness is associated with the tendencies to make the wrong decision by ignoring the judge’s instruction to set aside evidence that should have been central to the decision to convict. Thus, in both cases, higher CP scores are associated with a conviction tendency, and this occurs irrespective of the judge’s instructions.

**DISCUSSION**

This study attempts to link together the literature on terror management theory into a coherent, ecologically valid trial of a defendant accused of a crime that could be construed as
terrorist in nature. Previous literature and court cases have shown systematic discrimination of racial minorities (especially African Americans) in trials which we were able to reproduce in the pilot study (Johnson, Whitestone, Jackson & Gatto, 1995; Sommers & Ellsworth, 2001; Dasgupta, DeSteno, Williams & Hunsinger, 2009). The lack of replication of the race effect in verdict tendencies that occurred in the pilot study is troubling, but there are multiple methodological explanations. The introduction of the new opening arguments may have caused a shift in the saliency of race, causing the main focus of participants to be the nature of the crime. This effect may be the most likely, as examining confidence in the bombing being terrorist related did produce significant results along the expected racial lines. Therefore, race may not be a salient or important factor when determining verdicts without a specific terrorist charge (which may then trigger a stereotype-consistent effect), but when the charge is made clear, race may be used to determine the motivations behind the crime. Future research could then look at interactions between charge type (murder vs. terrorism) and race in verdict tendencies.

Increased race saliency has been noted to cause decreased beliefs of guilt for non-white defendants, but this effect has only been seen when it has been primed in the defense’s arguments (Bucolo & Cohn, 2010). Furthermore, as Sommers and Ellsworth (2000, 2001, 2009) have demonstrated, race salience does not lead to an increased shift towards guilty verdicts—it specifically appears in the non-charged versions of trials. Sommers and Ellsworth (2000, 2009) clarify that race salience refers to, “salient ‘racial issues’ at trial, not the salience of race as a general construct.” The question then becomes, can terrorism be considered a racially charged crime? Although this is possible, of greater relevance may be that terrorism is the type of crime that results in more assumptions about the motives of the defendant. For example, if the defendant is painted as specifically targeting Americans due to their nationality, then jurors may
interpret this as racially charged but may not if the individual was an anti-government extremist. This information had not been given in the summary to avoid any specific effects.

The most parsimonious explanation of the lack of the race effect is the change in methodology since the pilot. In that study, the information was more restricted, and the race of the defendant was the sole manipulation. If we strip away most of the elements of a case, then the sole variable left will explain most of the variance; however, the addition of a mortality salience prime and opening arguments may have shifted most of the focus away from the race of the defendant. This explanation becomes more likely, as the race effect in the pilot study was modest at best, so the additional information may have become more important in the decision process.

Though defendant race was not used by participants to arrive at their verdict, it did create differences in their interpretations of the motives for the crime. The stereotype of Middle Easterners as terrorists has been previously documented before (Hitlan, Carrillo, Zárate, & Aikman, 2007; Nacos & Torres-Reyna, 2007). Das et al. (2008) have demonstrated the effectiveness of this stereotype as well; thus, the specific effect against the Middle Eastern defendant is not surprising. If there were an effect against outgroups in general, then both models should have produced significant results, even if the stereotypic model had been stronger. In fact, the minimal variance explained by the ingroup-outgroup model is carried by the Middle Eastern defendant, as there is almost no difference between the other two.

Though there was not a main effect in verdict tendencies for mortality salience, it does interact with both the CP scale and gender. Mortality salience by itself does cause an overall shift towards guilty verdicts, but the effect is fairly small. The important finding is the
substantial change in explained variance by the CP scale itself, suggesting that priming mortality salience leads to a change in the decision making process. When primed for mortality, participants may rely less on authoritarian beliefs and focus on other facets of the trial. The fact that gender differences have been observed most likely relates to the gender differences previously found in the literature with respect to mortality salience (Lambert, 2003; Traugott, 2002; Lemyre et al, 2006; Nellis, 2009).

Sentencing may be a problematic variable for study with extremely violent crimes, especially those that result in the deaths of many individuals. Though offense severity does have a modest, nonlinear effect on sentencing, Britt (2009) notes that as severity increases, the sentence will disproportionately increase. Thus, the ceiling effect is likely more pronounced not only due to the charges themselves but also due to these factors. Differences may be more observable in a case where either jurors are death qualified so that it may be included or to include fewer (if any) victims in an attempt to reduce perceived offense severity.

Failure to follow judicial instructions continues to be a problem in the legal system. Though much of the literature reviews pro-prosecution inadmissible evidence being used, recent meta-analytical findings suggest that such evidence’s usage by both sides influences verdicts (see Steblay, Hosch, Culhane & McWethy, 2006 for a review). Nietzel, McCarthy, and Kern (1999) demonstrate through repeated tests the failure to remove the effects of inadmissible evidence on jurors’ decision-making. Once this information has been presented, it is continued to be use despite serious issues such as lack of due process. This sort of process presents a serious issue for procedural justice, as attorneys on both sides can present evidence or use witnesses that may later be stricken since it will still influence jurors.
Kassin and Sommers (1997) have demonstrated that jurors are more likely to convict defendants if information is believed to be reliable though inadmissible (through illegal wiretapping) than in an unreliable situation. Our results for analyzing shifts in verdict tendencies after judicial admonition to ignore evidence display similar concerns, with barely over half of mock jurors making the appropriate decision to alter their verdicts once the key evidence linking the defendant has been removed. In such a case, jurors should expect to be moving towards a not guilty verdict via either a change of verdict or at least a reduction in confidence. Conviction proneness’s negative correlation to correct shifts here is expected considering both Kassin and Sommers’ previous work and that of Werner, Kagehiro, and Strube (1982). Their data demonstrates that authoritarians are more likely to convict regardless of the inadmissibility of the evidence. Furthermore, authoritarians will not include potentially exonerating evidence, explaining the failure to change their verdicts in the present study. In the case of the not guilty to guilty shift, those higher in authoritarian beliefs do seem to be at least nominally following the judicial instructions. However, Werner and colleagues suggest that this shift is simply their desire to arrive at a conviction. With the current paradigm, it is difficult to conclude whether it is a sincere adherence to due process or a belief in the necessity of a conviction that drives these jurors.

STUDY 2

The second study seeks to replicate and extend the findings of the first study in a general adult sample, as there have been previous criticisms about using college students to study jury decision making (Konecni & Ebbesen, 1979; Weiten & Diamond, 1979). More recent data, specifically with the PJAQ, suggests that there should be no difference between groups in terms of predictive ability (see Bornstein, 1999; Lecci & Myers, 2008). However, mortality salience
has been demonstrated to function differently according to age. Maxfield et al. (2007) demonstrated that older adults were actually less harsh towards moral transgressors after mortality salience inductions, specifically more subtle ones. Though the average age of the older adults in their research was much older ($M = 72.85, SD = 6.13$ in the first and $M = 73.72, SD = 7.57$), the fact that differential effects existed is important.

METHOD

533 adult participants were recruited from Wilmington Department of Motor Vehicles. After removing participants that did not finish the survey along with those that failed the race manipulation check, 299 (56.1%) participants remained. Of the remaining subjects, 51.2% ($n = 146; 14$ not reported) were female, and 85.3% ($n = 237; 21$ not reported) were Caucasian. The average age of subjects was 39.32 ($SD = 14.51$). Participants went through the same method as in the first study: reading the case summary, rendering a verdict, completing the PJAQ, and finally dealing with the follow-up.

RESULTS

Trial results

Amongst the general adult sample, 41.8% ($n = 125$) found the defendant not guilty, less than in the original study. The mean confidence reported was 6.66 ($SD = 2.26$) with an average verdict tendency of -.2 ($SD = 7.04$). Once again, females were not more likely to convict than males, $\chi^2(1) = .38, p > .05$.

Verdict tendencies
Verdict tendency was analyzed using a hierarchical multiple regression with the PJAQ subscales simultaneously entered. Together, they explained 13.8% of the variance, \( F(6, 292) = 7.79, p < .001 \). Of the six subscales, three emerged as significant with all entered: System Confidence, \( t(292) = 2.20, p = .04 \); Cynicism, \( t(292) = 2.38, p = .02 \); and Racial Bias, \( t(292) = 1.97, p = .05 \). Conviction Proneness remains a solid predictor when still considered alone, \( B = .29, t(297) = 5.18, p < .001 \). Mortality salience once again elicited no main effect, \( t(297) < 1, p = \text{ns} \). No interactions were observed between MS and any of the other variables.

If college age students at the DMV (18-22) are examined, the effects of the previous study do reemerge but only if the manipulation check is removed. This is likely a sample size issue, as filtering by correctly identifying race (which may not be a relevant concern for this analysis) reduces the cells to less than 10. For the females not experiencing mortality salience, the CP scale explains a significant amount of the variance in verdict tendencies, \( R^2 = .31, F(1, 22) = 9.85, p = .005 \). With mortality salience primed, CP explains almost none of the variance, \( R^2 = .01, F(1, 12) < 1, p = \text{ns} \). When compared to non-salient females as a whole, CP only explains 7% of the variance, \( B = .26, t(68) = 2.23, p = .03 \). Males show a similar pattern to the previous findings, though neither are significant likely due to reduced power. In the non-salient condition, CP explains little variance, \( R^2 = .04, F(1, 12) < 1, p = \text{ns} \). With salience primed, the variance explained increases and approaches significance, \( R^2 = .12, F(1, 25) = 3.46, p = .08 \).

Verdict tendencies significantly differed by defendant race, \( F(2, 296) = 6.50, p = .002 \). A Tukey’s post-hoc test revealed the differences between both the Middle Eastern and Caucasian group (\( MD = 2.45, p = .04 \)) and the Middle Eastern and Hispanic group (\( MD = 3.44, p = .001 \)). Amongst Caucasian participants, the ingroup-outgroup effect did not emerge, \( t(235) = -.04, p > .05 \). Even when examining all participants, there were no differences, \( t(297) < 1, p = \text{ns} \).
However, the stereotype-consistent model (comparing Middle Easterners to Caucasians and Hispanics) demonstrated differences between groups, $t(175) = -3.37, p = .001$, suggesting that it may be the superior model for juror decision-making tasks.

*Perceiving the crime to be terrorist in nature*

The confidence variable (rating certainty the act is one of terrorism) was examined using a simple regression. There was neither a main effect for mortality salience nor an interaction. The ingroup-outgroup and stereotype-consistent models were compared in predicting confidence, with the former not demonstrating significant findings using both Caucasians only, $B = .10$, $t(235) = -1.50, p > .05$, and all groups, $B = .08, t(296) = 1.37, p > .05$. The stereotype-consistent model showed the expected differences, $B = .24, t(296) = 4.15, p < .001$, with jurors showing more confidence that the crime was terrorist in nature when carried out by the Middle Eastern defendant. This effect persisted when examining just Caucasian participants as well, $B = .21$, $t(235) = 3.32, p = .001$. The PJAQ as a whole did not predict the confidence, $R^2 = .04, F(6, 291) = 1.83, p > .05$. However, amongst all the subscales, Cynicism emerged as a significant predictor, $B = .14, t(291) = 2.07, p = .04$. As a singular predictor, the CP subscale does not predict confidence, $B = .07, t(296) = 1.27, p = .21$.

*Sentencing*

Sentencing remained a problem due to the ceiling effect noted in study one. Despite this setback, the System Confidence subscale did significantly predict harsher sentencing, $B = .18$, $t(224) = 2.04, p = .04$, though the complete PJAQ did not, $R^2 = .04, F(6, 291) = 1.83, p > .05$. Logarithmic transformation of sentencing did not demonstrate any changes in the PJAQ’s predictive ability. 64.1% of participants ($n = 148$) chose life without parole, with a combined
75.4% \((n = 174)\) selecting one of the options involving a life sentence. If we split sentencing down the middle of the continuum so that the lower values are coded 1 (7 years to 30 years) and the higher values 2 (40 years to life without parole), we see significant differences in recommendations based on verdict, \(\chi^2(1) = 15.21, p < .001\).

**Judicial instructions**

Of the 174 participants that voted not guilty, only 32.7% \((n = 57)\) of participants followed judicial instructions, with 46% \((n = 80)\) not changing their verdicts, and 21.3 \((n = 37)\) adjusting their verdict in the inappropriate direction. The PJAQ did predict shifts this time, explaining 9.6% of the variance, \(F_{(6,173)} = 2.96, p = .009\). Of the predictors, only the CP scale emerged significant in the expected direction using a one-tail test, \(B = .18, t(167) = 2.01, p = .02\).

125 participants rendered a guilty verdict, with 48% \((n = 60)\) correctly following instructions. 38.4% \((n = 48)\) did not adjust their verdict following the removal of key evidence, and 13.6% \((n = 17)\) gave a more confident guilty verdict. The PJAQ explained 13.4% of the variance in the new verdict tendencies, \(F_{(6, 118)} = 3.04, p = .008\). The CP was a strong predictor of being resistant to changing verdicts as expected, \(B = -.33, t(118) = -3.01, p = .002\). Once again, the PJAQ CP scale is an overall predictor of shifts to, and lack of shifts away from, conviction. Interestingly, the mortality salience induction did result in a main effect for the new verdict shifts, with those being primed having a significantly smaller change, \(t(117) = 2.49, p = .01\).

**DISCUSSION**

Though the PJAQ as a whole was still significant as expected, different predictors emerged in the adult sample. System Confidence was a consistent predictor for both samples
Cynicism and Racial Bias emerged in the adult sample, and the predictive validity of Conviction Proneness was lost. That is not to say CP is no longer a predictor at all; if examined alone, it still accounts for 8.3% of the variance in verdicts, $F(1, 297) = 26.81, p < .001$. However, most of the variance it explains is shared between other predictors.

The emergence of the RB scale is expected due to the differences in verdict tendencies by race. The differential verdict tendencies by race support the stereotype-consistent model of juror bias over the ingroup-outgroup effect, supporting previous research (Gordon & Anderson, 1995; Jones & Kaplan, 2003). Bodenhausen’s (1988) selective processing hypothesis elucidates the findings by stating that individuals are more likely to process stereotype consistent evidence than stereotype inconsistent evidence. These individuals are more likely to recall incriminating evidence and dismiss potentially exonerating evidence when it corresponds to stereotypes (Bodenhausen & Lichtenstein, 1987; Bodenhausen & Wyer, 1985). These effects may be further magnified in an actual trial, as when the decision-making task becomes more complex, individuals ultimately rely more on stereotypes and biases (Bodenhausen & Lichtenstein, 1987). The fact that the confidence in the motives being terrorist related conformed to a stereotype-consistent model as well further confirms this idea.

The lack of an effect or interaction for mortality salience after observing this effect in the college student sample poses an interesting question: does mortality salience work differently by age? Maxfield et al. (2007) states that it does, but the population examined in that study was of a significantly older age, around 73 years on average. A meta-analysis by Burke, Martens, and Faucher (2010) on two decades worth of mortality salience research suggests that age has not been shown to moderate the effects. However, when this issue has been studied, the overall age ranges are limited; thus, this conclusion is not necessarily accurate. In fact, only three of the
studies reviewed have similar age ranges to the present study (Cuillier, 2009; Jonas, Fritsche, & Greenberg, 2005; Pyszczynski et al., 1996). Both Jonas, Fritsche, and Greenberg (2005) and Pyszczynski et al. (1996) use subtle mortality salience primes to elicit the effect: specifically questioning participants outside a funeral home. The lack of mortality salience effects could be as Burke and colleagues (2010) suggest: the reduction in fear of death as participants’ age increases. Perhaps then a more subtle mortality salience approach than the explicit one used in the current study would have resulted in a replication of the first study’s findings. The robustness of the previous study’s findings regarding mortality salience amongst younger adults suggests that age may play a role in interpretation of mortality salience, specifically in an explicit versus subtle paradigm.

The current study completely replicates the findings from study 1 in terms of sentencing and following judicial instructions. The fact that the System Confidence subscale of the PJAQ was able to predict some variance in sentencing while it was previously unable to do so, is likely to be due to low power. The current effect is modest, as most of the responses are still clustered at the high end of the scale.

GENERAL DISCUSSION

Throughout the three studies conducted, one variable has been a consistent predictor of juror bias: Conviction Proneness. Conviction Proneness can be examined not only as authoritarian attitudes but also as a pervasive anti-defendant bias. These individuals are more likely to convict and recommend longer sentences (Mitchell & Byrne, 1973; Pennington & Hastie, 1981; Kassin & Wrightsman, 1983), hold more discriminatory attitudes towards members of other races (Echebarria-Echabe & Guede, 2007; Napier & Jost, 2008), and display moral
intolerance towards norm violators (Napier & Jost, 2008). These traits have been repeatedly demonstrated through the current research, with those scoring high on authoritarian attitudes having overall higher verdict tendencies, being more confident in the motive being terrorist related in the student sample (Note: this effect was not present in the general adult sample, most likely due to the stronger effect of defendant race), and failure to heed judicial instructions.

The variations in verdict tendencies by CP in younger adults prove to be particularly interesting. In the non-mortality salient conditions for females, the effect size is massive. In comparison, the average measure of juror bias has a modest effect ($r = .16$), while the values between the three studies here are between .46 and .67. When that level of variance is explained by one bias, little room is left for evidence. These individuals present a serious challenge if empanelled as jurors, as authoritarian attitudes may dictate most of their behavior in any ambiguous case. However, it is important to remember that though pretrial biases can be strong predictors, overwhelming evidence may not provide a situation for their influence to be exerted. According to the liberation hypothesis (Kalven & Ziesel, 1966), jurors will come to rely more on these biases if the case is equivocal. Arguably these trials may be the most important, as an impartial jury that carefully weights the value of the evidence is essential for due process to be carried out.

If these problems are endemic to a specific group, then a new problem arises. A defense attorney would naturally want to exclude these individuals, but Batson (1986) prevents the systematic exclusion of individuals based on gender or race. One would not be justified in attempting to remove females from rape trials, another crime that exhibits gender differences (Weir & Wrightsman, 1990; see Schutte & Hosch, 1997 for a review). It should be noted that
this large effect tends to fade with age—the overall variance explained amongst female participants by CP markedly declines to 7%.

Age may be one of the primary factors that affect decision-making with both authoritarian beliefs and mortality salience. The effect of MS on college age females leads to the eradication of CP as a predictor of verdict tendencies; however, this change does not necessarily indicate that the participants have become better jurors. The reduction of variance in verdicts by CP is not countered by an increase in the other subscales, leaving no real indication as to what now accounts for the missing variance.

Especially troubling about those high in Conviction Proneness is the refusal to follow judicial instructions. This pattern is easily observed for those that initially voted guilty, as CP was negatively associated with the proper verdict shift towards a not guilty verdict, confirming Werner and colleagues’ (1982) pattern of using inappropriately inadmissible evidence. The problem emerges amongst those that voted not guilty, as shifts towards a guilty verdict means that jurors are seemingly following judicial instructions. However, the significance of the CP subscale as the key predictor suggests that it is simply a desire to arrive at conviction, not a triumph of due process. Therefore in the voir dire process, it may be in the defense’s best interests to avoid empanelling these individuals.

Between the two models of racial bias presented, the stereotype-consistent effect has emerged as the best predictor of juror decision-making. There has been plenty of evidence suggesting that ingroup-outgroup stereotyping still does occur (Sommers & Ellsworth, 2000; 2001); however, it may be that in cases that are more congruent with certain existing stereotypes, that there will only be marked increases in guilty verdicts for those defendants. This effect
replicates previous findings (Gordon & Anderson, 1995; Jones & Kaplan, 2003) and suggests that even if there are not specific differences in verdicts (as in study 1), that there may be certain attributions made about the motivations of the defendant. This effect has been robust occurring through the pilot and both studies, with participants placing more confidence in the crime being terrorist related with the Middle Eastern defendant.

**Limitations**

One potential limitation is the use of the mortality salience prime in conjunction with the trial summary to attempt to understand mortality salience’s effects on juror decision-making. Though a mortality salience prime in the opening statement can lead to changes in verdicts or the biases that are used to arrive at verdicts, these effects might not be as long lasting in an actual trial. Thus, ecological validity is compromised in terms of attempts to generalize the findings, as MS might naturally diminish given the much longer time between opening statements and rendering a verdict that occurs in a real trial (see Greenberg et al., 1986 for a review of TMT processes). This limitation however may not necessarily be a factor; according to Arndt and colleagues (2005), as testimony, charges, and even the case itself can lead to mortality salience primes. Thus, if the case itself is ultimately priming MS, then these effects should carry through the verdict, possibly even being magnified if the death penalty remains on the table. It should then be noted that the overall effects of the case cannot be conceived in a mortality salient versus non-salient fashion. Instead, they would be salient versus more directly salient due to additional prime, which could explain the lack of MS effects or interactions in the DMV sample.

Though in the college age group from the DMV the effects of study 1 appear to be replicated, it should be noted that due to the small sample size, no actual significant interactions
could be observed. The trends that currently appear do suggest that a similar, consistent pattern will occur, but with a combination of low power and subjects, these effects may be reversed; therefore, this replication should be noted with caution.

The trial stimulus acts as a limitation, since it is the least accurate portrayal. Narby et al. (1993) demonstrate as the stimuli increase in realism (from trial summary to a videotaped trial), effect sizes for measures of pretrial bias increase. A videotaped trial would also alleviate the significant participant loss due to the manipulation check, as the current manipulation is a simple name change. Live trials may include other factors to make the race of the defendant more cognizant to jurors since more reminders may appear (accent, clothing, etc). MS effects may also increase as well dependant on the evidence presented, namely through graphic pictures or testimony. It should also be noted that the judicial instructions section does differ from an actual trial, as participants are evaluating it after a decision instead of during consideration.

Future research

Further studies should examine if the trial itself functions as a mortality salience prime, as this would remove the limitations of solely having it in opening arguments. Even if the prime occurs at the end of the trial, there will still be a significant delay before a verdict is rendered; thus, the effects must be due to a constant component of the trial (i.e.: charges, the trial itself, etc) to have any lasting power. Future studies could have participants read a non-MS provoking case (e.g.: robbery or fraud) versus a terrorism case and examine death thought accessibility to determine if the case actually triggers MS.

Though sentencing was a problematic variable, it should still be examined. Since stereotype-consistency was used for determining motives, it may come into play further on other
measures such as whether participants believe the defendant could be rehabilitated or likelihood to recidivate. Jurors may be more likely to believe that Caucasian defendants are willing to change, specifically if the motives are believed to be more anti-government than anti-American.
REFERENCES


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Figure 1.

Terror management processes and their functions in juror decision-making.

Note: highlighted route shows the path mortality salience is expected to take in this case. (from Arndt et al., 2005)
Figure 2.

Verdict Tendencies by Condition and Gender
Three-way interactions between mortality salience, Conviction Proneness, and gender.
Three-way interactions between mortality salience, Innate Criminality, and Gender

Figure 4.

Non-Salient Verdict Tendency by IC

Salient Verdict Tendency by IC
APPENDIX A. Opening arguments

Prosecution, mortality salience primed:

Ladies and gentlemen of the jury. On March 23rd, 2008, the defendant, X, decided to maim innocent civilians due to his grievances with the federal government’s policies. This is not the way we settle our differences in this country—we have courts of law such as this, we have elections, we have discussion. We do not solve problems with acts of violence.

As we will show you, the defendant has the motives, means, and the opportunity to carry out this attack. He had the materials necessary to make the explosives, the ammonium nitrate fuel oil or ANFO. This ANFO was the same substance used in the 1995 Oklahoma City bombing. This substance is used by militants in Afghanistan and Pakistan to make explosive device to kill U.S. troops. The defendant had enough to construct the bomb that was detonated at the library—far more than what was necessary for a simple garden. The defendant had access to the library to place the explosive device and the motive to do it. His strong and constant criticism and condemnation of the American government provides a backdrop for his actions.

Now imagine that you are one of the victims, trapped inside the demolished library. Smoke, fire, the cries of injured men, women, and children. You have been mortally wounded by shrapnel, left to bleed out on the floor with no hope for rescue, no hope for survival. As you fade away, there is nothing but fear and thoughts of the family you leave behind. You will never see your spouse or parents again. You will never see your children again. You’ll never have the chance to raise them. Your life has ended. Imagine that.
Today, I’m asking you to vindicate the victims of this horrific crime by sending this man to prison. I’m asking that you make sure that this man does not have the opportunity to do this type of crime again. And so I will ask you to find him guilty.

Thank you.

Prosecution, mortality salience not primed:

Ladies and gentlemen of the jury. On March 23rd, 2008, the defendant, X, decided to maim innocent civilians due to his grievances with the federal government’s policies. This is not the way we settle our differences in this country—we have courts of law such as this, we have elections, we have discussion. We do not solve problems with acts of violence.

As we will show you, the defendant has the motives, means, and the opportunity to carry out this attack. He had the materials necessary to make the explosives, the ammonium nitrate fuel oil or ANFO. This ANFO was the same substance used in the 1995 Oklahoma City bombing. This substance is used by militants in Afghanistan and Pakistan to make explosive device to kill U.S. troops. The defendant had enough to construct the bomb that was detonated at the library—far more than what was necessary for a simple garden. The defendant had access to the library to place the explosive device and the motive to do it. His strong and constant criticism and condemnation of the American government provides a backdrop for his actions.

Today, I’m asking you to vindicate the victims of this horrific crime by sending this man to prison. I’m asking that you make sure that this man does not have the opportunity to do this type of crime again. And so I will ask you to find him guilty.

Thank you.
Defense statement:

Ladies and gentlemen of the jury. The incident on March 23rd was indeed a tragedy, but one that X was not responsible for. As you will see, the evidence the prosecution has is circumstantial. The storage unit that the bomb making supplies were found in was shared—any of the other users could have placed it there. He had legitimate uses for the ANFO as fertilizer for his garden.

It is not a crime to speak ill of the government; such speech is protected by the first amendment. Such speech does not qualify as a motive. The prosecution simply needs someone to blame for this heinous act because they could not find the other men. It cannot be said that he is responsible beyond a reasonable doubt, so I will ask you to find him not guilty.

Thank you.
APPENDIX B. Case stimuli

The defendant, Mark Hughes (or Amin El-Hamarna for the experimental condition), a 34 year old male, is charged with 12 counts of murder in the first degree (18 USC 1111), and 15 counts of attempted murder in the first degree (18 USC 1113). He was employed as a janitor of the Public Library of Charlotte & Mecklenburg County in Charlotte, North Carolina. On March 23rd, 2008 at 9:32 AM, an explosion occurred in the library killing 12 and injuring 15 others located in or around the library. The prosecution contends that the defendant is responsible for the explosion, as he had access both to supplies that could be used as explosives and material knowledge as to how to combine the materials so as to create an explosion. Subsequent searches of the defendant’s home and a storage unit lead to the discovery of documents discussing the explosive nature of chemicals on his computer and ammonium nitrate fertilizer, nitromethane, ammonium nitrate fuel oil (ANFO), and other bomb-making supplies at the storage unit. The chemicals discussed in the document were similar to those found in the storage unit. The amount of supplies that had been used was enough to take down a large building that covered two blocks, consistent with the blast. Enough remained to create a second similarly sized bomb. The defendant stated that while the fertilizer and nitromethane were his (used in his garden and as a cleaning solvent for his job, respectively), the storage unit was shared with three other men, and he did not know of the other supplies. The other men could not be located or apprehended for trial. Witnesses testified that Mr. Hughes left quickly on the day of the blast, exiting the building 15 minutes before the explosion and appeared to be in a rush. The defendant alleged that his wife had called in to work sick, and he had to take her to a doctor’s appointment which cell phone records and the physician’s office confirm, though the prosecution states he had ample time to still trigger the blast and leave in the ensuing confusion. Security cameras that survived
the blast do show the defendant leaving before the blast but do not capture where he went after
the library. The physician testified that the defendant arrived on time with his wife to the
appointment, and he appeared nervous and disheveled. A co-worker testified that Mr. Hughes
seemed bitter and frequently complained about the United States government’s involvement in
overseas conflicts and killings of civilians in drone strikes, though there was no motive found for
why Mr. Hughes would target a public library. An FBI explosives expert also testified stating
that the defendant’s home had traces of the nitrate fertilizer and nitromethane, but the defense
contends that simply confirms Mr. Hughes’ use of both substances in other activities at home.
No other witnesses testified at the trial.
APPENDIX C. Inadmissible for guilty verdict:

It has now been determined by the court that the ammonium nitrate fuel oil (ANFO) and bomb-making supplies were obtained from the defendant’s residence and storage unit through an illegal search and seizure by the police. Thus, the judge has now ruled that this evidence is inadmissible and should not to be used in determining the guilt or innocence of the defendant.

I find the defendant, X

_____ Guilty beyond a reasonable doubt

_____ Not guilty

Please place an X next to your verdict.

Please indicate your level of confidence in the verdict you just gave by circling a number below.

1 2 3 4 5 6 7 8 9 10

not at all confident completely confident

Inadmissible for not guilty verdicts:

The prosecution revealed that the defendant had a videotaped confession of himself on his computer confessing to the crime and promising further actions against the government due to its immoral wars and actions. The defense objects stating that the search warrant did not cover the contents of the computer and was not in plain view and was in violation of the defendant’s Fourth Amendment rights. The judge sided with the defense ruling that the confession and videotape are inadmissible and not to be used in determining the guilt or innocence of the defendant.

I find the defendant, X

_____ Guilty beyond a reasonable doubt
_____ Not guilty

Please place an X next to your verdict.

Please indicate your level of confidence in the verdict you just gave by circling a number below.

1 2 3 4 5 6 7 8 9 10

not at all completely
confident confident