

Exploring the Psychological Underpinnings of the Moral Mandate Effect: Motivated Reasoning, Group Differentiation, or Anger?

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When people have strong moral convictions about outcomes, their judgments of both outcome and procedural fairness become driven more by whether outcomes support or oppose their moral mandates than by whether procedures are proper or improper (the moral mandate effect). Two studies tested 3 explanations for the moral mandate effect. In particular, people with moral mandates may (a) have a greater motivation to seek out procedural flaws when outcomes fail to support their moral point of view (the motivated reasoning hypothesis), (b) be influenced by in-group distributive biases as a result of identifying with parties that share rather than oppose their moral point of view (the group differentiation hypothesis), or (c) react with anger when outcomes are inconsistent with their moral point of view, which, in turn, colors perceptions of both outcomes and procedures (the anger hypothesis). Results support the anger hypothesis.

Keywords: moral mandate, fairness, justice, anger

People's feelings about what is just or unjust are sometimes rooted in strong but apparently conflicting convictions about right and wrong. For example, Dr. Jack Kevorkian was sentenced in 1999 to 10 to 25 years in prison for helping Thomas Youk, a man with Lou Gehrig's disease, die by lethal injection. One public opinion poll revealed that Americans were divided about the question of physician-assisted suicide: Sixty-one percent of Americans believed doctors should be allowed to help a terminally ill patient who is living in severe pain commit suicide, and 35% opposed the practice (Gallup, 2002).

Supporters of Kevorkian's actions were dismayed when he was convicted of second-degree murder. Defense attorney David Gorosh called the verdict unjust and commented, "Dr. Kevorkian is certainly no murderer. We believe it's certainly unjust to equate an act of compassion to an act of murder" (Kevorkian awaits, 1999). Moreover, Youk's widow questioned the fairness of the trial procedures because she and Youk's brother were not allowed to testify at the trial. She said, "I'm confused about the fact that we were here to find the truth, the whole truth, and so much was eliminated" (Youk's wife, 1999). In sum, supporters of physician-assisted suicide were upset by the verdict and questioned the

fairness of the trial because the outcome of the trial threatened their moral commitment to voluntary euthanasia.

In contrast, opponents of physician-assisted suicide agreed with the verdict and thought the Kevorkian case was an example of a justice system that worked rather than one that bowed to public sentiment. State Senator William Van Regenmorter, who authored the law banning assisted suicide in Michigan, stated, "At a time when many of us wonder if part of the justice system is broken, this helps restore faith in that system" (Kevorkian—The reaction, 1999). Others went so far as to cite the verdict as evidence of the validity of their moral point of view. For example, county prosecutor David Gorcyca called the verdict "proof that our first commitment as a nation is to the protection of human life" (Kevorkian awaits, 1999). In sum, opponents of physician-assisted suicide argued that Kevorkian's verdict and the justice system were just, because the verdict affirmed their moral point of view.

The Kevorkian case and others like it raise the question of how people reason about justice. Is justice reasoning in some or most cases driven primarily by whether the "right" outcome is achieved, or are fairness judgments driven more by process considerations, such as whether a defendant receives a fair trial and due process? Considerable research suggests that due process is more important than whether particular outcomes are achieved in shaping people's judgments that something is fair or unfair (e.g., Lind & Tyler, 1988; Tyler & Lind, 1992). However, recent research indicates that when people have strong moral convictions about the issue at hand, obtaining the right outcome is more important than procedural propriety or impropriety in shaping people's fairness judgments. In fact, people appear to have very different interpretations of whether procedures are fair or unfair as a function of whether the procedures yield what they believe are morally justified outcomes (*the moral mandate effect* [MME]; e.g., Skitka & Houston, 2001; Skitka & Mullen, 2002).

The primary goal of the two studies that are the focus of this article is to test a number of explanations for why the MME

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occurs. Due process considerations might become less important to people when they have a moral mandate because (a) they are motivated to justify their preferred outcome and therefore actively distort procedural information to support their preferred conclusions (the *motivated reasoning hypothesis*); (b) the situation triggers in-group identification or out-group disidentification, which, in turn, leads to distributive biases (the *group differentiation hypothesis*); (c) anger about outcomes that challenge people's moral point of view may lead to a generalized sense of injustice (the *anger hypothesis*); or (d) some combination of these cognitive and motivational processes. Before turning to the specifics of these studies, we first review relevant research on the psychology of fairness judgments. We then review theory and research that led to the hypotheses that the MME may be a consequence of motivated reasoning, group differentiation, or anger.

The Fair Process Effect

One of the most widely replicated findings in the justice literature is the *fair process effect*—that is, that fair procedures positively impact people's subsequent thoughts, feelings, and behaviors (e.g., Folger, Rosenfeld, Grove, & Corkran, 1979). For example, positive aspects of procedures have been shown to predict people's perceptions of procedural and distributive fairness, their satisfaction with procedures and outcomes, and their willingness to accept and comply with the decisions of authorities (e.g., Lind & Tyler, 1988; Tyler & Lind, 1992; see Tyler & Smith, 1999, for a review). Considerable research has shown that people accept negative, unfavorable, and nonpreferred outcomes as fair when such outcomes are arrived at by institutional procedures that are perceived as fair (e.g., Greenberg, 1987; Tyler, 1990; Van den Bos, Wilke, Lind, & Vermunt, 1998). Structural and interactional aspects of procedures predict how people reason about fairness when they are the direct recipients and when they are third party perceivers of procedural treatment (Van den Bos & Lind, 2001). Thus, theories of procedural justice posit that features of procedures (e.g., opportunities for voice, lack of bias) should be an important predictor of people's overall sense of whether justice was served in any particular case.

Over time, however, researchers have observed a few exceptions to the fair process effect. For example, although people may be willing to accept unfavorable outcomes when they perceive processes to be fair, these results do not emerge when people have information that allows them to objectively judge whether their outcomes are fair (e.g., when they can socially compare their outcomes with others; Van den Bos, Lind, Vermunt, & Wilke, 1997). In addition, recent research has demonstrated that fair process effects do not emerge when the outcomes under consideration are associated with people's strong moral convictions.

The MME

When people have a strong attitude that they see as rooted in moral conviction (i.e., something is right or wrong, moral or immoral), they are said to have a moral mandate (Skitka, 2002). For example, a person who has a strong attitude about abortion (as defined by extremity, importance, and certainty; see Krosnick & Petty, 1995) also has a moral mandate if that person sees his or her position on abortion as tied to his or her core moral values. Several

studies have documented that procedural factors such as neutrality, trust in authority, and other features of due process have little impact on people's justice reasoning when they have a moral mandate relevant to the outcome of the case. People's assessments of whether outcomes and, perhaps more surprisingly, procedures are fair are predicted nearly exclusively by whether procedures yield an outcome that threatens or affirms their moral mandates (Skitka, 2002; Skitka & Houston, 2001; Skitka & Mullen, 2002).

For example, a controversial custody case required a choice of either granting a 5-year-old Cuban boy (Elián González) political asylum in the United States or returning him to Cuba to his father. Many people saw this custody case as relevant to their moral convictions about the values of freedom versus parental rights. A longitudinal study tested the hypothesis that people who saw the case as connected to their core moral values would be relatively impervious to whether the case was handled in a procedurally fair way and would focus instead on whether the outcome supported or threatened their moral values (Skitka & Mullen, 2002). Results indicated that people's postresolution judgments of procedural fairness, outcome fairness, and decision acceptance were better predicted by prerelation assessments of the strength of moral mandates associated with the value the people attached to outcomes that supported either political freedom or parental rights than by prerelation judgments of procedural fairness (Skitka & Mullen, 2002; see also Bobocel, Son Hing, Davey, Stanley, & Zanna, 1998; Rasinski, 1987, for related research). Taken together, these studies indicate that people's justice reasoning—about both outcomes and procedures—is sometimes influenced by their moral convictions in addition to or instead of traditional factors, such as procedural propriety and fair interpersonal treatment.

Accounting for the MME

Although previous research has found support for the moral mandate hypothesis about what people will think is fair or unfair when they have moral mandates, no research has explored the cognitive and motivational processes that might lead to the MME. For example, are people more likely to either remember or seek out procedural flaws and problems when outcomes threaten their moral mandates (motivated reasoning)? Alternatively, is the MME a consequence of the degree to which people identify with different parties involved in a dispute, such as Elián's father versus his Miami relatives (group differentiation)? Or does people's anger at what they perceive to be morally untenable outcomes trump careful appraisal of information, such as whether the procedures used to arrive at the outcome were appropriate and fair (the anger hypothesis)? We explore each of these possibilities in turn.

The Motivated Reasoning Hypothesis

When procedures yield an outcome that challenges rather than affirms a moral mandate, people may become motivated to explain why or how it happened. That is, when an outcome threatens a moral mandate, people may be motivated to engage in more critical information processing and seek flaws with the procedures in an attempt to explain how they produced the wrong outcome (cf. Kunda, 1990). This additional processing might entail (a) an active reevaluation of procedural information (e.g., rereading procedural information) or (b) a biased memory search of procedural infor-

mation to support the conclusion that the procedures were unfair. In contrast, when an outcome affirms people's moral mandates, they should have little motivation to search for procedural flaws or critically evaluate aspects of the procedures (i.e., they should be relatively willing to accept the fairness of the procedures).

The motivated reasoning hypothesis is consistent with considerable research on the effects of prior beliefs on judgment. Although people tend to be cognitive misers who rely on simple, low-effort heuristics under most circumstances (e.g., Fiske & Taylor, 1991), they tend to shift into a more thoughtful and analytical mode of reasoning when they experience something negative or unexpected (Rutte & Messick, 1995; Wong & Weiner, 1981). For example, in Lord, Ross, and Lepper's (1979) classic study, perceivers found more fault with procedures used for collecting data when the results of studies contradicted rather than supported their prior beliefs (see also Ditto & Lopez, 1992; Edwards & Smith, 1996; Houston & Fazio, 1989; Klein & Kunda, 1992; Kunda, 1987, for related research). Corrective reasoning may be even more likely when moral as compared with nonmoral beliefs are challenged, given that moral beliefs are thought to be immutable (Hare, 1981; Kant, 1786/1947).

For example, we would expect supporters and opponents of physician-assisted suicide to be differentially critical of procedural aspects of Kevorkian's trial as a function of whether the trial verdict supported or threatened their moral beliefs. Kevorkian's guilty verdict should have threatened the moral beliefs of supporters of physician-assisted suicide; therefore, these individuals should have been motivated to reappraise whether the trial procedures were fair (e.g., supporters might have more carefully scrutinized the judge's decision not to allow Youk's brother and widow to testify). However, Kevorkian's guilty verdict supported the moral beliefs of opponents of physician-assisted suicide; therefore, they should not have experienced any motivation to reconsider whether the trial procedures were fair. In sum, the MME may be a consequence of motivated reasoning. If the motivated reasoning hypothesis is true, then we expect relatively superficial consideration of procedures in cases where outcomes supported people's moral mandates but careful reappraisal of procedures in cases where outcomes threatened people's moral mandates.

The Group Differentiation Hypothesis

People often favor in-group members at the expense of out-group members (Ellemers, Spears, & Doosje, 1999; Tajfel, 1982; Yzerbyt, Castano, Leyens, & Paladino, 2000). For example, considerable research documents that, across a wide variety of domains, people allocate more resources to those in their in-group, perceive in-group members more favorably, and like in-group members more than out-group members, even in the absence of conflicting group interests (Ellemers et al., 1999; Yzerbyt et al., 2000). Thus, people's in-group and out-group classifications might be important in their fairness reasoning.

For example, Americans were relatively divided about whether Kevorkian should be punished (Gillespie, 1999), a division that might have been due in part to the degree to which they viewed Kevorkian and his patients as in- or out-group members. In-group and out-group distributive biases therefore might have played a significant role in shaping whether people believed that Kevorkian was guilty or innocent, which, in turn, might have shaped their

judgments of outcome and procedural fairness in the case. In sum, the MME may be due to differential identification with various parties involved in a criminal proceeding and subsequent in-group favoritism or out-group discrimination. If this is true, controlling for the degree to which participants identify with parties in a criminal proceeding should eliminate the MME.

The Anger Hypothesis

A third explanation for the MME is that people's affective reactions to outcomes color their judgments of fairness. When outcomes challenge perceivers' sense of absolute right and wrong, they may respond with moral outrage, which leads them to a "pox on all your houses" reaction. They damn not only the nonpreferred outcome but also the procedure that led to it and the authorities who made the decision. Several different lines of research are consistent with the idea that affect may influence people's justice reasoning (e.g., Haidt, 2001). For example, Wheatley and Haidt (2005) found that hypnotically inducing people to feel disgust in response to neutral words led them to judge descriptions of acts that used those words as more morally wrong than did participants who had not been hypnotized to associate disgust with these words. Similarly, other research has found strong effects for negative emotions associated with challenges to people's moral worldviews on subsequent judgment and behavior (Greenberg, Solomon, & Pyszczynski, 1997; Tetlock, Kirstiel, Elson, Green, & Lerner, 2000).

Emotional reactions to violations of moral mandates may therefore overwhelm other, presumably relevant information, such as whether authorities allowed for voice, were appropriately neutral and unbiased, and so forth. Procedural information may do little to offset the feelings of incensed outrage in reaction to an outcome that threatens a moral mandate; instead, anger and outrage may lead people to paint the entire situation as unfair.

For example, prior to his conviction in 1999, Kevorkian was brought to trial and acquitted three times. Opponents of physician-assisted suicide expressed outrage each time Kevorkian was acquitted and questioned the fairness of a justice system that could let Kevorkian go free (e.g., Margolick, 1994). In other words, their outrage at each of Kevorkian's acquittals led them to deem not only the outcome but also the process as unfair. In contrast, when Kevorkian was convicted in 1999, opponents of physician-assisted suicide praised the verdict and argued that it helped to restore faith in the justice system (Kevorkian—The reaction, 1999). In sum, the MME may be due to strong affective reactions that accompany outcomes that threaten moral mandates. If this is true, controlling for people's affective reactions to outcomes should eliminate the MME.

Overview of the Studies

The goal of the two studies described in this article is to test these three competing explanations for the MME. Testing these hypotheses required creating a situation that would bring outcomes, procedures, group identification, and challenges to moral mandates into possible conflict. Toward this end, we developed a number of newspaper stories that described the trial of people charged with going too far in the name of their moral beliefs—in particular, people who did something illegal in the name of a

pro-choice or pro-life belief about abortion. All of the trial descriptions were based on real court cases, but we adapted them to (a) protect the actual persons involved in these situations (by changing the names), (b) allow license in reporting differential verdicts, and (c) ensure that trial descriptions contained a number of procedural flaws.

These cases therefore allowed us to explore people's (a) perceptions of procedural and outcome fairness, (b) relative amounts of information processing of procedural details, (c) identification with the defendant, and (d) affective reactions to the trial procedures and outcome as a function of whether defendants were acquitted or convicted of crimes that supported, opposed, or were unrelated to participants' moral beliefs. Thus, the critical manipulations were the extent that the defendant's crime supported or opposed the participant's moral beliefs and the verdict in the case. We did not manipulate procedural fairness in the stimulus cases we used. Although traditional work on procedural justice has focused on the impact that positive aspects of procedures have on people's subsequent thoughts, feelings, and behaviors, the focus of our studies was different. That is, we were interested in testing different accounts for why the MME occurs. Given that prior research has already demonstrated that people respond more strongly to whether the correct outcome is achieved than to manipulations of procedural fairness in these types of trials (Skitka & Houston, 2001), we held the procedures constant in our studies. We did this both to simplify the design and to allow us to strategically plant procedural flaws, given that the motivated reasoning hypothesis predicts that people should be differentially motivated to process such flaws as a function of whether they have a relevant moral mandate and whether the verdict in the case threatens or affirms that moral mandate.

Before turning to the specifics of these studies, we first describe pilot work we did to ensure that the cases we used for stimulus materials involved defendants who received neither very fair nor very unfair trials (in the absence of verdict information) and were seen as equally guilty and that people could detect similar numbers of procedural flaws in each case when directly asked to do so. We also ensured that the trial descriptions were otherwise equivalent in important ways (e.g., perceived seriousness of the defendant's alleged crime).

Pilot Study

Method

Participants

One hundred ninety-eight introductory psychology students at the University of Illinois at Chicago (UIC) participated in the experiment in exchange for partial credit toward a course requirement.

Materials and Procedure

Participants read one of seven spurious newspaper articles that described a defendant who was accused of a crime and the defendant's trial. All of the trial summaries were based on actual abortion-related crimes and trials. Three articles described the trials of defendants accused of committing crimes to further pro-life beliefs (i.e., a man allegedly bombed an abortion clinic, a priest allegedly destroyed an abortion clinic's property, and two parents allegedly kidnapped their son's pregnant girlfriend to prevent her from having an abortion). Four articles described the trials of defendants

accused of committing crimes to further pro-choice beliefs (i.e., a woman allegedly aided a minor in obtaining an abortion, a doctor allegedly provided illegal late-term abortions, a doctor allegedly provided an abortion to a minor without parental consent, and parents allegedly violated a court order and took their daughter to another state [where restrictions on late-term abortions were more lenient] so she could have an abortion). All of the newspaper articles described the criminal charges and the trial, and none exceeded one page in length. We embedded three procedural flaws in each newspaper article (e.g., the jury was all pro-life, the defense attorney violated a judge's gag order in an attempt to drum up sympathy for his client, a key witness was not subpoenaed to testify). Participants did not learn the verdict of the trial.

Measures

After reading the article, participants were asked to complete a questionnaire that assessed their perceptions of the fairness or unfairness of the defendant's trial, how guilty or innocent they perceived the defendant to be, the perceived seriousness of the defendant's crime, their perceived similarity or dissimilarity to the defendant, and how easy or difficult it was to read the article, all on bipolar scales (-3 to 3). After answering all of the closed-ended questions, participants were asked to list as many procedural flaws or problems with the procedures and events surrounding the trial as they could find. Participants were then thanked for their participation and debriefed.

Results

Out of the seven cases tested, four trial descriptions were perceived by participants to be functionally equivalent across a number of important psychological dimensions. Two pro-life stories (a man accused of bombing an abortion clinic and a priest accused of destroying an abortion clinic's property) and two pro-choice stories were retained (a woman accused of aiding a minor in obtaining an abortion across state lines without her parents' consent and a doctor accused of providing late-term abortions). Subsequent analyses report on comparisons of the retained stories and therefore are based on $N = 119$ (and exclude the $n = 79$ who rated one of the excluded stories).

Defendants in each of the four retained cases were perceived to have received an equally fair trial ($M = 0.41$, where zero indicated neither fair nor unfair), $F(3, 115) = 1.15$, *ns*. Participants were also equally satisfied with the trial's fairness ($M = -0.02$, reflecting that they were neither satisfied nor dissatisfied with the trial's fairness), $F(3, 115) = 0.48$, *ns*. Other results revealed that the four cases were equivalent in the extent to which participants felt similar to the defendants ($M = -1.19$, indicating that participants perceived themselves to be dissimilar to the defendants), $F(3, 115) = 2.20$, *ns*; the perceived seriousness of the defendants' crimes ($M = 0.16$, indicating that participants perceived the crimes to be neither more nor less serious than other crimes they might read about in the newspaper), $F(3, 115) = 1.93$, *ns*; whether the events depicted seemed believable ($M = 1.52$, indicating that participants felt the events described in the article were believable), $F(3, 115) = 2.02$, *ns*; and how easy or difficult the article was to read ($M = 1.67$, indicating that participants found the article easy to read), $F(3, 115) = 0.61$, *ns*. In light of the results of Studies 1 and 2, it is important to note that we obtained these results when participants did not know whether defendants were acquitted or convicted and without controlling for participants' position on abortion.

Furthermore, results revealed that participants perceived the defendants in the four articles to be equally likely to be guilty, $F(3, 115) = 1.25$, *ns*. That is, on average, participants perceived the defendants to be slightly guilty ($M = -0.90$, $SD = 1.25$) on a scale ranging from -3 (*definitely guilty*) to 3 (*definitely innocent*).¹ Finally, the number of procedural flaws participants could identify when explicitly asked to list flaws they saw with procedures was equivalent across stories: On average, participants could find 2.21 out of 3.00 possible procedural flaws, a result that did not vary as a function of story condition, $F(3, 109) = 0.99$, *ns*.

Discussion

In sum, the results of the pilot study indicate that the four cases we used for stimulus materials were equivalent across a number of important psychological dimensions that could influence the perceived fairness of a defendant's trial. Participants viewed the four cases to be equivalent in the extent to which the defendants received a fair trial (the procedures were perceived to be neither fair nor unfair in the absence of verdict information), the seriousness of the defendant's crime, and how easy or difficult it was to read the article. Moreover, participants perceived each of the defendants to be slightly guilty, a finding that has implications for the results of Studies 1 and 2. Moreover, our use of more than one representative of a pro-life and a pro-choice case allowed for greater generalizability of results and less concern that differences might be due to an idiosyncratic detail of a given case.

Study 1

The stimulus materials developed for Studies 1 and 2 were designed to threaten or affirm participants' moral mandates about abortion by exposing the participants to defendants who were either convicted or acquitted of committing a crime that supported, opposed, or was unrelated to the participants' moral mandates. Participants with a pro-life, a pro-choice, or no moral mandate about abortion were randomly assigned to read one of the four newspaper articles about a defendant who allegedly had committed a crime to further either pro-life or pro-choice beliefs. We classified crimes according to whether they supported, opposed, or were unrelated to the participant's moral beliefs. For example, if the defendant's crime furthered pro-life beliefs (e.g., bombed an abortion clinic), that crime supported the beliefs of participants with a pro-life moral mandate, opposed the beliefs of participants with a pro-choice moral mandate, and was unrelated to the beliefs of participants without a moral mandate about abortion. We hypothesized that perceptions of procedural and outcome fairness would vary as a function of whether the crime supported, opposed, or was unrelated to participants' moral mandates about abortion and the verdict in the case.²

Previous research indicates that people feel that justice requires the guilty to be convicted and the innocent be acquitted of crimes (Skitka & Houston, 2001). Therefore, given that our defendants were all perceived to be slightly guilty, we hypothesized that participants would rate a conviction to be more fair than an acquittal. However, we hypothesized that participants' moral mandates would moderate this effect. In particular, we predicted that participants would rate a conviction to be more fair than an acquittal when crimes were unrelated to participants' moral man-

dates. However, we predicted this effect to be exaggerated when crimes opposed participants' moral mandates and attenuated or reversed when crimes supported participants' moral mandates. Additionally, we explored three possible explanations for the MME by testing whether the motivated reasoning, group differentiation, or anger hypothesis provided a better account for the data.

Method

Participants

Two hundred introductory psychology students at UIC participated in the experiment in exchange for partial credit toward a course requirement. Seventy-one percent of participants were female. Participants ranged in age from 17 to 40 years ($M = 19.76$, $SD = 6.16$).

Design

We used a 3 (crime: supported, opposed, or unrelated to participant's moral mandate) $\times 2$ (verdict: acquit, convict) between-subjects design. Participants' identification with the defendant, affective reactions to the trial procedure and outcome, fairness ratings, and recall of procedural flaws were the primary dependent measures for this experiment.

Procedure

Participants were asked to read a newspaper article about a defendant's trial and answer questions about their perceptions of the case. They were seated at separate computer cubicles and completed the experiment on the computer. The background information about the crime and the procedures used in the case were presented to participants in a newspaper article format on the computer screen. Half the participants read about a pro-life defendant, and half read about a pro-choice defendant.

After reading about the case, participants were allowed to choose whether they wanted to (a) share their thoughts and feelings about the case by typing their reactions in an open-ended text box, (b) reread the article (i.e., the description of the crime and the legal procedures), or (c) proceed to the rest study. If participants opted to reread the case or to provide an open-ended response, they were given an opportunity to do so, and then they proceeded with the rest of the experiment. Participants then learned the verdict in the case: Half the participants learned that the defendant was acquitted, and half learned that the defendant was convicted.

After reading the verdict, participants were again allowed to choose whether they wanted to (a) share their thoughts and feelings about the case, (b) reread the description of the crime and legal procedures, (c) reread the trial verdict, or (d) proceed to the rest of the experiment. Following their choice, participants responded to several closed-ended questions about their perceptions of the case. The questions (and the response scales) were presented to participants one at a time in random order via MediaLab (2004) software. Participants indicated their answer to each question by clicking their mouse on the box that corresponded to their answer.

¹ Although our goal was to develop materials that were ambiguous with respect to defendant guilt, the lay psychology of the situation is such that people tend to perceive that people charged with crimes and brought to trial are more likely to be guilty than innocent.

² Note that, to simplify the design, we collapsed across story and moral mandate to create a *type of crime* variable that captured whether the defendant's crime supported, opposed, or was unrelated to participants' moral beliefs. Analyses conducted separately for pro-life and pro-choice defendants, with moral mandate and verdict as independent variables, yielded a pattern of results similar to that for analyses reported when we used type of crime as a variable.

Measures

Moral mandates. In a pretesting session that occurred 3 to 12 weeks before the experimental session, participants completed a questionnaire that assessed their attitudes about abortion. In particular, participants were asked to self-report their position on abortion by answering the following question: "Would you classify yourself as more pro-choice (in favor of allowing abortion to be legal) or pro-life (in favor of passing laws to prevent women from having abortions)?" Participants answered on a scale ranging from -3 (*strongly pro-choice*) to 3 (*strongly pro-life*). To assess moral conviction, we asked participants, "To what extent does your position on abortion reflect something about your core moral values?" with answers given on a scale ranging from 1 (*not at all*) to 5 (*extremely*).

We classified participants as having a moral mandate about abortion by using objective cutoffs on the self-report and moral conviction items. That is, we classified participants as having a pro-choice moral mandate if they reported that they were moderately or strongly pro-choice (a -2 or -3 on the self-report scale) and if they scored at 3 or above on the moral conviction item (indicating moderate to strong agreement with the moral conviction item). We classified participants as having a pro-life moral mandate if they reported that they were moderately or strongly pro-life (a 2 or 3 on the self-report scale) and if they scored at 3 or above on the moral conviction item. We classified all other participants as having no moral mandate about abortion.

Procedural fairness. We measured perceived procedural fairness with four questions. That is, participants responded to the following questions on 7-point bipolar scales: (a) "How fair or unfair was the defendant's trial?" (b) "Do you think the defendant received as fair of a trial as most defendants would get, a more fair trial than most defendants would get, or a less fair trial than most defendants would get?" (c) "How biased or unbiased were the procedures used in the legal case?" and (d) "How satisfied or dissatisfied are you with the fairness of the defendant's trial?" We averaged participants' responses to these four items to create a composite index of procedural fairness (Cronbach's $\alpha = .69$).

Outcome fairness. We measured perceived outcome fairness with three items. In particular, participants responded to the following questions on 7-point bipolar scales: (a) "To what extent do you believe the defendant received a fair or unfair verdict in this trial?" (b) "Do you think the verdict in this case was as fair as it is in most other trials, less fair, or more fair?" and (c) "How satisfied or unsatisfied are you with the fairness of the verdict in this case?" We averaged participants' responses to these three items to create a composite index of outcome fairness (Cronbach's $\alpha = .81$).

Anger with the procedures and the verdict. We had participants answer two questions to assess their anger with the procedures and verdict. In particular, participants responded to the following questions on 5-point scales ranging from 1 (*not at all*) to 5 (*extremely*): "How angry are you about the procedures used in the case?" and "How angry are you about the outcome of this case?" Although these two items were positively correlated, $r(199) = .59, p < .01$, we used them as separate mediators when testing the anger hypothesis.

Identification with the defendant. We measured identification with the defendant with two items that tapped participants' similarity to and liking of the defendant. In particular, participants answered the following questions on 7-point bipolar scales: "How much do you like or dislike the defendant?" and "How similar or dissimilar do you feel you are to the defendant?" We averaged these two items to create a measure of identification with the defendant (Cronbach's $\alpha = .77$).

Procedural flaws. After they answered the closed-ended questions, we explicitly asked participants to recall any procedural flaws they perceived in the case they read about. In particular, we asked participants to imagine that they were "hired to find flaws with the procedures and events surrounding the case" and to list as many of the flaws as they could recall. Two independent coders categorized participants' open-ended responses to the procedural flaws prompt as reflecting (a) one of the three procedural flaws we planted in the case or (b) some other type of comment. The two

coders agreed 96% of the time, and discrepancies were resolved by discussion. After typing as many procedural flaws as they could remember, participants answered several demographic questions and were then debriefed and thanked for their participation.

Results

We first tested whether we conceptually replicated the MME in this experimental context.³ Results of this analysis found the predicted Crime \times Verdict interactive effect on both procedural and outcome fairness. Procedures and outcomes were perceived to be more fair when they led to convictions than when they led to acquittals when participants did not have a moral mandate about abortion, an effect that was significantly stronger when the crime opposed, and weaker when the crime supported, perceivers' moral mandates. Subsequent analyses explored whether there was evidence of motivated reasoning and the degree to which the MME was a consequence of identification (or disidentification) with defendants or people's anger with the verdict. Results were most consistent with the anger hypothesis. More detail is provided in the following sections.

Fairness Ratings

Procedural fairness. A 3 (crime: supported, opposed, unrelated) $\times 2$ (verdict: acquit, convict) between-subjects analysis of variance (ANOVA) with participants' ratings of procedural fairness as the dependent variable revealed a significant main effect for verdict: Participants thought that procedures that led to a conviction were more fair than procedures that led to an acquittal, $F(1, 191) = 10.74, p < .01, \eta^2 = .05$. Consistent with the moral mandate hypothesis, results also revealed the predicted Crime \times Verdict interaction, $F(2, 191) = 4.36, p = .01, \eta^2 = .04$ (see Table 1). Analysis of the simple effects of verdict revealed that participants did not differ in their perceptions of procedural fairness as a function of verdict when the crime supported or was unrelated to their moral mandates, $F(1, 191) < 1, ns, \eta^2 = .00$, and $F(1, 191) = 2.90, p = .10, \eta^2 = .04$, respectively. In contrast, when the crime opposed their moral mandates, participants thought the procedures were more fair when they led to a conviction than when they led to an acquittal, $F(1, 191) = 16.63, p < .01, \eta^2 = .23$. In sum, people's moral mandates about abortion influenced their perceptions of procedural fairness.

Outcome fairness. A 3 (crime: supported, opposed, unrelated) $\times 2$ (verdict: acquit, convict) between-subjects ANOVA, with participants' ratings of outcome fairness as the dependent variable, revealed a significant main effect for verdict: Participants thought the outcome was more fair when the defendant was

³ Because of a programming error, participants' responses to the verdict manipulation check item were not recorded. However, the verdict manipulation check item in Study 2 revealed that only 5 of 132 participants (fewer than 4%) incorrectly recalled the verdict in the case when asked whether the defendant was found to be guilty or innocent. Moreover, results of Study 2 revealed that including versus excluding these participants did not change the nature of the results. Therefore, it seems reasonable to assume that (a) most participants noticed and accurately remembered the verdict in the case in Study 1 and (b) were it possible to identify participants who failed the verdict manipulation check in Study 1, excluding them would not change the nature of the results.

Table 1
Means and Standard Deviations for Perceived Procedural Fairness, Outcome Fairness, and Anger at the Verdict as a Function of Type of Crime and Verdict, Study 1

Verdict	Type of crime					
	Opposed		Supported		Unrelated	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Procedural fairness						
Acquit	-0.18	1.15	-0.28	1.01	-0.28	1.05
Convict	0.93	0.88	-0.30	1.24	0.16	1.17
Outcome fairness						
Acquit	-0.28	1.75	-0.05	1.85	-0.25	1.43
Convict	1.41	1.34	-0.08	1.52	0.54	1.33
Anger at the verdict						
Acquit	2.50	1.35	1.90	1.27	2.26	1.11
Convict	1.32	0.70	1.71	1.03	1.59	0.98

Note. Procedural and outcome fairness ratings ranged from -3 (*very unfair*) to 3 (*very fair*). Anger at the verdict ratings ranged from 1 (*not at all*) to 5 (*extremely*).

convicted than when he or she was acquitted, $F(1, 191) = 13.74$, $p < .01$, $\eta^2 = .07$. Consistent with the moral mandate hypothesis, results also revealed a significant Crime \times Verdict interaction, $F(2, 191) = 4.94$, $p = .01$, $\eta^2 = .05$ (see Table 1). Analysis of the simple effects of verdict revealed that participants thought a conviction was more fair than an acquittal when the defendant had committed a crime that was unrelated to or opposed the participants' moral mandates, $F(1, 191) = 4.61$, $p < .05$, $\eta^2 = .08$, and $F(1, 191) = 19.18$, $p < .01$, $\eta^2 = .23$, respectively. An examination of effect sizes indicated that this effect was stronger when the defendant's crime opposed perceivers' moral mandates than when it was unrelated to a moral mandate. Participants' perceptions of outcome fairness did not differ as a function of verdict when the defendant's crime supported their moral mandates, $F(1, 191) < 1$, ns , $\eta^2 = .00$ (see Table 1). In sum, the results are consistent with previously observed MMEs on perceptions of outcome fairness.

Testing the Motivated Reasoning Hypothesis

The motivated reasoning hypothesis predicted that participants who learned about a verdict that threatened their moral mandates would be more likely to reevaluate the procedures that led to the outcome than participants who received a verdict that supported their moral mandates. We used chi-square analyses to test whether participants were differentially likely to choose to reread the trial procedures as a function of the verdict for each type of crime. Results revealed that participants' choice of whether to reread the procedures, reread the verdict, share their reactions, or continue with the experiment did not vary as a function of the verdict in the case when the crime was unrelated to or supported participants' moral mandates, $\chi^2(3, N = 70) = 1.50$, $p = .68$, and $\chi^2(3, N = 64) = 3.69$, $p = .30$, respectively. In contrast, participants' choice of what to do next in the study did vary as a function of verdict when the crime opposed participants' moral mandates, $\chi^2(3, N = 64) = 7.88$, $p < .05$. Contrary to the motivated reasoning hypothesis, participants were not more likely to reread the procedures in the case, but were slightly more likely to reread the verdict in the

case, when a defendant was acquitted rather than convicted of committing a crime that opposed participants' moral mandates.⁴ Thus, results were not consistent with a motivated reasoning explanation for the MME: Participants who learned that a defendant was acquitted of a crime that opposed their moral mandate were not more likely to actively reevaluate the procedures in the case relative to when he or she was convicted.

If the MME is due to differences in motivated reasoning, one might also expect that participants would vary in their relative attentiveness to procedural flaws as a function of the type of crime, even if most participants did not actively reevaluate procedures. A 3 (crime: supported, opposed, unrelated) \times 2 (verdict: acquit, convict) ANOVA with the total number of procedural flaws participants recalled as the dependent variable tested this hypothesis. Results revealed that participants recalled an average of 1.36 out of 3.00 possible procedural flaws and that recall of procedural flaws did not vary as a function of crime, $F(2, 191) = 2.75$, $p = .07$, $\eta^2 = .03$; verdict, $F(1, 191) < 1$, ns , $\eta^2 = .00$; or their interaction, $F(2, 191) = 1.06$, $p = .35$, $\eta^2 = .01$. Moreover, descriptive results revealed that 75% of participants were able to recall at least one procedural flaw in the case. Thus, it was not the case that participants simply did not perceive flaws with the procedures. In sum, the results provided no support for the hypothesis that the MME was due to differential attention given to procedures or to explicit reevaluation of procedural information once participants learned about outcomes as a function of whether crimes supported, opposed, or were unrelated to perceivers' moral mandates.

Testing the Group Differentiation Hypothesis

To test whether identification with the defendant mediated the interactive effect of crime and verdict on participants' perceptions of fairness, we followed the guidelines established by Baron and Kenny (1986). We first tested whether identification was related to crime and verdict. Results of a 3 (crime: supported, opposed, unrelated) \times 2 (verdict: acquit, convict) ANOVA with identification with the defendant as the dependent variable revealed only a main effect for crime on participants' identification with the defendant, $F(2, 193) = 11.78$, $p < .01$, $\eta^2 = .11$. Participants expressed more identification with defendants whose crimes supported the participants' moral beliefs ($M = -0.33$, $SD = 1.36$) than with those whose crimes were unrelated to the participants' beliefs ($M = -0.95$, $SD = 1.25$), $F(1, 193) = 7.18$, $p < .01$. Moreover, participants expressed more identification with defendants whose crimes were unrelated to the participants' moral beliefs than with defendants whose crimes opposed the participants' beliefs ($M = -1.47$, $SD = 1.40$), $F(1, 193) = 5.20$, $p < .05$.

Although identification varied as a function of type of crime, correlational analyses revealed that identification with the defendant did not correlate with participants' perceptions of procedural, $r(197) = .06$, $p = .40$, or outcome fairness, $r(197) = .11$, $p = .13$. Moreover, controlling for identification in an analysis of covari-

⁴ Descriptive analyses revealed that, after reading the verdict, most participants (67%) chose to share their reactions to the case by typing in their thoughts and feelings about the trial. Only 11% of participants chose to reread the procedures, and only 6% of participants chose to reread the verdict in the case. Thus, rereading the verdict was a relatively uncommon response.

ance (ANCOVA) did not eliminate the interactive effect of crime and verdict on participants' ratings of procedural or outcome fairness. That is, results of a 3 (crime: supported, opposed, unrelated) \times 2 (verdict: acquit, convict) ANCOVA, with controls for identification with the defendant, revealed a significant Crime \times Verdict interaction for participants' ratings of procedural and outcome fairness, $F(2, 190) = 4.88, p = .01$, and $F(2, 190) = 5.61, p < .01$, respectively. Thus, results are not consistent with the group differentiation hypothesis.

Testing the Anger Hypothesis

To test whether participants' affective reactions to the verdict mediated the influence of crime and verdict on perceptions of procedural and outcome fairness, we first tested whether participants' anger at the verdict varied as a function of crime and verdict. Results of a 3 (crime: supported, opposed, unrelated) \times 2 (verdict: acquit, convict) ANOVA revealed a significant Crime \times Verdict interaction on participants' reported anger at the verdict, $F(2, 193) = 3.23, p = .04, \eta^2 = .03$ (see Table 1). Analysis of the simple effects of verdict revealed that participants were more angry about the verdict when defendants were acquitted rather than convicted of crimes that were unrelated to or opposed participants' moral mandates, $F(1, 193) = 6.47, p < .05, \eta^2 = .09$, and $F(1, 193) = 18.69, p < .01, \eta^2 = .23$, respectively. In contrast, participants' anger about the verdict did not vary as a function of verdict when the defendant committed a crime that supported participants' moral mandates, $F(1, 193) < 1, ns, \eta^2 = .00$. Therefore, the crime and verdict interactive effect on anger about the verdict paralleled the interactive effect of crime and verdict on perceptions of fairness. Second, we found that participants' anger at the verdict was significantly related to their judgments of procedural, $r(197) = -.58, p < .01$, and outcome fairness, $r(197) = -.68, p < .01$. Participants who were angrier at the verdict thought the procedures and outcome were less fair.

Third, results of a 3 (crime: supported, opposed, unrelated) \times 2 (verdict: acquit, convict) ANCOVA revealed that when we controlled anger at the verdict, the previously observed interactions between crime and verdict on participants' ratings of procedural or outcome fairness were reduced to nonsignificance, $F(2, 190) = 1.58, p = .21, \eta^2 = .01$, and $F(2, 190) = 1.77, p = .17, \eta^2 = .02$, respectively. Therefore, in support of the anger hypothesis, anger at the verdict mediated the interactive effect of crime and verdict on participants' ratings of procedural and outcome fairness. Similar analyses indicated that participants' anger at the procedures did not mediate the interactive effect of crime and verdict on perceptions of procedural and outcome fairness. Participants' anger at the verdict, but not the procedures, provides an account for the MME.⁵

Discussion

Study 1 was designed to test whether people's judgments of procedural and outcome fairness would be influenced by their moral mandates about abortion. Results support the moral mandate hypothesis. Although all participants read a case that contained three procedural flaws (i.e., the objective fairness of the procedures remained constant), results revealed that participants' judgments of procedural fairness were influenced by the trial verdict and

whether the defendant's crime supported, opposed, or was unrelated to the participants' moral mandates about abortion. That is, perceptions of procedural fairness were enhanced when a defendant was convicted of committing a crime that opposed the participant's moral beliefs and diminished when that defendant was acquitted. In contrast, perceptions of procedural fairness did not differ as a function of verdict when defendants committed crimes that were unrelated to or supported participants' moral beliefs.

We obtained similar results with respect to outcome fairness. Consistent with previous research documenting that people prefer to convict rather than acquit defendants perceived to be guilty (Skitka & Houston, 2001), results revealed that participants rated the outcome to be more fair when defendants were convicted than when they were acquitted. However, this tendency to prefer a conviction to an acquittal was moderated by participants' moral mandates about abortion. When crimes were unrelated to participants' moral beliefs, participants perceived a conviction to be more fair than an acquittal. This effect was magnified when crimes opposed participants' moral mandates and attenuated when crimes supported their moral mandates. It is interesting to note, however, that there were limits to the MME. Participants did not rate an acquittal to be more fair than a conviction when a defendant's crime supported their moral mandates; instead, they rated the outcome to be equally fair when the defendant was convicted or acquitted. Thus, moral mandates proved to be an important determinant of people's perceptions of both procedural and outcome fairness, but Study 1 also reveals that there are limits to the biasing effect of moral mandates on people's perceptions of fairness.

In addition to replicating the MME, the results also offer support for the anger hypothesis. Participants' self-reported anger at the verdict in the case (but not the procedures) mediated the influence of crime and verdict on perceptions of procedural and outcome fairness. People were angered when a defendant who opposed their moral mandate went unpunished, and this anger drove them to devalue the fairness of the procedures and the outcome in the case. In contrast, when participants' moral mandates were not threatened by the verdict in the case (or when they did not have a moral mandate about abortion), they reported little anger and therefore rated the procedures and the trial outcome to be more fair. Although we cannot conclusively rule out the possibility that fairness judgments mediated the effects of moral mandates on anger (because anger and fairness judgments were both measured variables),

⁵ One could argue that people's fairness judgments mediated their affective reactions rather than the opposite (particularly given that people's affective reactions and fairness judgments were collected in random order). Therefore, we also conducted analyses to test whether participants' fairness judgments mediated the influence of moral mandate and verdict on their anger at the verdict. Results revealed that participants' outcome fairness judgments statistically mediated the influence of moral mandates and verdict on anger at the verdict; however, participants' procedural fairness judgments did not. We did not conduct analyses using fairness as a mediator for participants' anger at the procedures because there was not a significant interaction between crime and verdict on participants' anger at the procedures. Thus, it seems more plausible that affective reactions mediated fairness judgments (rather than the converse) because affective reactions to the verdict mediated participants' judgments of procedural and outcome fairness, whereas fairness judgments did not consistently mediate people's affective reactions to procedures and outcomes.

the results of Study 1 reveal that anger consistently mediated fairness judgments, whereas fairness judgments did not consistently mediate anger. Irrespective of the causal sequence, the results nonetheless irrefutably identify that anger is intimately involved in the MME.

In contrast, we found no evidence that group identification could account for the MME. Participants' identification with the defendant was unrelated to their perceptions of procedural and outcome fairness. Thus, the MME was not simply due to in-group bias or out-group derogation. Similarly, results also failed to support the motivated reasoning hypothesis. Participants were equally unlikely to reread the procedures in the case irrespective of whether the defendant was convicted or acquitted of committing a crime that either supported, opposed, or was unrelated to participants' moral mandates about abortion.

Although our results provide no evidence that people were more likely to actively reevaluate the procedures when defendants were acquitted rather than convicted of committing crimes that opposed participants' moral mandates, one could argue that people did not need to reread the procedural information to search for flaws because they could easily remember the procedural information. Indeed, our results suggest that most people could recall at least one procedural flaw in the case when explicitly asked to do so at the end of the study. Moreover, recall of procedural flaws did not vary as a function of the type of crime the defendant committed or the verdict in the case. Therefore, participants might have reconsidered evidence of procedural flaws in memory rather than actively reviewing procedures by rereading them. Study 2 therefore focuses on assessing whether there were differences in processing and rehearsal of procedural information, rather than assessing whether participants actively reviewed procedural information, to provide a more sensitive test of the motivated reasoning hypothesis.

Study 2

In Study 2 we used a design very similar to Study 1 but used only two of the stories (one pro-life and one pro-choice defendant) to simplify the design. Half the participants read about a man accused of bombing an abortion clinic, and the other half read about a doctor accused of providing late-term abortions. Moreover, in Study 2 we included measures of depth of information processing (e.g., a free recall memory task and a sentence recognition task) and omitted participants' option to physically review information, to test whether participants were differentially likely to review procedural information in memory as a function of the type of crime and verdict. If some participants thought more carefully about the procedural information (i.e., reviewed the procedural information in memory) after learning that the verdict challenged their moral mandate (e.g., when a defendant was acquitted of a crime that opposed their moral mandate), then they should have superior performance on the depth of information processing measures relative to participants who did not think about the procedural information as carefully. Moreover, we also recorded the time participants spent reading the verdict in the case to test whether participants spent more time reading and thinking about a verdict that threatened rather than affirmed their moral mandate. In sum, we designed Study 2 to (a) replicate the results of Study 1 with respect to participants' fairness judgments, (b) provide a

stronger test of the motivated reasoning hypothesis by including measures of depth of information processing, and (c) test the anger and group differentiation hypotheses.

Method

Participants

One hundred thirty-two introductory psychology students at UIC participated in the experiment in exchange for partial credit toward a course requirement. Sixty-four percent of participants were female. Participants ranged in age from 17 to 29 years ($M = 19.14$, $SD = 1.88$).

Design

Study 2 used a 3 (crime: supported, opposed, unrelated) \times 2 (verdict: acquit, convict) between-subjects design. Participants' identification with the defendant, affective reactions to the trial procedures and outcome, fairness ratings, and scores on the depth of processing measures (time spent reading the article and verdict, performance on a sentence recognition task, and recall ability) were the dependent measures for this experiment.

Procedure

The procedure for Study 2 was similar to the procedure used for Study 1; however, we only used the trials of one pro-life and one pro-choice defendant. Half the participants read about a man accused of bombing an abortion clinic; the other half read about a doctor accused of providing late-term abortions. After reading about the case, participants learned the verdict: Half the participants learned the defendant was acquitted, and half learned the defendant was convicted. After learning the verdict, participants answered a variety of questions that assessed their perceptions of fairness, affective reactions to the trial procedures and outcome, and identification with the defendant (described below). The questions (and the response scales) were presented to participants one at a time, in random order, via MediaLab (2004) software.

After answering all the closed-ended questions, participants completed 10 simple insight problems (Sternberg & Davidson, 1995) that served as an interference task before performing a free recall memory task. Participants were then asked to type as many details as they could remember about the article they read. Participants' open-ended recall data were content coded by two independent coders (blind to hypotheses) for the content and the number of independent ideas recalled about the case. The two coders agreed 88% of the time. A third coder resolved discrepancies.

Following the recall task, participants performed a sentence recognition task. That is, participants were instructed that a total of 20 sentences would appear one at a time in the center of the computer screen. Their task was to indicate as quickly and as accurately as possible whether the sentence on the screen appeared in the article they read, by pressing the corresponding "yes" or "no" key on the computer keyboard. The sentence remained on the screen until participants indicated their response. Response latencies were recorded via MediaLab DirectRT (2004) software. Participants were presented with 10 sentences that appeared in the article they read (sentence present) and 10 sentences that did not appear in the article they read (sentence absent), in random order. After completing all the tasks, participants answered several demographic questions and were then debriefed and thanked for their participation.

Measures

Moral mandates. In a pretesting session that occurred 3 to 12 weeks before the experimental session, participants completed a questionnaire that assessed their attitudes about abortion. In particular, participants reported their position on abortion using the same self-report item used in

Study 1. Moreover, to assess moral conviction, we asked participants to respond to four questions on scales ranging from -3 (*strongly disagree*) to 3 (*strongly agree*): (a) "My attitude about abortion is closely related to my core moral values and convictions," (b) "My attitude about abortion is closely tied to how I see myself as a person," (c) "I would feel really awful about myself if I did not defend my position on abortion," and (d) "My feelings about abortion are related to how important it is to demonstrate to myself or others that I will stand up for what I think is right." We averaged participants' responses to these four items to create a composite index of moral conviction (Cronbach's $\alpha = .82$).

We classified participants as having a moral mandate about abortion using objective cutoffs on the self-report item and moral conviction scale. That is, we classified participants as having a pro-choice moral mandate if they reported that they were moderately or strongly pro-choice (a -2 or -3 on the self-report scale) and if they scored at 2 or above on the moral conviction scale (indicating moderate to strong agreement with the moral conviction items). We classified participants as having a pro-life moral mandate if they reported that they were moderately or strongly pro-life (a 2 or 3 on the self-report scale) and if they scored at 2 or above on the moral conviction scale (indicating moderate to strong agreement with the moral conviction items). We classified all other participants as having no moral mandate about abortion.

Procedural fairness. We measured perceived procedural fairness with three items. In particular, participants responded to the following questions on 7-point bipolar scales: (a) "How fair or unfair was the defendant's trial?" (b) "How biased or unbiased were the procedures used in the legal case?" and (c) "How satisfied or dissatisfied are you with the fairness of the defendant's trial?" We averaged participants' responses to these three items to create a composite index of procedural fairness (Cronbach's $\alpha = .62$).

Outcome fairness. We measured perceived outcome fairness with the same three items used in Study 1. We averaged participants' responses to the three items to create a composite index of outcome fairness (Cronbach's $\alpha = .77$).

Anger with the procedures and the verdict. Participants answered the same two items that we used in Study 1 to assess their anger with the procedures and verdict in the case. These two items were positively correlated, $r(132) = .59, p < .01$, but we treated them as separate mediators when testing the anger hypothesis.

Identification with the defendant. Finally, participants answered the same two items that we used in Study 1 to tap identification with the defendant. We averaged these two items to create a measure of identification with the defendant (Cronbach's $\alpha = .74$).

Results

We first tested whether we had replicated the MME we observed in Study 1. Results of this analysis found the predicted Crime \times Verdict interaction for participants' ratings of procedural and outcome fairness. The pattern of results was similar to that observed in Study 1 (see Tables 1 and 2).⁶ Subsequent analysis explored (a) whether participants differed in the amount of information processing they engaged in as a function of the type of crime and verdict in the case and (b) whether identification with the defendant or people's affective reactions to the verdict mediated the MME. Results were again most consistent with the anger hypothesis. More detail is provided below.

Verdict Manipulation Check

As a check on the verdict manipulation, we asked participants whether the defendant on trial was found guilty or not guilty. Five participants provided the incorrect response. However, including

Table 2
Means and Standard Deviations for Perceived Procedural Fairness, Outcome Fairness, and Anger at the Verdict as a Function of Type of Crime and Verdict, Study 2

Verdict	Type of crime					
	Opposed		Supported		Unrelated	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Procedural fairness						
Acquit	-0.88	1.13	-0.52	1.07	-0.51	1.01
Convict	1.01	0.90	0.29	1.14	0.53	0.94
Outcome fairness						
Acquit	-1.29	1.19	-0.62	1.44	-0.54	1.15
Convict	1.31	0.77	0.52	1.30	0.70	1.27
Anger at the verdict						
Acquit	2.92	1.29	2.19	1.36	2.06	0.87
Convict	1.21	0.66	1.62	0.80	1.38	0.72

Note. Procedural and outcome fairness ratings ranged from -3 (*very unfair*) to 3 (*very fair*). Anger at the verdict ratings ranged from 1 (*not at all*) to 5 (*extremely*).

or excluding these participants in the data analysis did not change the nature of the results. Therefore, these 5 participants are included in the results that follow.

Fairness Ratings

Procedural fairness. A 3 (crime: supported, opposed, unrelated) \times 2 (verdict: acquit, convict) between-subjects ANOVA with participants' ratings of procedural fairness as the dependent variable revealed a main effect for verdict: Participants rated procedures that led to a conviction to be more fair than procedures that led to an acquittal, $F(1, 126) = 45.26, p < .01, \eta^2 = .26$. Results also revealed the predicted Crime \times Verdict interaction, $F(2, 126) = 3.54, p = .03, \eta^2 = .05$ (see Table 2). Analysis of the simple effects of verdict revealed that participants felt that procedures that led to a conviction were more fair than procedures that led to an acquittal but that this effect was largest when crimes opposed participants' moral mandates, $F(1, 126) = 40.70, p < .01, \eta^2 = .47$, and smallest when crimes supported participants' moral mandates, $F(1, 126) = 7.01, p < .05, \eta^2 = .12$. The effect size for verdict when crimes were unrelated to participants' moral mandates fell in between these two groups, $F(1, 126) = 8.49, p < .01, \eta^2 = .23$.

Outcome fairness. A 3 (crime: supported, opposed, unrelated) \times 2 (verdict: acquit, convict) between-subjects ANOVA with participants' ratings of outcome fairness as the dependent variable revealed a main effect for verdict: Participants thought that it was more fair to convict than to acquit the defendant, $F(1,$

⁶ Note, however, that the magnitude of the effects varied somewhat from Study 1 to Study 2. This can possibly be attributed to the fact that we used only two legal trial descriptions in Study 2, whereas we used four in Study 1. Although pilot testing revealed that participants perceived these four stories to be functionally equivalent across a number of important psychological dimensions, the results of Studies 1 and 2 suggest that there nevertheless might have been idiosyncratic details of the two omitted cases that shifted slightly the magnitude of the predicted effects.

126) = 60.59, $p < .01$, $\eta^2 = .33$. Moreover, results revealed the predicted Crime \times Verdict interaction, $F(2, 126) = 5.34$, $p = .01$, $\eta^2 = .08$ (see Table 2). Analysis of the simple effects of verdict revealed that participants thought it was more fair to convict than to acquit the defendant but that this effect was largest when crimes opposed participants' moral mandate, $F(1, 126) = 58.11$, $p < .01$, $\eta^2 = .63$, and smallest when crimes supported participants' moral mandates, $F(1, 126) = 10.64$, $p = .01$, $\eta^2 = .15$. The effect size when crimes were unrelated to participants' moral mandates fell in between these two groups, $F(1, 126) = 9.05$, $p < .01$, $\eta^2 = .22$.

Testing the Motivated Reasoning Hypothesis

To test the motivated reasoning hypothesis, we investigated whether participants spent more time reading the verdict in the case, had better recall for the case, and performed better on a sentence recognition task when the defendant received an outcome that threatened rather than affirmed (or was unrelated to) the participants' moral mandate. We conducted the depth of processing analyses separately for each article because of differences in article length and content. Results of all analyses revealed no differences in depth of processing as a function of crime and verdict.⁷

Time spent reading the verdict. There were no differences in the time participants spent reading the verdict as a function of type of crime, verdict, or their interaction for participants who read about the pro-life defendant (all F s < 1). Similarly, there were no differences in the time participants spent reading the verdict as a function of type of crime, $F(2, 61) = 0.49$, $p = .62$; verdict, $F(1, 61) = 3.61$, $p = .06$; or their interaction, $F(2, 61) = 1.45$, $p = .24$, for participants who read about the pro-choice defendant.

Recall data. There was not a significant interaction between crime and verdict on the total number of ideas participants recalled about the pro-life defendant, $F(2, 59) = 2.02$, $p = .14$, or the pro-choice defendant, $F(2, 60) = 1.38$, $p = .26$. Similarly, there was not a main effect for type of crime on the total number of ideas that participants recalled when reading about the pro-life, $F(2, 59) = 0.83$, $p = .44$, or pro-choice defendant, $F(2, 60) = 1.07$, $p = .35$.

Moreover, more fine-grained analyses that explored whether participants' moral mandates influenced the type of information they recalled (e.g., procedural information, the outcome of the trial, background information about the crime) failed to yield any differences in the type of information recalled as a function of crime or verdict. In sum, contrary to the motivated reasoning hypothesis, there were no differences in the amount or type of information that participants recalled as a function of the type of crime and verdict.

Sentence recognition. We calculated separately participants' average response latencies to the 10 sentences that appeared in the article they read and the 10 sentences that did not appear in the article they read. We counted inaccurate responses as errors and excluded them from participants' average reaction time scores.

Contrary to the motivated reasoning hypothesis, separate 2 (sentence type: present, absent) \times 3 (crime: supported, opposed, unrelated) \times 2 (verdict: acquit, convict) mixed ANOVAs revealed there was not a significant interactive effect of crime and verdict on participants' reaction times when they read about either the pro-life, $F(2, 59) = 2.01$, $p = .14$, $\eta^2 = .06$, or the pro-choice

defendant, $F(2, 61) = 0.77$, $p = .47$, $\eta^2 = .03$. Moreover, analyses conducted with participants' error rates as the dependent variable also failed to yield a significant Crime \times Verdict interaction or a main effect for type of crime when participants read about either the pro-life or the pro-choice defendant (all p s $> .61$). On average, participants inaccurately responded to approximately 10% of the sentences, which indicates that they were fairly accurate. Taken together, these results suggest that participants responded in roughly equal time and with equal accuracy to the sentence verification task irrespective of the type of crime and the verdict in the case.

Time spent reading the case. Finally, to ensure that there were no encoding differences in the time participants spent reading the article as a function of their moral mandates, we conducted one-way ANOVAs with participants' reading times as the independent variable. Results revealed no differences in time spent reading the article as a function of type of crime for participants who read about either the pro-life or the pro-choice defendant (both F s < 1). Thus, there were no encoding differences in participants' information processing as a function of their moral mandates about abortion. In sum, there was no evidence that the MME was due to differences in motivated reasoning.

Testing the Group Differentiation Hypothesis

We conducted the same mediational analyses as we used in Study 1. Similar to Study 1, participants identified more with defendants who shared their moral beliefs ($M = -0.32$, $SD = 1.28$) than defendants whose crime was unrelated to their moral beliefs ($M = -0.99$, $SD = 1.12$) and the least with defendants who opposed their moral beliefs ($M = -1.87$, $SD = 1.28$). However, participants' identification with the defendant was unrelated to their perceptions of procedural, $r(132) = .00$, $p = .99$, or outcome fairness, $r(132) = .08$, $p = .34$. Moreover, controlling for participants' identification with the defendant in an ANCOVA did not eliminate the Crime \times Verdict interaction for participants' judgments of procedural or outcome fairness, $F(2, 124) = 3.64$, $p = .03$, and $F(2, 124) = 5.40$, $p = .01$, respectively. In short, the results do not support the group differentiation hypothesis.

Testing the Anger Hypothesis

Similar to Study 1, participants' anger at the verdict mediated the interactive effect of crime and verdict on perceptions of procedural and outcome fairness. That is, the results revealed a significant Crime \times Verdict interaction on participants' reported anger at the verdict, $F(2, 126) = 4.49$, $p < .05$, $\eta^2 = .07$ (see Table 2). Participants were more angry when defendants were acquitted than when they were convicted of crimes that opposed the participants' moral mandates, $F(1, 126) = 34.62$, $p < .01$, $\eta^2 = .42$, but were not differentially angry as a function of verdict when defendants' crimes were unrelated to or supported their moral mandates, $F(1, 126) = 3.70$, ns , and $F(1, 126) = 3.57$, ns , respectively.

In addition, participants' anger at the verdict was significantly related to their judgments of procedural, $r(132) = -.67$, $p < .01$,

⁷ In the interest of saving space, we provide a summary of the motivated reasoning analyses below. More detailed analyses can be obtained from Elizabeth Mullen.

and outcome fairness, $r(132) = -.79, p < .01$. Participants who reported more anger at the verdict thought the procedures and outcome were less fair. Finally, results of an ANCOVA indicated that the previously observed interactions between crime and verdict on participants' ratings of procedural or outcome fairness were reduced to nonsignificant when we controlled anger at the verdict, $F(2, 125) = 0.71, p = .49, \eta^2 = .01$, and $F(2, 125) = 1.23, p = .30, \eta^2 = .02$, respectively. Anger at the verdict therefore mediated the interactive effect of crime and verdict on participants' ratings of procedural and outcome fairness.⁸ Moreover, similar analyses found that participants' anger at the procedures in the case did not mediate the interactive effect of crime and verdict on perceptions of procedural and outcome fairness. Thus, consistent with Study 1 and the anger hypothesis, anger at the verdict but not the procedures provided an account for the MME.

Discussion

Study 2 was designed to (a) replicate the MME we observed in Study 1, (b) provide an additional test of the anger and group differentiation hypotheses, and (c) provide a stronger test of the motivated reasoning hypothesis. Results of Study 2 replicate Study 1 with respect to judgments of procedural and outcome fairness. Participants' ratings of procedural and outcome fairness were shaped by their moral mandates about abortion and the verdict in the case. On average, participants rated the procedures and outcome in the case to be fair when the defendant was convicted and unfair when the defendant was acquitted. This effect, however, was stronger when defendants committed a crime that opposed participants' moral mandates and weaker when defendants committed a crime that supported participants' moral mandates.

Furthermore, the results of Study 2 provide additional evidence for the anger hypothesis. Consistent with Study 1, the results of Study 2 reveal that participants' anger at the verdict mediated the interactive influence of crime and verdict on perceptions of procedural and outcome fairness. Participants were angered when the outcome of the case threatened their moral mandates (i.e., when defendants were acquitted rather than convicted of a crime that opposed participants' moral mandates), and this anger at the verdict led them to judge both the procedures and the outcome to be unfair. In contrast, participants reported little anger when the outcome of the case affirmed their moral mandates (e.g., when defendants were punished for committing a crime that opposed participants' moral mandates) and consequently rated the procedures and outcome to be fair. Again, the reverse causal sequence (that fairness judgments mediated anger) is possible, given that anger and fairness were both measured, rather than manipulated, variables. Indeed, the results suggest that both causal models were plausible in Study 2 (although this was not true in Study 1). Regardless of the causal sequence, the results nonetheless conclusively demonstrate that anger was associated with the MME. Moreover, consistent with Study 1, the results provide no support for the group differentiation hypothesis. Participants' identification with the defendant was unrelated to their perceptions of procedural and outcome fairness, indicating that the MME was not simply due to in-group bias or out-group derogation.

Finally, Study 2 provides no evidence for the motivated reasoning hypothesis. People demonstrated roughly equal depths of information processing across all the measures included in the study,

irrespective of the type of crime and the verdict. That is, participants in all conditions spent roughly equal amounts of time reading the article and the verdict, performed equally well on a sentence recognition task, and had similar recall for details of the article. Moreover, participants did not differentially attend to or encode procedural information as a function of the type of crime defendants committed (i.e., participants spent equal amounts of time reading the trial procedure information, and there was no evidence of encoding differences as a function of type of crime across all the depth of processing measures). In sum, Study 2 replicates the MME observed in Study 1. Moreover, Study 2 provides additional evidence that the anger hypothesis gives a compelling account for the MME and more conclusively rules out the motivated reasoning and group differentiation hypotheses.

General Discussion

The current research extends previous work on moral mandates by exploring possible mechanisms that could account for the MME. In particular, we have explored three competing hypotheses for the MME: the motivated reasoning, group differentiation, and anger hypotheses. Results provide support for the anger hypothesis and no support for the motivated reasoning or group differentiation hypotheses. That is, when people had a moral mandate, they appeared to suspend judgments of procedural and outcome fairness until they knew the outcome. When outcomes supported people's moral mandates, people perceived the procedures and outcome to be fair and reported little anger. However, when outcomes threatened a moral mandate, judgments of whether the procedures and outcome were fair became colored by perceivers' outrage. The form of this outrage was quite specific: Anger at outcomes that challenged perceivers' moral convictions, not anger at flawed procedures, accounted for the effects of moral mandates on judgments of procedural and outcome fairness.

Almost as interesting as the finding that the MME could be explained by differences in anger is the finding that the MME was not due to motivated reasoning or in-group or out-group distributive biases. Although there were very good reasons to believe that the MME would be a consequence of motivated reasoning (e.g., Lord et al., 1979), we found no evidence that people (a) actively reread procedural information (Study 1) or (b) more extensively reviewed procedural information in memory (Study 2) when the outcome of the case threatened rather than affirmed their moral mandate. These results indicate that people processed information about the cases in similar ways irrespective of whether they had a moral mandate relevant to the case and whether the outcome threatened, affirmed, or was unrelated to their moral mandate. Similarly, results of both studies fail to provide any evidence that differences in identification with defendants who supported or opposed participants' moral beliefs could account for the MME.

⁸ Similar analyses that tested the reverse causal order (i.e., that fairness judgments mediated affective reactions) revealed that perceptions of outcome fairness and perceptions of procedural fairness also statistically mediated the influence of moral mandates and verdict on anger at the verdict. We did not conduct similar analyses to test whether perceptions of fairness mediated the influence of crime and verdict on anger at the procedures because there was not a significant interaction between crime and verdict on anger at the procedures.

Overall, only the association of anger with people's procedural and outcome fairness judgments provides an account of the MME. Moreover, the case for the anger hypothesis and against the motivated reasoning and group differentiation hypotheses was replicated across two studies.

Our results in support of the anger hypothesis are consistent with a growing body of evidence that suggests that people respond to challenges to their worldview with moral outrage and a desire to punish the transgressor (e.g., Goldberg, Lerner, & Tetlock, 1998; Greenberg et al., 1997; Skitka, Bauman, & Mullen, 2004; Tetlock, 2002; Tetlock et al., 2000) and with other research that indicates that discrete emotions function either as a source of moral judgment (Haidt, Koller, & Dias, 1993; Wheatley & Haidt, 2005) or as predictors of moral judgment (Rozin, Lowery, Imada, & Haidt, 1999). For example, Haidt's (2001) social intuitionist model argues that people often make moral judgments quickly and intuitively on the basis of their gut-level reactions and that moral reasoning only comes into play when people are asked to justify their conclusions. Similarly, neuropsychological research suggests that people generate affect in conjunction with moral judgment and that these affective states subsequently guide moral judgment and choice (Damasio, 1994; Greene & Haidt, 2002; Greene, Sommerville, Nystrom, Darley, & Cohen, 2001). Other related research also has found that discrete emotions color people's subsequent judgments and decisions in a number of contexts, many of which appear to be potentially morally loaded (e.g., Bodenhausen, Sheppard, & Kramer, 1994; DeSteno, Petty, Wegener, & Rucker, 2000; Keltner, Ellsworth, & Edwards, 1993; Lerner, Gonzalez, Small, & Fischhoff, 2003; Lerner & Keltner, 2000). Taken together, these results are consistent with the notion that people's affective reactions to the outcome of the trials influenced their judgments of fairness.

However, the typical causal order considered in the justice literature is that judgments of fairness or unfairness lead to affective reactions (e.g., inequity leads to distress; Adams, 1965), rather than anger or other emotions leading to differences in people's perceptions that something is either fair or unfair. The underlying assumption behind this argument is that justice judgments are cognitively based—that is, one reasons about the relevant information, forms a judgment that events were fair or unfair, and then feels anger or satisfaction (Adams, 1965; Kohlberg, 1969). However, we believe that people's affective reactions to outcomes in cases such as the ones we studied here might be more primary than their fairness judgments (cf. Haidt, 2001). People's affective reactions can occur relatively quickly, with little conscious cognitive processing (e.g., Lazarus, 1991), which suggests that affective reactions might sometimes occur before more carefully reasoned fairness judgments, particularly in domains that are morally loaded (see also Hume 1739/1951).

Despite our ability to marshal a number of arguments to bolster the conclusion that anger about outcomes mediated the effects of moral conviction on people's fairness judgments, it is impossible in principle to conclusively prove a mediational theory. Because the evidence is correlational, one can always argue that the converse causal connection is also plausible or that nonmeasured variables are responsible for observed variance in proposed mediators and effects. As Reizenstein (1986) noted, "the investigator's hope can only be that over time the accumulated evidence becomes 'inescapably consistent'" (p. 1131) in support of a proposed me-

diational relation. Regardless of the causal sequence, the investigation of the dynamic interplay between affect and fairness reasoning remains a relatively underinvestigated area of inquiry, and we look forward to seeing more research in the future that explores the role of affect in how people decide whether outcomes and procedures are fair (see also Scher & Heise, 1993; Van den Bos, 2003).

There are a number of ways to improve future investigations of how people's emotions influence their fairness reasoning. For example, future research should incorporate a more comprehensive measure of people's affective reactions to justice-relevant events. We only assessed anger in the current studies; including other measures of affect (e.g., disgust) might provide additional insight into how affect and justice interrelate. Moreover, the use of longitudinal designs would help to tease apart the causal direction between affect and perceptions of fairness (see Grote & Clark, 2001, for a good example). One could use structural equation modeling to evaluate the fit of different models that vary whether affect mediates perceptions of fairness or the reverse. Similarly, examining when people spontaneously form fairness judgments by allowing people to provide more open-ended reactions to justice-related events (rather than explicitly asking people to form a judgment that something is fair or unfair) might also help to tease apart the causal sequence. Do people report experiencing emotions in response to justice-related events before they reason about whether the events were fair or unfair? Alternatively, do people first form their fairness judgments and then discuss their affective reactions? Finally, another way to study affect and fairness reasoning is to manipulate people's affective states prior to asking them to evaluate justice-related events (e.g., Van den Bos, 2003). This would allow one to more conclusively establish that affect influences fairness reasoning. However, studying the effects of incidental emotions (i.e., emotions that are manipulated prior and unrelated to the justice stimuli) may not have the same implications for justice reasoning as studying the effects of emotions that are elicited during the course of a justice-related event and are focal to the event (e.g., focal emotions elicited during the course of the event could presumably overwhelm incidental emotions manipulated before the event).

We should note a number of other caveats associated with the approach taken here. For example, we did not manipulate the procedural propriety of the trials we used as stimulus materials. Instead, all of the procedures included a number of potential procedural flaws and were seen as about neutral in terms of their procedural fairness (i.e., neither fair nor unfair). One could argue that had the procedures been overwhelmingly fair instead of neutral, people might have been more willing to accept outcomes that threatened their moral mandates. However, readers should recall that Skitka and Houston (2001) used a strong manipulation of procedural propriety that included a condition that, manipulation checks indicated, participants saw as quite fair, and the authors still found that moral mandates were a better predictor of people's procedural and outcome fairness ratings than procedural propriety. Similarly, in their demonstrations of the MME, Skitka and Mullen (2002) and Skitka (2002) found a full range of variance on preoutcome judgments of procedural fairness in the Elián González case and in assessments of state referenda and the Supreme Court. In both cases, variations in preoutcome judgments of procedural

fairness still did not predict people's postoutcome judgments of fairness when perceivers had moral mandates about outcomes.

In addition, it remains an open question whether we would also observe evidence of the MME when perceivers are direct recipients of procedural treatment rather than third-party observers of procedural treatment. Although there is some evidence that procedural variations affect people's fairness reasoning in both first- and third-party contexts (Van den Bos & Lind, 2001), it remains to be seen whether the MME will still occur when perceivers are more personally involved in procedures. Finally, in our studies, people learned about the procedures before they learned about outcomes—an approach that has considerable mundane reality, given that people typically encounter procedures before they learn about outcomes. That said, there may be reasons to expect greater evidence of differential processing of procedural information when people learn about outcomes before learning about procedures.

In conclusion, the current research expands our knowledge of how people reason about fairness in important ways. In particular, the current research demonstrates that people's moral mandates influenced their perceptions of the fairness of both the procedures and the outcome of a legal trial. That is, people interpreted identical procedures to be differentially fair as a function of whether they yielded an outcome that threatened, affirmed, or was unrelated to their moral mandates. We were surprised to find that motivated reasoning and in-group-out-group distributive biases played little or no role in explaining the MME. Instead, people's fairness judgments in these contexts were colored by the presence or absence of anger with the outcome of the trial. Taken together, our findings suggest that it would be fruitful for future research to more deeply explore the connections between discrete emotions and how people reason about fairness or unfairness. Justice theorizing will be advanced if researchers conduct more studies that test hypotheses about the underlying psychological processes that shape justice reasoning.

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