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HARM AND VICTIM AGE AS FACTORS IN THE
DETERMINATION OF INTENTIONALITY AND CULPABILITY

by

DONAL DAVID BARNARD JR

A dissertation submitted to the Graduate Faculty in Developmental Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The Graduate Center of The City University of New York

2017

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DETERMINATION OF INTENTIONALITY AND CULPABILITY

This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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ACKNOWLEDGEMENTS

I would like to sincerely thank Professor Herbert Saltzstein for his mentorship throughout my doctoral studies. His continued guidance and friendship have been invaluable to my progress.

This dissertation would not be possible without the help of my doctoral committee; Herbert Saltzstein, Maureen O'Connor, and Angela Crossman. I am especially thankful for my committee's patience and accessibility throughout this process. I would also like to thank Mel Pipe and Toni Spring for being my outside readers.

There have been so many people that have given me support, encouragement, and advice throughout this journey. I would like to thank Maria Jerskey, Margaret Bull Kovera, Juraci Di Silva, Nathaniel French, Crystal Shackelford, and Emma Fell.

A special thank you to my friend Brooke McIntyre for being a source of strength and comfort during difficult times. I would also like to thank Gabriel Packard, Russell Martello, and David Holden for their encouragement and friendship.

Finally, and most importantly, I would like to thank my mother, Esther, for her endless support; my father, Don, for sitting with me in coffee shops, reading his Kindle, and keeping me company as I worked on my laptop; and my sister, Paula, for never letting me lose sight of what matters most.

Abstract

By

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In the United States criminal justice system, jurors are directed to determine a defendant's guilt beyond a reasonable doubt by establishing both the act of committing a crime (*actus reus*) and the culpable mental state of the defendant (*mens rea*), that is, the defendant's intentionality. The role of a juror in a criminal case is that of a factfinder, deciding whether the two elements of the crime have been met. Criminal cases where jurors are asked to decide the facts vary in the harm that resulted. The more severe the harm, the greater the perceived injustice. This research examines if a motivation to reduce perceived injustice influences determinations of intentionality (*mens rea*), verdict decisions, and deserved punishment. Lastly, it examines if the court's suggested remedy to mitigate the effects of biasing information—an instruction to disregard—is an effective solution. This study finds that there is a greater attribution of intentionality to a defendant's actions when the harm resulting from an alleged crime is more severe. More severe harm also predicts greater belief in guilt, although this is mediated by intentionality. In addition to these findings, more severe harm and greater attribution of intentionality also predict harsher punishment. Whether the victim was an adult or child does not impact the attribution of intentionality, verdict decisions, or punishment. An instruction to disregard biasing information is ineffective. Results are discussed in the context of the just-world theory (Lerner & Miller, 1978) and demonstrate a need in the criminal justice system for an empirically-driven re-examination of the balance between prejudicial versus probative evidence.

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Introduction

American criminal jurisprudence comprises 52 separate criminal codes: one for each state and the District of Columbia, as well as the Federal Criminal Code, which governs federal jurisdictions. In most cases, the U.S. Constitution grants the power to assign criminal liability to the states. At the same time, the U.S. Constitution delegates the enforcement of both intrastate crimes and crimes specifically related to federal interests to the federal government (Robinson & Dubber, 2007).

Most states and federal districts have, historically, applied two broad elements of a criminal offense: *mens rea* and *actus reus*. Thus, in most cases, a verdict of criminal guilt requires that the prosecution prove two things:

1. That the defendant committed the offense of which he or she is accused (*actus reus*).
2. That the defendant possessed the requisite state of mind to commit the crime (*mens rea*) (Chesney, 1932).

The task of a juror as the trier-of-fact is to determine whether the requisite elements, *actus reus* and *mens rea*, have been met beyond a reasonable doubt. In other words, jurors must evaluate the evidence to determine whether the prosecution has sufficiently proved that the defendant committed the criminal act(s) and that the defendant did so with the requisite culpable mental state.

While there are identifiable complications with both determinations, the former can often be more straightforward than the latter. Jurors must decide whether there is sufficient evidence to prove that the defendant committed the accused act. There is a greater likelihood that direct physical evidence will indicate the actions of a defendant rather than the mental state, due to the fact that actions are concrete occurrences in the physical world and mental states must be

inferred from actions. Physical evidence linking a defendant to a crime scene (e.g., DNA evidence) is compelling and goes to substantiating *actus reus*.

The evaluation of *mens rea* is more precarious both because it pertains to the state of mind of the defendant at the time of the crime (which can be distinct from the time at which the jury makes its decision) and because it is ill-defined in legal doctrine. Lacey (1993) observed, “*Mens rea* is the (not entirely happy) umbrella term used by most criminal law scholars to refer to a range of practical attitudes or states of mind on the defendant's part” (p. 621). Gardner (1993) echoed this difficulty, writing, “The *mens rea* concept is ... notoriously elusive due to its history of imprecise and ambiguous exposition at the hands of common law courts, legislators, and commentators alike” (p. 635). *Mens rea* has been alternately described as “a guilty mind, a mind bent on evil, or a malicious intent” (Chesney, 1932, p. 628).

A number of attempts have been made to clarify this ambiguity in practical application. In order to help jurors determine this element, two types of tests have regularly been provided. In *objective tests*, jurors are asked what a reasonable person would have been thinking in the defendant's position. *Subjective tests* ask jurors to ascertain the mental state of the actual defendant. Recently, courts have moved more toward the subjective (Elliott & Quinn, 2008).

First developed in 1962 (and updated in 1985) as a guide for states considering statutory reform, the American Law Institute's (1985) Model Penal Code attempted to establish more concrete definitions of culpability and provide some uniformity across jurisdictions. The drafters excised the words *intent* and *intentions* from its descriptions of mental states on the grounds that they were overly ambiguous and imprecise (Robinson & Dubber, 2007). Instead, they offered a minimum requirement of culpability that specifies, “A person is not guilty of an offense unless

he acted purposely, knowingly, recklessly, or negligently, as the law may require, with respect to each material element of the offense” (American Law Institute, 1985, p. 21).

While adopting many of the code’s reforms, some states have continued to include intentionality as a criterion of culpability. State governments, such as New York, Pennsylvania, Maine, and Texas, adopted language similar to the code’s but with the term *intentionally* substituted for *purposely*. Others have adopted their own terminology for the mental element of a crime, often using similar terms. For instance, when defining murder in the first degree, Washington State requires that the defendant acted with *premeditated intent*. Given its broad application as a pervasive *mens rea* criterion, it is important to understand how people attribute intentionality to an action.

Determining Intentionality

As early as Aristotle (1892), social scientists and philosophers have tried to define what it means for an individual to act intentionally, and to understand attributions of intentionality (Heider, 1958; Jones & Davis, 1965; Shaver, 1985). Recognizing the need for a clear, empirically supported model of intentionality ascription, Malle and Knobe (1997) set out to study the question and provide a rigorous definition of what characterizes an act that is viewed as intentional.

First, they sought to understand how people think about the concept and the rationale for what acts can be viewed as intentional versus unintentional. They asked 104 San Jose State University students to evaluate a series of action statements and rate each on a spectrum of intentionality. They found little variation between subjects in their perceptions of intentionality and concluded that this can be explained by the existence of a shared tacit understanding of intentionality, which they termed the *folk concept of intentionality*.

In order to construct a model of the folk concept of intentionality, they first gave it a functional definition. They asked 159 college students to define their understanding of what it means for an act to be intentional. Students evaluated 20 verbal descriptions of a range of behaviors covering events, such as bodily actions, emotions, and accomplishments. They then identified which definitional attributes were pervasive throughout the responses.

The model posits that for an action to be viewed as intentional, five key elements must be present: “A desire for an outcome; beliefs about an action that leads to that outcome; an intention to perform the action; skill to perform the action; and awareness of fulfilling the intention while performing the action” (Malle & Knobe, 1997, p. 101). Malle and Knobe then tested the model by providing written scenarios that controlled for each attribute—desire, belief, intention (which is a product of desire and belief), skill, and awareness—to demonstrate that, in general, all are necessary for an attribution of intentionality (Malle & Knobe, 1997).

Knobe and Burra (2006) further articulated the distinction between having an intention and acting intentionally. The social perception of intention is partially determined by beliefs about an agent’s pre-behavioral psychological state (what they intend to do), whereas the determination of intentionality is based on a post-behavioral moral evaluation. Whether actions are judged as intentional is only a relevant determination if there is a question of wrongdoing. One may have an intention to kill one’s neighbor, which they may or may not act upon; until they actually kill their neighbor they could not be judged as doing so intentionally.

In this dichotomy, the authors argued that when someone assesses whether another person has an intention, this person attempts to identify the presence or absence of a pre-behavioral mental state. When assessing whether someone has acted intentionally, they engage in an evaluation of the behavior to assess wrongdoing; this suggests that the assessment of

intentionality, rather than a measure to anticipate behavior (based on someone's intentions), should instead be understood primarily as a tool by which observers make judgments as to whether a behavior deserves blame and to what degree.

Malle and Knobe's (1997) experiments showed empirical support for Knobe and Burra's (2006) theory. In the 1997 study, students were presented with written vignettes of a company executive whose actions increased company profits but also affected local wildlife. They were then asked to determine if he had the intention to affect the wildlife population and if he did so intentionally. The effects of his actions were varied. In one case, they increased the population, and in the other, they decreased the population.

When informed that his actions would decrease the wildlife population, 87% of participants agreed that the executive had intentionally decreased the population. However, when asked if the executive intended to decrease the population, only 29% agreed. In the other scenario, when the executive's actions increased the population, only 20% of the participants believed that he did so intentionally, and 0% said that he intended to increase the population. From this, Knobe and Burra (2006) concluded that not only do people distinguish between intention and intentionality; but they also more readily ascribe intentionality to bad actions than to good ones. In a related study, Malle and Nelson (2003) argued that the ascription of intentionality is shaded by the negative emotions felt towards the agent.

Alicke (2008) evaluated Knobe and Burra's (2006) findings in terms of outcome bias: "The tendency for people to blame actors for the outcomes of their actions, independent of their [the actors'] casual¹ [*sic*] and intentional role in the event" (p. 179). Thus, although observers have acknowledged that an actor did not necessarily desire a specific outcome, they also

¹ From the context it can be inferred that Alicke intended to say "causal" and not "casual."

attributed intentionality as a means of registering disapproval of what ultimately did occur.

While some could argue that actors should be held responsible for the outcome of their actions, regardless of whether they acted with intentionality, this finding does raise the question of whether a causal link is more likely to be inferred when the outcome is more negative.

Alicke (2000) argued that when people evaluate harmful events, they search for evidence of human control and its favorableness or unfavorableness. Evidential items are spontaneously evaluated along positive or negative dimensions (Osgood et al., 1957). People are predisposed to assign blame when a negative event occurs.

Although Alicke (2000) used the term *blameworthy*, instead of *intentional*, he based his model on the assumption that the attribution of intentionality is synonymous with the ascription of blame. In his model of *culpable control*, Alicke sought to explain how people apply blame: When faced with events that evoke strong negative reactions, people search for someone to blame. They make a blame-validation assumption in which evidence is evaluated in a way that justifies that desire to blame. The model posited that events that have extremely negative outcomes evoke a negative response and thus initiate a blame-validation process. The assessment of intentionality becomes the assessment of blame.

Tostain and Lebreuilly (2005) examined *outcome bias* specifically. This refers to the over-reliance on outcome information when determining the level of responsibility that should be attributed to an actor (Burger, 1981; Mazzocco, Alicke, & Davis, 2004). Tostain and Lebreuilly (2005) demonstrated that when evaluating an actor's actions, individuals ascribed more or less blame, responsibility, and punishment, depending on the outcome of the actions. This occurred even when the actor could not have anticipated that particular outcome. When given the example of an individual whose speeding led to an automobile accident, participants were far more likely

to ascribe responsibility and blame to the driver's actions when the crash resulted in fatalities compared to when it led to mild injuries. The exact same actions were attributed different levels of blame, depending on the severity of the outcome. From these findings, the researchers specified two modes of post-hoc evaluation that a person can engage in when attributing responsibility to an actor. When outcome severity was low, people would use the *rational model* to attribute responsibility to an actor. Conversely, when outcome severity was high, they would use the *justification model*.

In the rational model, people use decision stages (Fincham & Jaspars, 1980; Shaver, 1985; Weiner, 1995) to determine causality, intentionality to guide their judgments, and the appropriate punishment for an offense. In the first stage, people confirm the causal relationship between the offense and the outcome, analogous to the *actus reus* component of jury decision-making. In the second stage, they evaluate the perpetrator's intentions to establish his or her responsibility for the outcome, analogous to the *mens rea* determination. Finally, they ascertain the appropriate punishment according to the degree of responsibility. Unforeseen or involuntary outcomes are not considered.

Alternatively, the justification model, first proposed by Alicke (2000), incorporates the outcome bias. The model postulated that extreme outcomes provoke feelings of injustice in those tasked with determining responsibility and delivering punishment. To rectify these feelings, people seek a punishment commensurate with the level of injustice. They then attribute a degree of responsibility to the actor that would justify the punishment. In other words, they determine the punishment that they consider just and only then attribute a level of responsibility to the actor that will make such a punishment appropriate. Alicke's finding may suggest that decision-makers, instead of evaluating the evidence, consistent with the justification model, may

determine what punishment they believe would restore justice to the circumstances (i.e., a conviction), and then working backwards to justify holding a defendant accountable. If jurors in a criminal trial apply the justification model when the alleged crime involves extreme outcomes that provoke feelings of injustice, this would conflict with their prescribed role as factfinders. Instead of weighing the evidence to determine the outcome (verdict), they may instead be determining the outcome (verdict) that they feel is just and working backwards.

A harm bias—or a post-hoc evaluation of events—relates to what Fischhoff coined the *hindsight bias* (Fischhoff, 1975). The hindsight bias refers to "the tendency for people considering a past event to overestimate their likelihood of having predicted its occurrence" (p. 288). Fischhoff sought empirical support that outcome knowledge affected post-hoc assessments of the likelihood of an event's occurrence. In addition to finding that outcome knowledge influences the estimation of its likelihood, he found that those making the judgments were unaware that they were influenced by outcome knowledge. In other words, decision-making is subject to biases that influence judgments, and decision makers can be unaware that they are reasoning in the presence of such biases.

In the justice system, jurors' judgments are, to some degree, affected by outcome knowledge—the question for the jury is to evaluate past actions. LaBine and LaBine (1996) showed support that the hindsight bias affects jurors' assessments of negligence. Mock jurors evaluated whether a therapist was negligent in fulfilling the Tarasoff Duty. The Tarasoff duty is the legal responsibility of a therapist to warn an individual if they believe that a patient they are treating has the intent to harm someone specific. A therapist can be held responsible if they had knowledge that their patient intended to harm a specific individual, but took no action to warn. LaBine and LaBine invited study participants to read case vignettes and then make

determinations of negligence in the duty to warn. Determinations of negligence and, therefore, whether the information the therapist had at the time warranted action, depended on their knowledge of the outcome. In the violent outcome condition, 24% of participants found the therapist negligent, while only 6% and 9% of jurors found the therapist negligent in the non-violent and unspecified conditions, respectively. Knowledge of the outcome shaded the degree to which the participants both held the therapist accountable and their expectation of what the therapist knew and should have expected, given what they knew.

Baron and Hershey (1988) sought to demonstrate that evaluation of decision quality was influenced by outcome information. In five experiments, University of Pennsylvania students used a Likert-type scale to evaluate the quality of a series of decisions (medical treatment and gambling) when both outcome and outcome knowledge were varied. In one example, students were told that a patient must make a difficult decision regarding treatment. The patient, a middle-aged man, had chronic chest pain, which could be improved by an operation; however, the operation carried an 8% chance of death. Students were told of the man's decision (to have or not have the operation) and the outcome (successful/unsuccessful/unstated) and were asked to evaluate the quality of the man's decision.

One experiment found:

In 44.3% of the 140 pairs of cases that differed only in success or failure, higher ratings were given to the case with success; in 9.3%, higher ratings were given to the case with failure, and in 46.4%, equal ratings were given to the two cases. (Baron & Hershey, 1988, p. 569)

The authors postulated that participants confused an evaluation of the outcome with an evaluation of the decision concluding that even when informed of the likelihood of a certain

outcome, regardless of the decision, people too heavily applied the rule that bad outcomes stem from bad decisions.

In a related study, LeBoeuf and Norton (2012) sought to determine whether people attribute disproportionate importance to an event's consequences when attributing its likely cause. They provided 129 students with the scenario of a computer crash and asked them to consider two possible causes and judge which cause was more likely. Information about the consequences of the crash was varied. In one case, an individual was fired for missing a deadline because of the crash; in the other, he received an extension on the deadline. In the more severe instance, 73% of participants judged a larger cause (a widespread virus) as more likely than a smaller cause (cooling fan malfunction). In the less severe case, only 56% judged the larger cause more likely. Based on this evidence, the researchers postulated their theory of *consequence-cause matching*, which stated that people have a tendency to match events' consequences with causes that are similar in size and valence. The authors theorized that matching arose because people were motivated to see the world in a predictable way, using consequence-cause matching as a heuristic tool.

While LeBoeuf and Norton (2012) addressed the fact that *consequence-cause matching* could occur along dimensions other than importance and valence, they did not address one dimension, which confounded the above finding. Based on their results, they concluded that individuals attributed larger, more negative causes to larger, more negative consequences; however, the data also showed support for an additional interpretation. A widespread computer virus is the result of a deliberate, malevolent human act, whereas a cooling fan malfunction is a technological occurrence devoid of intent. In the study, valence, outcome severity, and the human action were confounded. In this regard, LeBoeuf and Norton's research might suggest

that people tend to attribute negative outcomes not only to negative causes but also to the deliberate acts of an individual. *Consequence-cause matching* is also consistent with the just-world theory (Lerner & Miller, 1978) which also posits that people have a desire to believe the world is just and predictable, and will thus evaluate events in a manner that allows them to maintain that view.

The just-world theory (Lerner & Miller, 1978) has been used to explain the varied responses that people have to what they view as an unjust situation. When an injustice is perceived, there is a motivation to reduce the level of injustice of the situation. Depending on the options available, there are a variety of ways one can reduce perceived injustice. For example, imagine a pedestrian is hit by a car and suffers physical injury. To reduce perceived injustice, a person, such as an outsider informed of the situation, may compensate the pedestrian for the harm suffered using monetary or other rewards in the aim of restitution if it is in their power to do so. Compensating a victim for harm that was suffered mitigates the perceived injustice of the situation. However, if a person is not in a position to take restitutive action, then they will engage in other tactics to reduce perceived injustice. Another option is to lower the appraisal of the victim or attribute partial blame to the victim for their circumstances. Lowering appraisal of a victim who suffered harm reduces the injustice of the situation when there are no other restitutive options available. The theory posits that people are motivated to believe that the world is just and orderly and, therefore, predictable. If the world were chaotic and unpredictable, it would hinder their ability to enter new situations. The view of the world as just allows people to enter uncertain situations, secure in the belief that doing so will not result in an unpredictable or negative outcome. As Lerner and Miller (1978) wrote, “The belief that the world is just enables the individual to confront his/her physical and social environment as though they were stable and

orderly” (p. 1030). An aspect of believing that the world is just and orderly includes believing that “people generally get what they deserve” (p. 1030). When presented with circumstances of a perceived unjust state of affairs, people can alter their perception of those circumstances—what they believe transpired—to resolve this dissonance, because bad things should not happen to good people. Reducing the injustice that is perceived reassures an individual that they will not become a victim; they will behave differently, thereby not putting themselves in a position to be victimized.

The just-world theory has implications for the criminal justice system. As jurors, people are put in a position to decide the facts—what they believe transpired. The consequences of those decisions determine whether a person will be held accountable for harm to a victim. In accordance with the theory, an innocent victim who suffers harm as the result of crime is an injustice. As harm done to an innocent victim is viewed as unjust, then it is reasonable that the greater the harm, the greater the injustice, and the stronger the motivation to take restorative action. If people are willing to alter their view of what transpired to mitigate perceived injustice, does this lead to a greater motivation to hold a defendant accountable when greater harm occurred? In criminal cases, an option available to jurors is to hold a defendant accountable. Does this motivation to reduce injustice result in a greater likelihood of finding a defendant guilty when the crime they are accused of resulted in more severe harm?

The above research supports the idea that when more negative event or more severe harm occurs, there can be greater attribution of intentionality (Alicke, 2000; Malle & Nelson, 2003), blame (Alicke, 2008), and responsibility (Tostain & Lebreuilly, 2005). As Alicke (2008) states that attribution of intentionality is a mechanism for registering disapproval for a negative outcome. Attributing events to intentional human action allows people to maintain the belief that

the world is predictable and orderly (LeBoeuf & Norton, 2012; Lerner & Miller, 1978). In a criminal case, intentionality, with notable exceptions², is often a primary element in determining a guilty verdict. Jurors are often expected to follow a line of reasoning similar to the rational model: to base their verdict on the determination of a causal link between the defendant's actions and the crime (*actus reus*) and a finding that the actions were intentional (*mens rea*). However, when making judgments about events that resulted in severe harm, jurors may, in fact, apply a line of reasoning similar to the justification model: to seek to and restore a just state of affairs (Tostain & Lebreuilly, 2005). Based on these findings, we must question the assumptions that the courts make about jurors' ability to set aside bias. When a defendant is accused of a crime that resulted in more severe harm, are they more likely to be convicted as the result of a motivation to attribute negative events to intentional human action and a motivation to believe the world is just and orderly? The present study examines whether attribution of intentionality and belief in a defendant's guilt increases when greater harm has occurred, due to a motivation to reduce perceived injustice.

Victim

Research suggests that certain characteristics of the victim of an alleged crime, e.g., age, may influence perceptions of the severity of harm that has occurred. In murder cases, the race and gender of the victim have been shown to be indicators of whether capital punishment is pursued and meted out. In an early study, Paternoster (1984) found evidence of victim-based prosecutorial discretion, whereby the death penalty was pursued less often in cases with Black victims compared to those with White victims, unless the cases with the Black victim were

² Exceptions to these criteria exist in strict liability cases (i.e., those of statutory rape), in which an individual can be found guilty even if he committed the act unintentionally.

accompanied by aggravating circumstances. Bowers and Pierce (1980) found that there was greater likelihood in felony murder cases of the jury sentencing a defendant to death when the victim was White. Holcomb, Williams, and Demuth (2004) found that when all other legal factors were controlled for, defendants accused of killing White-female victims were more likely to receive the death penalty compared to any other gender-race combination.

Baumer, Messner, and Felson (2000) found that when a defendant is accused of killing a stigmatized or disreputable person, their sentencing was more lenient. When the victim is identified as a person who committed wrongdoing in the past, it may be that this person is viewed as more deserving of their circumstances and the harm they endured is viewed as resulting from their own prior bad acts, if not actually karmically retributive. When a victim is viewed as more deserving, or less innocent, there may be less of an inclination to attribute blame to a defendant. Crimes against child victims may be viewed as particularly heinous and deserving of punishment. For instance, Goodwin and Benforado (2014) found that when the victim of a shark attack was a little girl, as opposed to a homeless man or a dog, people were more likely to endorse that the shark should be killed.

Attempts have been made to classify victims according to their relative degree of responsibility and power to control or affect the situation. Such categories also judge the degree of guilt or responsibility of victims, ranging from total innocence to total responsibility. As reviewed by Sengstock (1976), Mendelsohn argued that victims could be classified into six typologies: (a) completely innocent victims (typically children or those attacked while unconscious), (b) victims with minor guilt, (c) voluntary victims, (d) victims who are more guilty compared to the offender, (e) victims who are alone guilty, and (f) the imaginary victim. In this typology, children had the least amount of power to control the situation and were not considered

fully responsible on the same level as adults were. Although it is questionable whether a child would be considered “completely” innocent, it is reasonable that, all things being equal, a child would be viewed as more innocent than an adult. Adults, although capable of being as innocent as a child, are less likely to be perceived as such, given an adult’s greater ability to control their circumstances. It follows from this that harm done to children may be judged as more severe than harm done to adults.

Although maintaining an alternative theoretical focus, these findings relating to victims are consistent with research on the just-world theory (Lerner & Miller, 1978). Victim research supports the notion that some victims, based on individual characteristics, e.g., age, sex, race, may be perceived as less deserving of harm. The just-world theory posits that a determination of a victim’s innocence depends on what perspective is required in order to maintain a view of the world as predictable. These theoretical perspectives are not mutually exclusive. Characteristics of a victim can be significant factors in juror judgments, as can situational factors. Both individual characteristics of the victim and circumstances of the crime may factor into determinations of a defendant’s culpability. A child victim is perceived as more innocent than an adult, but, where there is ambiguity, the child victim may be viewed as less innocent and more blameworthy to protect notions of a just world. This research investigates the possibility of a victim effect, whereby knowledge about the victim’s characteristics, whether an adult or child, may influence the degree to which a defendant is perceived as culpable.

Judicial Instruction

The influence of biasing information in legal proceedings has been a concern in the American justice system since its establishment. The Sixth Amendment to the Constitution guarantees criminal defendants the right to an impartial jury (U.S. Const. amend. VI). From this,

we can surmise that the Founders understood that certain experiences and knowledge that jurors have, relevant to case-specific matters, can improperly influence their decisions as factfinders. Additionally, the Judiciary has conveyed understanding that certain information presented at trial can influence factfinders' decisions. According to the Federal Rules of Evidence (§ 403, 2015), evidence can be excluded if "its probative value is substantially outweighed by a danger of...unfair prejudice" (p. 37). Despite safeguards put in place to prevent the introduction of prejudicial evidence, it is common that in open court, information presented to jurors can later be deemed inadmissible due to a determination that it is prejudicial. The courts have typically offered two remedies when information deemed prejudicial is heard by jurors. The more costly and time-intensive option is for the trial-court judge to call a mistrial, dismissing the jury and empaneling a new one. The alternative option is that the judge may provide an instruction to jurors directing them to set aside what they heard and not allow the inadmissible evidence to influence their decisions in the case. While the trial-court judge has discretion on which option to utilize, the Supreme Court has endorsed that a directive from the judge can be an adequate remedy to remove bias, stating, "jury instructions suffice in excluding inadmissible evidence." (Cruz v. New York, 1987, p. 191). In the eyes of the courts, verdicts reached by jurors exposed to prejudicial evidence carry no less weight than those reached by jurors not exposed. The question is whether the assumption that the courts make about jurors' ability to set aside specific information when reaching decisions is supported by the empirical research.

Research on how effective people are at regulating how specific knowledge influences their judgments suggests the courts may overestimate individuals' abilities. Wegner (1994) found evidence for a paradoxical effect when people attempt to suppress mental states. The "ironic process theory" suggests that an attempt to suppress a mental state can result in the mental state

carrying greater impact. The author argued that the activity of suppressing a specific thought or mental state requires monitoring. Monitoring of the mental state can make it more pronounced, resulting in the opposite of the desired outcome.

Research on how participants in court case simulations respond to directives to disregard inadmissible evidence has shown mixed findings. In an early study, Sue, Smith, and Caldwell (1973) examined whether participants, when reading a four-page synopsis of a murder case, were influenced by wiretapping evidence that was deemed inadmissible because it was obtained illegally. The researchers found that the strength of the evidence had an impact on whether the inadmissible evidence influenced participants' decisions. When the evidence against the defendant was weak, participants were more likely to find the defendant guilty regardless of an instruction from the judge to disregard. However, when the case against the defendant was already strong, the wiretapping evidence did not affect verdicts. Wistrich, Guthrie, and Rachlinski (2005) found that even judges who instruct jurors to set aside inadmissible information were unable to do so. Judges' decisions were affected by inadmissible information that they themselves determined to be inadmissible when they viewed the information as relevant to their decisions in the case.

A meta-analysis that examined the impact of a judicial admonishment to disregard inadmissible evidence on verdicts suggested mixed results. Steblay, Hosch, Culhane, and McWethy (2006) incorporated 48 studies that examined if an admonition from the judge to disregard inadmissible evidence was effective at preventing the evidence from affecting verdict decisions. They found that an admonition from the judge did not fully eliminate the impact of the inadmissible evidence on jurors' decisions. Further, when the admissibility of evidence was contested and then allowed, the impact of the evidence on verdicts increased. However, the

content of the inadmissible evidence was found to be a determinant of whether participants complied. Kassin and Sommers (1997), for example, reported that the content of inadmissible evidence and the judge's explanation for its exclusion impacted the effect of inadmissible evidence on verdicts. Specifically, they examined the effect of a wiretap that was ruled inadmissible either because it was obtained illegally or because it was unreliable. Mock jurors were more likely to vote guilty when the evidence was excluded because it was obtained illegally, regardless of whether it was admissible or inadmissible, than in the condition where it was excluded because it was unreliable. Hence, we must question whether individuals can effectively disregard inadmissible evidence when the information they are presented is viewed as a relevant component of the case. Indeed, "reactancy theory" (Brehm, 1966) posits that jurors view such an admonishment from the judge as limiting their right to consider all available evidence and, therefore, give greater weight to evidence they are directed to disregard. Reactancy theory suggests that jurors' disregard of judicial instruction is motivated by a desire to reach a just verdict, even if it means working outside of their prescribed role as factfinders.

Pickle (1995) and Edwards and Bryan (1997) also found support for a "backfire" effect. Pickle had students listen to an audiotaped recording of a theft as part of the evidence when acting as mock jurors. Students were then instructed to disregard the evidence as inadmissible. Although Pickle did find that students were able to set aside inadmissible evidence when instructed to do so, when a legal explanation was provided along with the instructions, the inadmissible evidence did affect verdict decisions. Edwards and Bryan (1997) found that when the information was emotionally charged, participants were less compliant with a judicial instruction. The impact of the emotionally charged incriminating evidence was stronger with the addition of a judicial admonishment to ignore it. When jurors feel that the information they are

being told to disregard would assist them in determining what they believe *actually happened*, then the evidence will influence their decisions. For example, if jurors are told that they are to ignore evidence due to a legal technicality, then they are more likely to allow the information to affect their judgments.

The harm that resulted from an alleged crime differs from inadmissible evidence, in that it is information that jurors are typically provided in court. However, the harm that occurred is not an element of the crime that jurors are asked to consider as factfinders. Further, information about the harm that occurred can be considered prejudicial, given the potential impact of the severity of harm on verdict decisions. If the severity of the harm that results from a crime carries a biasing effect, how effective is an instruction from the court to disregard?

Importance of Current Study

The above research illuminates a potential disparity between how the legal system expects individuals to make decisions and what the empirical research suggest they actually do. The harm that occurred as the result of an alleged crime may significantly influence jurors' determinations of the facts and the likelihood that a defendant is believed to be culpable. A defendant accused of a more heinous crime, one that resulted in more severe harm, may have a greater likelihood of being found guilty.

Individuals—including jurors—are motivated to mitigate perceived injustice (Lerner & Miller, 1978), in part, by attributing the cause of negative outcomes to intentional human action (LeBoeuf & Norton, 2012). When an injustice is perceived, individuals can be motivated to take action to restore a just state by altering perceptions of the situation, and possibly of the actors involved (i.e., victims and defendant) to mitigate the degree of the injustice.

Although the criminal justice system has safeguards in place to protect against biasing information influencing the jury—a judicial admonition—these safeguards have demonstrated limited effectiveness (Stebly, Hosch, Culhane, & McWethy, 2006). In some instances, a judicial admonition has had the opposite of the desired effect (Brehm, 1966; Edwards & Bryan, 1997; Pickle, 1995). Further, people may often be unaware of what information influences their decisions, including verdict decisions in a trial context (Crocker & Kovera, 2010; Saltzstein, Sanvitale, & Supraner, 1978). Even when they are directed—and agree—to disregard specific information, that information can still contribute to one’s decision. This study seeks to examine if the behavioral assumptions underlying traditional adversarial safeguards to prevent bias are supported by the research. Do more heinous crimes result in a greater inclination to find an accused culpable? When the victim is a child versus adult, is there a greater inclination to find an accused culpable. If so, is this due to a greater attribution of intentionality when more severe harm has occurred?

This study seeks to examine the following research questions and associated hypotheses:

Research Question 1. What effects do harm severity and victim age have on attribution of intentionality to a defendant’s actions?

H1: It was predicted that participants would attribute greater intentionality to the defendant’s actions when the alleged crime resulted in more severe harm.

H2: It was predicted that participants would attribute greater intentionality to the defendant’s actions when the victim of the harm was a child as opposed to an adult.

Research Question 2. What effects do harm severity, attribution of intentionality, and victim age have on verdict decisions?

H3: It was predicted that participants would have a greater belief in the defendant's guilt, as measured by verdict confidence scores, when the alleged crime resulted in more severe harm.

H4: It was predicted that participants would have a greater belief in the defendant's guilt, as measured by verdict confidence scores, when there was greater attribution of intentionality to the defendant's actions.

H5: It was predicted that participants would have a greater belief in the defendant's guilt, as measured by verdict confidence scores, when the victim of the harm was a child as opposed to an adult.

Research Question 3. What effects do severity of harm, attribution of intentionality, and victim age have on perceptions of deserved punishment?

H6: It was predicted that greater punishment, as indicated by longer sentence length, would be recommended for the defendant when the alleged crime resulted in more severe harm.

H7: It was predicted that greater punishment, as indicated by longer sentence length, would be recommended for the defendant when there is greater attribution of intentionality to the defendant's actions.

H8: It was predicted that greater punishment, as indicated by longer sentence length, would be recommended for the defendant when the victim of the harm was a child as opposed to an adult.

Research Question 4. What is the effect of instructing participants not to allow level of harm or sympathy for the victim to influence their judgments on the relationships identified in

previous research questions?

H9: It was predicted that when participants are instructed to not allow the level of harm that occurred or sympathy for the victim to influence their judgments, that these instructions would not mitigate the effects of harm or victim on verdict confidence or recommended sentence length. Effectively, it was predicted that there would be no effect of instruction on the above hypotheses, if significant.

Method

Participants

For this study, 340 participants were sourced from an online research pool and were randomly assigned to one of eight conditions. Participants were recruited via Amazon's Mechanical Turk (MTurk), an online subject pool where individuals participate in surveys and other activities in return for monetary compensation. While MTurk has been found to be as representative of the general population and more diverse than traditional undergraduate-college sampling (Buhrmester, Kwang, & Gosling, 2011; for reviews, see Mason & Suri, 2012 and Paolacci, Chandler, & Ipeirotis, 2010), some findings suggest that respondents can be less attentive than in other forms of data collection. Goodman, Cryder, and Cheema (2013) found that MTurk participants perform more poorly on instructional manipulation checks (IMCs) than do traditional undergraduate college samples. In-person data collection procedures can offer greater assurance that participants appear to be attending to the study materials. By contrast, MTurk respondents are participating remotely—likely from home, work, or where they have access to the internet—therefore, focused attention is less guaranteed. However, Goodman, Cryder, and Cheema (2013) showed that by filtering out MTurk participants who failed the IMCs, statistical noise was reduced and there was an increased likelihood of observing statistically significant differences on other dimensions. For this reason, the present study included IMCs and did not include participants in the analysis who failed the IMCs. Additionally, only participants who self-reported that they believed themselves to be eligible for jury service in the United States were included in the analysis. Two participants indicated that they were not eligible for jury service and, therefore, their data were excluded from the analysis. These two participants were also omitted because they failed the instruction instructional manipulation checks.

Overall, 81 participants failed one or more IMCs, leaving a sample of 259 participants. See Appendix A for descriptive data of participants excluded from the analysis. A power analysis based on an estimated medium effect size of 0.4 determined that a sample of 259 participants was adequate to detect any moderate to large effects at a significance level of .05 and a power of 0.80 for an analysis of variance and multiple linear regression analysis.

Of the participants included in the analysis, 121 (46.7%) were female and 138 (53.3%) were male. The mean age was 33.9 years ($SD = 10.19$ years). In terms of race, participant responses were based on an open-ended question. Respondents wrote down the racial description that best fit their own characteristics. Responses were later grouped into five categories – White/Caucasian, Black/African American, Hispanic/Latino, Asian, and Mixed. Most participants identified as White/Caucasian (76.4%), followed by Asian (7.7%), Hispanic/Latino (6.6%), Black/African American (5.8%) and Mixed (3.5%). Most participants (86.9%) responded that they had not previously participated in jury service.

Design

The overall design was a 2 X 2 X 2 factorial design (harm: severe or mild; victim: child or adult; and instruction: present or absent). In all conditions, participants read an abbreviated vignette of a criminal arson case (see Appendix B). They were then asked to complete a questionnaire (see Appendix C), which included asking participants to render a verdict as if they were a juror hearing this case, provide their confidence in that verdict, rate the degree to which the defendant's actions were intentional, and indicate the length of sentence they believed was warranted if the defendant were found guilty.

After providing informed consent (see Appendix D), one of eight versions of the abbreviated vignettes was read by each participant. Each vignette varied the severity of harm

(mild or severe), the age of the victim (child or adult) who suffered the harm, and whether participants were provided an instruction (present or absent) not to allow the harm or victim to influence their verdict decisions. All vignettes described an arson case involving an accused defendant throwing a lit cigarette into a trashcan in the apartment complex where he resided. This action caused a fire in a remote location. The accused defendant was known to have been in the midst of a dispute with the property manager of the apartment complex leading up to this act. The vignette involved an arson case because the circumstances allowed for the act to be separated from the potentially culpable mental state. By controlling for the act, we are able to determine variation in the assessment of *mens rea*. The severity of the harm that resulted from the accused's actions (i.e., duration of required hospitalization for the victim), the age of the victim who was harmed in the fire (i.e., a child or an adult), and whether or not an instruction was provided (not to allow the harm that occurred or sympathy for the victim to affect verdicts) were varied across conditions.

Harm Manipulation

The variable "harm" was operationalized by the duration of the hospital visit required by the bystander (victim), as well as whether the continued use of oxygen was required. In the vignette, the bystander was located in a building that adjoined the apartment complex property, where the fire had spread. In the mild-harm condition, the fire resulted in the victim requiring a 3-hour hospitalization due to smoke inhalation. In the severe-harm condition, the victim required a 3-week hospitalization and would require indefinite oxygen administration. Pilot data were collected to ensure that there was adequate variability to observe any effects for each of the dependent measures. Sixty participants were included in the pilot procedure. Although pilot data

indicated more not guilty than guilty verdicts, verdict confidence scores demonstrated adequate variability to detect potentially significant findings. See Appendix E for descriptive pilot data.

To confirm that the manipulation of harm conditions represented a difference in severity, an IMC for harm was administered. Near the end of the procedure, participants were asked to rate the severity of the harm that occurred on a Likert-type scale from 1 (not at all severe) to 7 (extremely severe). For the severe-harm condition, participants rated harm-severity significantly higher than participants in the mild-harm condition. The mean rating for participants in severe-harm condition was 5.26 ($SD = 1.204$) and the mean rating for participants in the mild-harm condition was 3.55 ($SD = 1.511$). An independent sample t-test was conducted, and harm-severity ratings were significantly higher for the severe harm condition than for the mild harm condition, $t = -10.009$, $p < .001$ (see Table 1).

Table 1
Harm Severity Ratings by Harm

Harm Conditions	<i>t</i>	<i>df</i>	<i>p</i>	95% CI
Severe vs. Mild*	-10.009	228.711	<.001	-2.053, -1.378

Note. Harm (independent variable): mild and severe. Harm severity rating (dependent measure): Scale: 1 (not at all severe) to 7 (extremely severe). (N=259). * $p < .001$.

Victim Manipulation

The variable “victim” was operationalized by whether the bystander who suffered harm as a result of the fire was specified as a child or whether it was just stated that it was a person. In the child-victim condition, the vignette read, “the result of Mr. Parker’s actions was that the fire spread to a building next door where a child was harmed.” The adult-victim condition read, “the

result of Mr. Parker's actions was that the fire spread to a building next door where a person was harmed." It was not specifically stated that the person harmed was an adult. To specify that it was an adult would have been unconventional phrasing and would have drawn undue attention to the manipulation. This could have jeopardized the mundane realism of the vignettes. For this reason, it was decided to state that the victim was a person, as it would likely be assumed that victim was an adult.

To confirm that participants appreciated the difference in victim conditions, an IMC for victim was administered near the end of the procedure. Participants were asked whether the victim in the fire was a child or whether it was not specified. Only participants who provided a correct response to the victim IMC, based on their randomly assigned condition, were included in the analysis. From the original sample of 340, 11 participants were excluded from the analysis because they did not pass the victim IMC. From the child-victim group, 7 participants (4.1%) failed the IMC and from the adult-victim group, 4 participants (2.4%) failed the IMC.

Instruction Manipulation

The variable "instruction" was operationalized by whether or not participants read an instruction not to allow the harm or the victim to influence their decisions in the case. In the instruction-present condition, the following statement was read by participants:

IMPORTANT: You must not allow any feelings or judgments about the harm that has been caused or sympathy that you may have for the victim to influence your decision about the facts of the case. You must decide the case solely on the evidence and the law before you. Again, it is very important that you not allow your personal feelings about the harm that occurred to influence your verdict decision.

In the instruction-absent condition, the above statement was not provided.

To confirm that participants were aware of the study manipulation for instruction, an IMC was administered near the end of the procedure. Participants were asked whether the following statement was true or false:

The initial instructions read at the beginning (the instructions that were provided by the judge) specifically stated that you are not to consider your reaction to the harm that occurred or the identity of the victim when making your determination about whether the defendant is guilty of arson.

From the sample of 340, 78 participants were excluded from the analysis because they failed the instruction IMC. There was an overlap of 8 participants who failed both the victim IMC and the instruction IMC. Of those who failed the instruction IMC, 14 participants (17.9%) indicated they did not receive an instruction, when in fact they did, while 64 participants (82.1%) indicated that they did receive an instruction, when in fact they did not. As addressed in the results and discussion, the instruction IMC was a stricter measure than the victim IMC. However, there is no indication that either the victim or instruction IMCs were ineffective in screening participants who may not have attended to the experimental manipulations, nor were there systemic differences observed for those who were omitted. The excluded sample of 81 participants did not significantly differ demographically from the sample included in the analysis. This sample was composed of slightly fewer females (45.7%) than males (54.3%). The mean age in the excluded sample was 33.2 (SD = 11.10). Most respondents identified as White/Caucasian (72.8%), followed by Black/African American (13.6%), Hispanic (7.4%), Asian (4.9%) and Mixed (1.2%). There were no statistically significant differences between the participants that were included and those that were excluded in terms of gender, $\chi^2(1) = 0.027, p = 0.899$, ethnicity $\chi^2(4) = 6.796, p = 0.147$, or age, $t(338) = -0.502, p = 0.616$.

Intentionality Dependent Measure

As a measure of the degree to which participants attributed intentionality to the defendant's actions, participants were asked to rate their level of agreement or disagreement with the following statement, "The defendant intentionally started the fire." Participants indicated their level of agreement, 1 (strongly disagree) to 7 (strongly agree), that the defendant intentionally started the fire. Higher ratings indicated greater agreement that the defendant intentionally started the fire.

Verdict Confidence Dependent Measure

As a dependent measure of verdict decisions, verdict confidence scores were calculated using a composite of each participant's guilty or not guilty verdict and their reported confidence in that decision. Dichotomous verdicts were recoded with confidence ratings (ranging from 0% to 100%) to produce a composite measure of verdict confidence score ranging from 1 to 22: 1, representing 100% confidence in not guilty; 11, representing 0% confidence in not guilty; 12, representing 0% confidence in guilty; and 22, representing 100% confidence in guilty. As other researchers have done to assess verdict decisions (Carlson & Russo, 2001; Crocker & Kovera, 2009; Edwards & Bryan, 1997; Sommers & Kassin, 2001), taking into account participants' confidence in their guilty/not guilty verdict is a more sensitive measure to ascertain the strength of their decision. A composite measure allows differentiation between participants' strength in their position. For example, two participants may have returned the same dichotomous verdict, but one was entrenched in their position, while the other was on the fence. A composite measure captures this difference. In the present study, while the bimodal distribution of dichotomous verdicts skewed toward not guilty, the data for verdict confidence more approximated normality.

Deserved Punishment Dependent Measure

Recommended sentence was a dependent measure of the level of punishment that the defendant deserved. As the final item in the procedure, participants were asked, “assuming the defendant was found guilty, what is your sentencing recommendation?” In criminal proceedings, judges, not jurors, make sentence recommendations. In this procedure, sentence recommendation served as a metric of the level of punishment participants believed the defendant deserved. Participants indicated recommended sentence using a slider scale ranging from 0 to 25 years. There were eight tick marks evenly dispersed across 0 and 25 years on the slider. The first tick mark to the left represented 0 years and last tick mark to the right represented 25 years. The tick mark selected by participants was converted to a 0 to 25-year scale, which was subsequently analyzed.

Results

The first goal of the study was to investigate whether greater intentionality is attributed to a defendant's actions when the harm resulting from an alleged crime was more severe and when the victim of the harm was a child as opposed to an adult. Demographic variables did not correlate with intentionality. Neither participant gender, $r(257) = -.05, p = .422$, nor participant age, $r(257) = .085, p = .171$, correlated with intentionality ratings. Hypothesis 1 predicted that participants would attribute greater intentionality to the defendant's actions when the alleged crime resulted in more severe harm. Hypothesis 2 predicted that participants would attribute greater intentionality to the defendant's actions when the victim of the harm was a child as opposed to an adult.

A two-way analysis of variance yielded a main effect for the attribution of intentionality, $F(1, 255) = 5.45, p = .020$ (see Table 2), such that the average intentionality rating was significantly higher for participants in the severe harm condition ($M = 2.71, SD = 1.43$) than in the mild harm condition ($M = 2.30, SD = 1.46$) (see Table 3). Based on the results provided, hypothesis 1, which stated that greater attribution of intentionality results from greater harm, was supported.

Table 2

Factorial ANOVA Results (DV = Intentionality)

Source	Type III SS	df	Mean Square	F	Sig.
Corrected Model	19.293 ^a	3	6.431	3.109	.027
Intercept	1611.474	1	1611.474	779.185	.000
Harm	11.277	1	11.277	5.453	.020
Victim	5.992	1	5.992	2.897	.090
Harm * Victim	2.830	1	2.830	1.368	.243
Error	527.379	255	2.068		
Total	2188.000	259			
Corrected Total	546.672	258			

Note. $R^2 = .035$ (Adjusted $R^2 = .024$).

Table 3
Mean Intentionality Ratings by Condition

Harm	Victim	Instructions	Mean	SD	N
Mild	Child	Yes	2.08	1.22	36
		No	1.96	0.93	23
		Total	2.03	1.03	59
	Adult	Yes	2.43	1.77	35
		No	2.70	1.75	27
		Total	2.55	1.75	62
	Total	Yes	2.25	1.471	71
		No	2.36	1.467	50
		Total	2.30	1.46	121
Severe	Child	Yes	2.89	1.62	36
		No	2.41	1.24	32
		Total	2.66	1.46	68
	Adult	Yes	2.86	1.59	36
		No	2.65	1.18	34
		Total	2.76	1.40	70
	Total	Yes	2.88	1.592	72
		No	2.53	1.205	66
		Total	2.71	1.43	138
Total	Child	Yes	2.49	1.43	72
		No	2.22	1.34	55
		Total	2.37	1.31	127
	Adult	Yes	2.65	1.68	71
		No	2.67	1.45	61
		Total	2.66	1.57	132
	Total	Yes	2.57	1.559	143
		No	2.46	1.321	116
		Total	2.52	1.46	259

Note. Agreement that Defendant intentionally started fire. Scale 1 (strongly disagree) to 7 (strongly agree).

The main effect for victim on intentionality rating was nonsignificant, $F(1, 255) = 2.897$, $p = .090$. Although this finding approaches significance, the trend was in the opposite direction of what was hypothesized; non-significant findings show higher intentionality ratings in the adult condition ($M = 2.66$, $SD = 1.57$) than the child condition ($M = 2.37$, $SD = 1.31$). Hypothesis 2, which anticipated greater attribution of intentionality results when the victim was a child as opposed to an adult, was not supported.

This study also investigated whether participants had a greater belief in the defendant's guilt when the harm resulting from a crime was more severe, when there was greater attribution of intentionality to the defendant's actions, and when the victim of the harm was a child as opposed to an adult. Demographic variables did not correlate with verdict confidence scores. Neither participant gender, $r(257) = -.051$, $p = .413$, nor participant age, $r(257) = .021$, $p = .737$, correlated with verdict confidence scores. For hypothesis 3, it was predicted that participants would have a greater belief in the defendant's guilt, as indicated by higher verdict confidence scores, when the alleged crime resulted in more severe harm. For hypothesis 4, it was predicted that participants would have a greater belief in the defendant's guilt when there was greater attribution of intentionality to the defendant's actions. For hypothesis 5, it was predicted that participants would have a greater belief in the defendant's guilt when the victim of the harm was a child as opposed to an adult.

To answer hypotheses 3, 4, and 5, a multiple linear regression was utilized with severity of harm, victim, and intentionality ratings as independent variables, which were entered simultaneously into the equation. Multiple linear regression was used in order to include intentionality ratings as a contributing factor in the model. Collinearity diagnostics showed that the independent variables were not correlated with each other, and there were, therefore, no

concerns of multicollinearity. The results of the regression analysis indicated the model accounted for 56.8% of the variance, $F(3, 255) = 111.77, p < .001$ (see Table 4). Intentionality ratings significantly predicted verdict confidence scores, $\beta = .749, p < .001$, such that an increase in intentionality ratings predicted an increase in verdict confidence scores. Table 5 displays verdict confidence scores across conditions. Harm did not significantly predict verdict confidence scores, $\beta = .04, p = .332$, and neither did victim, $\beta = -.034, p = .414$.

Table 4
Multiple Regression Analysis for Verdict Confidence Scores

Model		Unstandardized		Standardized		Collinearity		
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	-1.765	.930		-1.898	.059		
	Harm	.403	.414	.040	.972	.332	.980	1.021
	Victim	-.337	.411	-.034	-.819	.414	.990	1.010
	Intentionality*	2.563	.143	.749	17.93	.000	.970	1.031

Note. $R^2 = .568$ (Adjusted $R^2 = .563$). * $p < .001$.

Table 5
Mean Verdict Confidence Scores by Condition

Harm	Victim	Instructions	Mean	SD	N
Mild	Child	Yes	3.83	3.47	36
		No	3.13	1.79	23
		Total	3.56	2.93	59
	Adult	Yes	4.09	4.33	35
		No	4.93	6.13	27
		Total	4.45	5.16	62
	Total	Yes	3.96	3.89	71
		No	4.10	4.71	50
		Total	4.01	4.23	121
Severe	Child	Yes	5.89	5.84	36
		No	5.03	5.34	32
		Total	5.49	5.59	68
	Adult	Yes	6.06	6.11	36
		No	4.85	4.55	34
		Total	5.47	5.4	70
	Total	Yes	5.97	5.934	72
		No	4.94	4.91	66
		Total	5.48	5.47	138
Total	Child	Yes	4.86	4.88	72
		No	4.24	4.31	55
		Total	4.59	4.63	127
	Adult	Yes	5.08	5.36	71
		No	4.88	5.26	61
		Total	4.99	5.3	132
	Total	Yes	4.97	5.11	143
		No	4.58	4.83	116
		Total	4.80	4.98	259

Note. Verdict confidence scores (Scale: 1 to 22) are a composite measure of dichotomous verdict and confidence in verdict. Higher scores indicate greater confidence in guilt.

Dichotomous verdicts (guilty/not guilty) were also analyzed as a measure of verdict decisions. A binary logistic regression of dichotomous verdicts yielded similar results to the findings for verdict confidence, with one exception. In the above analysis, harm did not significantly influence verdict confidence scores when intentionality was also entered into the regression model, but harm did significantly predict dichotomous verdicts. The results of the

binary logistic regression (see Table G1) yielded that harm significantly influenced dichotomous verdict, $Wald = 3.914, p = .048$, such that participants in the severe harm condition were more likely to indicate that the defendant was guilty than participants in the mild harm condition. See Appendix G for an analysis of dichotomous verdict results.

The observed relationships between harm and intentionality, and between intentionality and verdict confidence suggested the possibility of mediation. Harm significantly affected the attribution of intentionality and attribution of intentionality significantly affected verdict confidence scores, but harm had no significant effect on verdict confidence when both victim and intentionality were entered simultaneously into the regression model. It was, therefore, examined if intentionality mediated the relationship between harm and verdict confidence. There are four steps in testing the mediation model (Baron & Kenny, 1986). First, the direct effect of harm on verdict confidence was tested, and the results showed that harm was a significant predictor of verdict confidence scores, $\beta = .147, p = .018$ (see Table 6).

Table 6
Direct effect of X (Harm) → Y (Verdict Confidence)

Model		Unstandardized		Standardized		
		Coefficients		Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.555	.990		2.580	.010
	Harm*	1.462	.614	.147	2.379	.018

Note. Dependent Variable: Verdict Confidence. * $p < .05$.

Second, the effect of harm on intentionality was tested. The results yielded that harm was a significant predictor of intentionality, $\beta = .142, p = .023$ (see Table 7).

Table 7

Direct effect of X (Harm) → M (Intentionality)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.885	.290		6.503	.000
	Harm*	.413	.180	.142	2.295	.023

Note. Dependent Variable: Intentionality. * $p < .05$.

Third, the effect of intentionality on verdict confidence was tested. The results yielded that intentionality was a significant predictor of verdict confidence, $\beta = .752, p < .001$ (see Table 8).

Table 8

Direct effect of M (Intentionality) → Y (Verdict Confidence)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.676	.409		-4.101	.000
	Intentionality*	2.571	.141	.752	18.280	.000

Note. Dependent Variable: Verdict Confidence. * $p < .001$.

The final model (see Table 9) tested the effect of harm and intentionality on verdict confidence. When intentionality is accounted for in the model, $\beta = .746, p < .001$, harm is not a significant predictor of verdict confidence scores, $\beta = .041, p = .324$. This mediation model suggests that there is a full mediation of intentionality for the relationship between harm and verdict confidence (see Figure 1).

Table 9

Indirect/mediation effect of X (Harm) |M (Intentionality) → Y (Verdict Confidence)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.253	.712		-3.163	.002
	Harm	.409	.414	.041	.989	.324
	Intentionality*	2.551	.142	.746	17.954	.000

Note. Dependent Variable: Verdict Confidence. * $p < .001$.

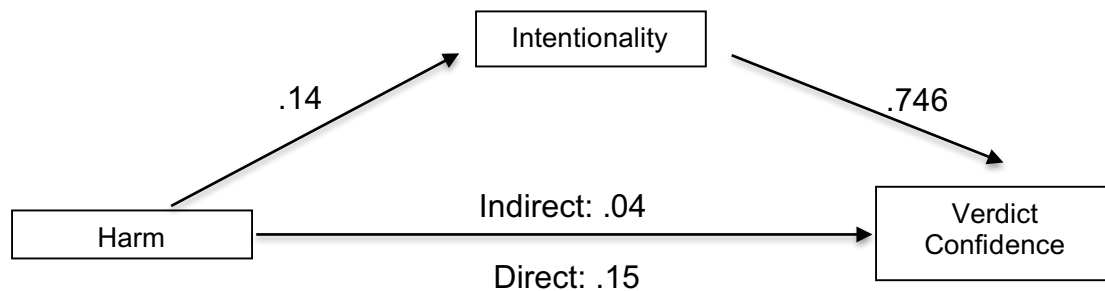


Figure 1.

Indirect effect of harm on verdict confidence, mediated by intentionality.

A goal of the present study was to investigate whether participants believed that a defendant was more deserving of punishment when the harm resulting from a crime was more severe, when there was greater attribution of intentionality, and when the victim of the harm was a child as opposed to an adult. Demographic variables did not correlate with recommended sentence length. Neither participant gender, $r(257) = -.089, p = .153$, nor participant age, $r(257) = -.029, p = .647$, correlated with recommended sentence length. Table 9 shows recommended sentence length across conditions. For hypothesis 6, it was predicted that greater punishment would be recommended for the defendant when the alleged crime resulted in more severe harm. For hypothesis 7, it was predicted that greater punishment would be recommended for the

defendant when there is greater attribution of intentionality to the defendant's actions. For hypothesis 8, it was predicted that greater punishment would be recommended for the defendant when the victim of the harm was a child as opposed to an adult. A multiple linear regression was conducted using the three independent variables entered simultaneously. The results of the regression analysis indicated the model accounted for 19.4% of the variance, $F(3, 255) = 20.487$, $p < .001$. Intentionality ratings significantly predicted recommended sentence length, $\beta = .396$, $p < .001$ (see Table 10), such that an increase in intentionality ratings predicted an increase in recommended sentence length. Table 11 displays recommended sentence across conditions. Harm predicted recommended sentence length, $\beta = .148$, $p = .01$, such that severe harm predicted an increase in recommended sentence length. Victim did not significantly predict recommended sentence length, $\beta = -.90$, $p = .343$.

Table 10
Multiple Regression Analysis for Recommended Sentence Length

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.	Collinearity Statistics	
	B	Std. Error	Beta	t		Tolerance	VIF
1 (Constant)	-1.349	1.711		-.788	.431		
Harm*	1.991	.762	.148	2.611	.010	.980	1.021
Victim	-.719	.757	-.054	-.950	.343	.990	1.010
Intentionality**	1.825	.263	.396	6.938	.000	.970	1.031

Note. $R^2 = .194$ (Adjusted $R^2 = .185$). * $p < .05$. ** $p < .001$.

Table 11
Mean Recommended Sentence Length by Condition

Harm	Victim	Instructions	Mean	SD	N
Mild	Child	Yes	4.17	5.3	36
		No	3.88	4.56	23
		Total	4.06	4.98	59
	Adult	Yes	3.27	6.21	35
		No	3.70	7.38	27
		Total	3.46	6.69	62
	Total	Yes	3.72	5.74	71
		No	3.79	6.18	50
		Total	3.75	5.90	121
Severe	Child	Yes	5.56	6.24	36
		No	7.37	7.25	32
		Total	6.41	6.75	68
	Adult	Yes	5.75	7.05	36
		No	7.46	7.98	34
		Total	6.58	7.51	70
	Total	Yes	5.65	6.61	72
		No	7.41	7.58	66
		Total	6.45	7.12	138
Total	Child	Yes	4.86	5.79	72
		No	5.91	6.46	55
		Total	5.32	6.08	127
	Adult	Yes	4.53	6.72	71
		No	5.8	7.88	61
		Total	5.11	7.28	132
	Total	Yes	4.67	6.25	143
		No	5.85	7.21	116
		Total	5.21	6.71	259

Note. Longer recommended sentences represent greater deserved punishment (Scale: 0 to 25 years).

Finally, the present study examined whether an instruction to participants mitigated the significant effects of harm and intentionality on verdict confidence scores or recommended sentence length. For hypothesis 9, it was predicted that when participants were instructed to not allow the level of harm that occurred or sympathy for the victim to influence their judgments, that these instructions would not mitigate significant effects on verdict confidence or

recommended sentence length.

Hypothesis 9 re-evaluated hypotheses 3 through 8 by adding the instruction factor to determine if the effects of the other independent variables are mitigated. A hierarchical linear regression, using a stepwise design, was employed to measure the significance of the instruction variable on verdict confidence. Table 12 presents the model summary with the associated coefficients. The results of the regression model showed that only intentionality significantly contributed to verdict confidence. The results did not deviate from those presented in Table 4. Paired with the non-significant contribution to the model, it is evident that instruction, $\beta = -.317$, $p = .751$, did not affect verdict confidence scores when harm, victim, and intentionality were accounted for.

Table 12
Model Summary of Hierarchical Linear Regression (DV = Verdict Confidence)

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	-1.765	.930		-1.898	.059		
Harm	.403	.414	.040	.972	.332	.980	1.021
Victim	-.337	.411	-.034	-.819	.414	.990	1.010
Intentionality*	2.563	.143	.749	17.933	.000	.970	1.031
2 (Constant)	-1.590	1.081		-1.471	.143		
Instruction	-.131	.413	-.013	-.317	.751	.992	1.008
Harm	.412	.416	.041	.991	.323	.974	1.026
Victim	-.332	.412	-.033	-.806	.421	.989	1.012
Intentionality*	2.561	.143	.749	17.863	.000	.967	1.034

* $p < .001$.

A second hierarchical model was applied to examine the effects of instruction on recommended sentence length. The overall model was significant, and harm severity, as well as intentionality, significantly contributed to the overall model. Table 13 exhibits the breakdown of the coefficients for the hierarchical model and does not deviate from the findings displayed in Table 9. Instruction did not enter as a significant predictor in the overall model, $\beta = .093$, $p = .099$, and therefore, it is evident that instruction did not influence the effects of harm, victim, or intentionality on recommended sentence length.

Table 13
Model Summary of Hierarchical Linear Regression (DV = Sentence Length)

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	-1.349	1.711		-0.788	0.431		
Harm*	1.991	0.762	.148	2.611	.010	.980	1.021
Victim	-.719	0.757	-.054	-.950	.343	.990	1.010
Intentionality**	1.825	0.263	.396	6.938	.000	.970	1.031
2 (Constant)	-3.016	1.980		-1.523	.219		
Instruction	1.255	.757	.093	1.657	.099	.992	1.008
Harm*	1.900	.762	.142	2.949	.013	.974	1.026
Victim	-.762	.755	-.057	-1.010	.314	.989	1.012
Intentionality**	1.847	.263	.401	7.037	.000	.967	1.034

* $p < .05$. ** $p < .001$.

Additional Analyses

Although just-world beliefs (Lerner & Miller, 1978) might explain the observed findings, no direct hypotheses were posited regarding the just-world scale (JWS) (Rubin & Peplau, 1975). Rubin and Peplau posit that there are individual differences in belief in a just world. JWS score is an indication of belief in a just world, with higher scores representing a stronger belief in a just world. Thus, a related research question is whether participants with a stronger belief in a just world respond differently to the experimental manipulations than participants with weaker belief in a just world. However, an analysis of participants' scores on the JWS was not found to significantly affect participants' verdict confidence responses to manipulation of the independent variables. However, performance on the JWS significantly predicted recommended sentence length, $\beta = .112, p = .045$, with participants scoring higher on the JWS indicating longer prison sentences. See Appendix H for an analysis incorporating performance on the JWS.

Seventy-eight participants failed the instruction condition IMC. While the instruction IMC may have been a stricter criterion by which to filter participants, it remains reasonable that the instruction IMC effectively screened participants who did not register the study manipulation. When the data were analyzed with those who failed the instruction IMC included, the results indicated similar results; however, the effects of harm on the attribution of intentionality did not reach significance, $F = 4.01, p = .18$. See Appendix F for an analysis of results with participants who failed the instruction IMC included.

Although no hypotheses were stated regarding whether participants would differ by condition as to whether they believed the defendant 1) intentionally injured the victim; 2) was responsible for starting the fire; 3) was responsible for injury to the victim; 4) was to blame for starting the fire; or 5) was to blame for injury to the victim, these questions were asked of

participants and results analyzed. Significant effects were observed for whether “the defendant intentionally caused injury to another person.” The analysis yielded a significant main effect for victim, $F(1, 255) = 6.522, p = .011$ (see Table I6), such that when the victim was an adult, there were higher intentional injury ratings ($M = 1.80, SD = 1.27$) than when the victim was a child ($M = 1.46, SD = .85$). See Appendix I for analysis of these findings.

Discussion

This study hypothesized that participants would attribute greater intentionality to a defendant's actions when the harm resulting from a crime was more severe. Results of a factorial analysis of variance indicated that this hypothesis was supported. Participants were more likely to attribute intentionality to actions that resulted in more severe harm. This finding is consistent with previous research showing that greater intentionality is attributed to actions that resulted in more negative outcomes (Alicke, 2000; Malle and Knobe, 1997). People more readily ascribed intentionality to bad actions compared to good ones (Knobe & Burra, 2006), and negative emotions toward an agent can influence ascriptions of intentionality (Malle and Nelson, 2003). Because intentionality is often the primary component of *mens rea*, this finding reveals that individuals are more likely to find that one of the elements of the crime has been proven when a defendant is accused of a crime that resulted in more severe harm.

Greater attribution of intentionality when harm is more severe can be explained in light of the just-world theory (Lerner & Miller, 1978). A motivation to believe that the world is predictable and orderly can cause people to take action to reduce perceived injustice when options to do so are available. In the present study, when there was more severe harm, and therefore a greater injustice, participants were more inclined to believe that the defendant acted intentionally and was, therefore, culpable. Finding the defendant acted intentionally mitigates the degree to which the events that occurred were random. If participants were to view the harm that occurred as a fluke, or the result of chance, this would be indicative of a chaotic world. Instead, by viewing the fire as the result of intentional human action (as opposed to mere carelessness), an action for which the perpetrator is being held accountable, it mitigates the unpredictability and the perceived injustice.

Although this finding demonstrates that participant judgments about an element of the crime (*mens rea*) were biased by the severity of resulting harm, it does not suggest that participants disregarded their prescribed role as factfinder. As directed, participants based their verdict decisions on whether they found *mens rea* and *actus reus* to be proven; however, their execution of that directive was affected by the severity of harm that occurred. As discussed below, the findings for verdict confidence scores provide insight into how harm severity specifically affected jurors' verdict decisions.

The second hypothesis was that participants would attribute greater intentionality to a defendant's actions when the victim of the harm was a child compared to when the victim adult. Results of a factorial analysis of variance indicated that this hypothesis was not supported. In fact, although not significant, a marginal trend was observed in the opposite direction from what was predicted. Marginally greater attribution of intentionality was attributed to the defendant's actions when the victim was an adult. One possible interpretation of this result is that a child victim harmed as the result of an intentional act would be perceived as a greater injustice than would a child victim harmed as the result of an accident. There are multiple means by which people can reduce perceived injustice. While one method is holding the defendant accountable, in this circumstance, believing that the defendant acted intentionally may have increased the perceived injustice, even if it would have reduced the perception of chaos. Further support for this interpretation is participants' responses to whether the defendant intentionally caused injury to another person. Although no hypotheses were made for this measure, participants were significantly more likely to agree that the defendant intentionally caused injury to another person when the victim was an adult as opposed to a child. Mitigating perceived injustice could have taken the form of reducing the belief that the act was intentional or that causing injury was

intentional, instead of believing that the act was intentional and holding the defendant accountable.

The second research question was whether the severity of harm, attribution of intentionality, and victim influenced belief in guilt. It was hypothesized that participants would have a greater belief in the defendant's guilt, indicated by verdict confidence scores, when the resulting harm was more severe and when greater intentionality was attributed to the defendant's actions. Results of a multiple linear regression analysis found that while harm did not directly predict verdict confidence when intentionality and victim were also entered simultaneously into the model, greater intentionality did lead to stronger belief in defendant's guilt.

Mediation analysis suggested that the effect of harm was obfuscated by the effect of intentionality on verdict confidence. The analysis demonstrated a full mediation of intentionality for the relationship between harm severity and verdict confidence. Harm severity indirectly affected the final outcome of verdict confidence suggesting that participants were, in part, abiding by the court's direction when making verdict decisions. Participants based their verdict decisions on determinations of *mens rea* and *actus reus*. Given that determining a culpable mental state of a defendant is within the purview of jurors, the present findings provide support for the conclusions that verdict decisions are based on proper criteria. Since harm only indirectly affected verdict decisions, participants may have been following the instruction regarding how to arrive at their decisions, but their ability to determine the elements were biased by the severity of harm. In a criminal trial, more severe harm may lead to greater belief in guilt, but not because jurors are rejecting their prescribed role as factfinders. These findings do not suggest that this is an example of jury nullification (Schefflin, 1972), whereby jurors disagree with how they are to apply the law and instead render a verdict that they believe is fair. Instead, the present findings

support that jurors are making decisions within the scope of their prescribed role, but that their judgments about whether the elements of the crime have been met are influenced by the severity of the harm that occurred. If it were only observed that participants were more likely to find a defendant culpable when greater harm occurred, but was not mediated by intentionality attributions, it would have been unclear as to whether participants were following the instruction to base verdict decisions on *mens rea* and *actus reus* requirements. However, because verdict decisions were mediated by intentionality attributions, and because the act reus was essentially stipulated to, this supports the contention that participants based verdict decisions on the criteria they were instructed to. It was observed that participants followed instruction to decide culpability based on whether they believed that the *mens rea* and *actus reus* requirements to have been met. to the instruction. The implications for the court system are that the application of the *probative versus prejudicial* standard should be further reevaluated. Asking jurors to set aside prejudicial information may not be within their capability, despite their efforts to do so.

The fifth hypotheses in the study proposed that participants would have a greater belief in defendant's guilt when the victim of the harm was a child as opposed to an adult. Results of a multiple linear regression analysis indicated that this hypothesis was not supported.

The third research question was whether severity of harm, attribution of intentionality, and type of victim influenced the level of deserved punishment, as indicated by recommended sentence length. It was hypothesized that longer sentence lengths would be recommended for a defendant when the crime resulted in more severe harm. Results of a multiple linear regression analysis indicated that this hypothesis was supported. The seventh hypothesis was that longer sentence lengths would be recommended for a defendant when greater intentionality was

attributed to their actions. Results of a multiple linear regression analysis indicated that this hypothesis was supported.

Longer sentences were recommended for a defendant when the resulting harm was more severe and when there was greater attribution of intentionality to the defendant's actions. These findings are consistent with the justification model (Alicke, 2000), in that extreme outcomes provoke feelings of injustice in those tasked with determining responsibility and delivering punishment. To manage the resulting psychological discomfort, people then attribute responsibility and apply a punishment they view as commensurate with the degree of injustice. Tostain and Lebreuilly (2005) suggested that the justification model met one's need to believe that outcomes derive from intended action and, therefore, remain within human control. Similarly, the just-world theory (Lerner & Miller, 1978) is consistent with these results, suggesting that participants may have recommended harsher punishment to the defendant to restore a just state.

Additional exploratory analyses examined the relationship between the JWS (Just World Scale (Rubin & Peplau, 1975) and the study variables. Specifically, would participant's JWS score predict the effects of the experimental manipulations. The hypothesized findings did not differ based on participants' JWS score, however, participants who scored higher on the JWS were significantly more likely to recommend longer sentences overall. This finding supports the just-world theory (Lerner & Miller, 1978), such that participants who have a stronger inclination to mitigate perceived injustice would award harsher punishment overall than participants with a weaker inclination to do so.

Given that harm only indirectly affected verdict decisions, the fact that harm and intentionality both significantly affected recommended sentence further supports that participants

were attempting to abide by their role as factfinder despite an inclination to reduce the perceived injustice. While participants may have had a greater desire to see a defendant punished when harm was more severe, they still abided by their role as factfinders when making verdict decisions. When more severe harm resulted from the crime, participants did as instructed and based their verdict decisions on their determination of *mens rea* and *actus reus*. When it came to meting out punishment, participants' decisions were not confined by their determination of elements. This demonstrates that despite a motivation to mitigate injustice and punish a defendant, jurors will attempt to follow instructions and make decisions based on the elements of the crime that are presented.

The eighth hypotheses in the study predicted that longer sentences would be recommended for a defendant when the victim of the harm was a child as opposed to an adult. Results of a multiple linear regression analysis indicated that this hypothesis was not supported.

The fourth research question examined whether providing an instruction not to allow the harm that occurred or the type of victim influenced judgments. The ninth hypothesis examined whether instructions to not allow the level of harm that occurred or the type of victim to influence their judgments, would mitigate any significant effects. Using a series of hierarchical linear regressions, the instruction variable was added to see if the inclusion of the variable affected any of the significant observed findings. The presence of an instruction did not significantly affect the relationships between the independent and dependent variables.

Consistent with previous research (Stebly, et al., 2006) an instruction to disregard specific information, not allowing said information to affect decision-making, was shown to be ineffective. An instruction did not mitigate the effect of harm or attribution of intentionality on verdict confidence or recommended sentence length. Despite being provided with an instruction

not to allow the harm that occurred to affect their judgments, more severe harm contributed to greater attribution of intentionality, which then, in turn, contributed to a greater belief in guilt. Additionally, despite an instruction, more severe harm and greater attribution of intentionality predicted harsher punishment. Participants were unable to set aside specific information and prevent it from influencing their judgments.

Summary and Conclusions

The findings of this study support that the severity of harm resulting from an alleged crime may affect judgements of culpability. Attribution of intentionality, often a primary component of the *mens rea* requirement. In this study, harm severity was found to have had an indirect effect on verdict decisions, which supports the conclusion that participants base decisions on assessment of culpability on attribution of intentionality. More severe harm and greater attribution of intentionality predict longer recommended sentences, demonstrating a greater motivation to punish. While this finding supports a greater inclination to punish when the harm is more severe, it also highlights the contrast between the finding for recommended sentence and verdict decisions. While harsher punishment was a direct result of the degree of harm, verdict confidence decisions were not. Despite an individual's increased willingness to punish when more severe harm occurred, they followed the instruction on how to arrive at their verdict decision. Participants worked within the parameters provided when deciding verdicts. Although participants did adhere to instructions regarding on what they are to base their verdict determinations, they were unable to regulate what influences their judgments. A notable caveat to this finding is that when dichotomous verdict decisions were analyzed, there was a direct effect of harm on dichotomous verdict. However, a dichotomous measure is arguably not as sensitive a measure as verdict confidence scores. An instruction on what questions to answer

when determining guilt, and an instruction on regulating what influences one's judgments are different. Instructing participants to not allow specific information to influence their decisions may extend beyond the capability of individuals in these circumstances. In criminal trials, information, such as the harm that has occurred, should be considered potentially biasing and prejudicial to the degree that it prevents a defendant from receiving a fair trial. As Tostain and Lebreuilly (2005) described, when outcome severity is high, people are more likely to apply the *justification model*, whereas when outcome severity is low, they will use the *rational model*. The present findings support this division. When the defendant was accused of more severe harm, the application of the justification model results in a greater a greater likelihood of finding a defendant culpable. However, when the harm was less severe, there was a greater inclination to use the rational model—weighing the evidence and then determining a verdict.

In an effort to limit the biasing effect of severe harm, the courts may consider various forms of bifurcation, where the factfinders are only provided limited information that is needed to decide specific factual questions in dispute. There are many circumstances where the feasibility of limiting information about the harm that occurred would be challenging. However, if the courts moved in the direction of considering what influences jurors' decisions, based on empirical evidence, it could result in a greater adherence to the fundamental principles of the judicial system. The courts have demonstrated awareness that specific information can affect jurors' judgments in a way that interferes with the execution of their charge. It is the trial court's purview to determine if the prejudicial value of evidence outweighs its probative value. The present findings suggest that knowledge about the harm that occurred may bias the jury. When the harm that occurred is severe, the harm that occurred may be considered prejudicial. Given the legal provision that the probative value of information must outweigh its prejudicial effect, the

present study demonstrates that the courts need an empirically driven assessment of what should be considered prejudicial. These findings support that the scope of what is considered prejudicial evidence is in need of expansion. Doing so would reduce the degree to which specific information (i.e., harm severity) affects belief in culpability.

Limitations of the Study

This study found no significant effect for victim (whether child or adult) on the attribution of intentionality, verdict confidence scores, or recommended sentence length. Although it was predicted that when the victim was a child, greater intentionality would be attributed to the defendant's actions, the data suggest a non-significant result in the opposite direction; greater intentionality was attributed to a defendants' actions when the victim was an adult. In addition to the possible explanation that a child intentionally harmed is perceived as a greater injustice than a child accidentally harmed, this could be the result of the manipulation of the child and adult condition lacking salience. The fact that in the adult condition, it was unspecified whether the person harmed was a child or an adult, could have left participant not knowing the age of the victim. It would be worthwhile for future research to examine whether there is a difference when the victim was an adult or child with a clearly identified distinction between the conditions.

Participants in this study were recruited through Amazon's MTurk. As discussed above, some researchers have found that MTurk participants perform more poorly than undergraduate participants, but that using IMCs serve as an effective remedy (Goodman, et al., 2013). Eleven participants were omitted from the analysis because they did not pass the victim IMC. Given the brief nature of the procedure and the limited amount of text that participants were required to

read, participants failing this IMC were likely not even minimally attending to the study materials and, therefore, would not have appreciated the study manipulations. The instruction IMC yielded a substantially higher failure rate than the victim IMC. Seventy-eight participants did not correctly identify whether or not they were provided an instruction. The high rate of failure for the instruction IMC may have been, in part, to the difficulty for participants to identify to which instructions the IMC question was referring. Further, the fact that whether the victim was a child versus an adult being repeated several times could have resulted in the manipulation having a stronger effect. Because all participants were given some form of instructions, there may have been some confusion for participants. However, among those who failed the instruction manipulation check, it was not possible to distinguish those who simply did not understand the manipulation check item from those who did not register that the instruction was provided. Given that 259 participants did correctly identify their experimental condition, it was decided that the more conservative analysis, despite the reduction in power, would be used to ensure that the sample appreciated the experimental manipulations. Although the use of an MTurk sample was appropriate to answer the questions in this study, future studies could address the issue further by using an alternative in-person method, where participants are read an instruction. This type of procedure would likely limit the number of participants who do not appreciate experimental manipulation.

An analysis conducted with participants who failed the instruction IMC included differed from the analyses with these participants excluded. With these participants included, harm did not significantly affect attribution of intentionality. However, as argued by Goodman, et al. (2013), the use of an MTurk sample, unchecked by IMCs, poses a greater likelihood of non-significant findings, due to the addition of statistical noise. Including these participants, most of

whom failed to appreciate the experimental manipulation, is additional noise that could obscure significant findings of the study.

As predicted, an instruction to not allow the harm that occurred or sympathy for the victim to influence the verdict judgments was not an effective remedy for the observed significant findings. Despite the fact that all participants included in the analysis passed the IMC, indicating an understanding that harm and victim were not to guide their decision-making, the instruction failed to remedy the effects of harm and the attribution of intentionality. While it could be argued that the instruction given was not effective in directing participants to disregard the harm, including participants who correctly indicated the presence or absence of an instruction is evidence that, at some level, participants registered what was being asked of them.

When verdict decisions were re-evaluated with dichotomous verdicts as the measure of verdict, the findings differed slightly from what was observed for verdict confidence scores. Both more severe harm and greater attribution of intentionality significantly predicted more guilty verdicts; however, only the attribution of intentionality predicted verdict confidence scores. While this finding suggests that harm, as well as intentionality, may directly affect verdicts, it should be noted that dichotomous verdicts are not as precise a metric as verdict decisions. Verdict confidence scores, by integrating confidence in the verdict decision, allow for a more sensitive measure of the strength of the belief in verdicts as well. Jurors who are less confident in their verdict decision may be more willing to change their position after deliberating with their fellow jurors.

A limitation of the present findings is that in a courtroom setting, jurors are likely to be more aware of the gravity of the circumstances, both from situational cues and because of the realism that a persons' liberty is at stake. When jurors hear the instructions provided by a judge,

as opposed to reading them online while free from these social circumstances, they may be more likely to comply. Further investigation of the effectiveness of an instruction, under circumstances that can approximate the realism of the courtroom, could aid in determining the effectiveness of an instruction.

Recommendations for Future Research

Greater intentionality was attributed to a defendant when the harm that resulted from a crime was more severe. Jurors' determinations of the elements of the crime, i.e., *mens rea*, contribute to a greater belief in guilt. The next step in addressing the impact of harm on verdict decisions is to explore various remedies for the effect. Bifurcation is potentially an effective remedy. Segmenting the role of the factfinders in order to limit the presence of potentially biasing information, could potentially increase the effectiveness and fairness of the administration of justice; however, such an improvement would need to be empirically tested.

Although victim's age did not significantly effect the attribution of intentionality, verdict decisions, or sentencing recommendations, these finding may be related to the experimental design that was used to disentangle the act and the outcome. Further research could be developed to identify under what other circumstances the age of the victim, as well as other characteristics, could alter how juror determinations are made. These findings would demonstrate that there are situational as well as dispositional factors that can determine how the case is interpreted and what effect they have on the administration of justice.

The lack of significant findings related to the victim might be further examined by conducting a similar study with victims that differed more significantly in terms of perceived innocence. As suggested earlier, the adult victim in this study's vignettes might not have been appreciably less innocent compared to the child victim. This hypothesis could be examined by

comparing effects of a child victim against an adult victim with characteristics that elicit perceptions of being more deserving or less innocent.

The applicability of this study's findings to real world conditions could be examined in future research. Instead of using vignettes to acquaint participants with court case information, a future study could survey participants about perceptions of defendants in actual court cases. Multimedia could be used to acquaint participants with the defendants and the circumstances of their cases, and surveys could then be completed to measure perceptions related to harm, defendant guilt, and sentencing appropriateness. Further, the present study does not examine the what effect the deliberation process would have on jurors' views. Future research could examine whether the deliberation process mitigates the present findings.

The present study examined what effect harm severity and the age of the victim had on judgments pertaining to a crime presently under consideration. However, the effects of harm on intentionality and verdict decisions may carry over to judgments in future cases. As Saltzstein, Sanvitale, and Supraner (1978) found, when participants believed that a defendant acted with intentionally, and awarded harsher sentences, those effects carried over to judgments in subsequent cases. Participants were harsher in their sentences in later cases. These findings suggest that, as a result of greater harm, participants may be inclined to attribute greater intentionality to a defendant's actions in future cases, even when the harm that resulted is not as severe. A motivation to mitigate the injustice of the circumstances could affect future determinations of intentionality and culpability. A future study could examine the result of these potential transfer effects. Does the exposure to greater harm in one situation result in participants being more likely to find a defendant's actions intentional, or view a defendant as more culpable,

in future situations? Such a finding would imply that participants' inclinations to mitigate injustice may persist beyond the present case into future evaluations.

Finally, an intervention study might be a useful complement to this study's findings. An intervention could be developed that was aimed at sensitizing potential jurors to the cognitive biases that might unduly affect their decision-making. In this study, an instruction was not found to be an effective safeguard to prevent the information about the harm that occurred from affecting verdict decisions. The instruction directed participants to regulate how specific knowledge affects their judgments, which is arguably outside of their capability. However, there are other forms of instruction that could be more effective at limiting the biasing effect of information. As Brehm (1966) demonstrated, when mock jurors were told that inadmissible evidence was to be ignored because it was non-credible, the inadmissible evidence did not affect verdict decisions; however, when they were instructed to disregard the evidence because it violated a procedural protocol, it did affect verdict decisions. An instruction may be more effective if participants are provided an explanation that calls the veracity of the information into question. Providing a rationale relating to the veracity of specific information for why the specific information should be disregarded may be more effective in mitigating the effects of harm. The risk of unjustly convicting innocent defendants based on severity of harm resulting from the alleged crime could be emphasized during the intervention. The effects of such an intervention on juror decision-making could be examined using pre- and post-tests and/or a control group. Exploring these options could shed greater light on a method to mitigate the observed findings.

Appendix A
Descriptive Statistics for Participants Excluded from Analysis

Table A1
Mean Verdict Confidence Scores for Excluded Participants

Harm	Victim	Instructions	Mean	SD	N
Mild	Child	Yes	2.75	1.71	4
		No	6.71	7.3	17
		Total	5.95	6.76	21
	Adult	Yes	9.4	9.71	5
		No	5.63	4.54	16
		Total	6.52	6.09	21
	Total	Yes	6.44	7.78	9
		No	6.18	6.05	33
		Total	6.24	6.36	42
Severe	Child	Yes	3.8	1.3	5
		No	7.61	6.91	18
		Total	6.78	6.31	23
	Adult	Yes	2.5	2.12	2
		No	3.14	1.88	14
		Total	3.06	1.84	16
	Total	Yes	3.43	1.52	7
		No	5.66	5.73	32
		Total	5.26	5.28	39
Total	Child	Yes	3.33	1.5	9
		No	7.17	7.01	35
		Total	6.39	6.46	44
	Adult	Yes	7.43	8.66	7
		No	4.47	3.72	30
		Total	5.03	5	37
	Total	Yes	5.13	5.97	16
		No	5.92	5.85	65
		Total	5.77	5.85	81

Note. Verdict confidence scores (Scale: 1 to 22) are a composite measure of dichotomous verdicts and confidence in verdict. Higher scores indicate greater confidence in guilt.

Table A2
Mean Intentionality Ratings for Excluded Participants

Harm	Victim	Instructions	Mean	SD	N
Mild	Child	Yes	2.5	1.92	4
		No	3.18	1.94	17
		Total	3.05	1.91	21
	Adult	Yes	3.4	2.61	5
		No	3.06	1.48	16
		Total	3.14	1.74	21
	Total	Yes	3	2.24	9
		No	3.12	1.71	37
		Total	3.1	1.81	42
Severe	Child	Yes	2	0	5
		No	3.33	1.75	18
		Total	3.04	1.64	23
	Adult	Yes	1.5	0.71	2
		No	1.79	0.8	14
		Total	1.75	0.78	16
	Total	Yes	1.86	.38	7
		No	2.66	1.6	32
		Total	2.51	1.49	39
Total	Child	Yes	2.22	1.2	9
		No	3.26	1.82	35
		Total	3.05	1.75	44
	Adult	Yes	2.86	2.34	7
		No	2.47	1.36	30
		Total	2.54	1.56	37
	Total	Yes	2.5	1.75	16
		No	2.89	1.66	65
		Total	2.81	1.67	81

Note. Higher intentionality ratings represent greater attribution of intentionality (Scale: 1 to 7).

Table A3
Mean Recommended Sentence Length for Excluded Participants

Harm	Victim	Instructions	Mean	SD	N
Mild	Child	Yes	3.67	5.05	4
		No	5.67	6.19	17
		Total	5.27	5.94	21
	Adult	Yes	7.14	9.11	5
		No	8.04	9.89	16
		Total	7.82	9.49	21
	Total	Yes	5.56	7.39	9
		No	6.82	8.15	37
		Total	6.55	7.92	42
Severe	Child	Yes	5.71	1.96	5
		No	9.52	8.49	18
		Total	8.7	7.68	23
	Adult	Yes	0	0	2
		No	6.38	8.54	14
		Total	5.58	8.24	16
	Total	Yes	4.08	3.21	7
		No	8.15	8.52	32
		Total	7.42	7.96	39
Total	Child	Yes	4.76	3.57	9
		No	7.65	7.61	35
		Total	7.06	7.04	44
	Adult	Yes	5.1	8.21	7
		No	7.26	9.16	30
		Total	6.85	8.92	37
	Total	Yes	4.91	5.81	16
		No	7.47	8.3	65
		Total	6.97	7.9	81

Note. Longer recommended sentences represent greater deserved punishment (Scale: 0 to 25 years).

Table A4
Dichotomous Verdicts for Excluded Participants

Harm	Victim	Instructions	Not Guilty	Guilty	N
Mild	Child	Yes	4	0	4
		No	13	4	17
		Total	17	4	21
	Adult	Yes	3	2	5
		No	14	2	16
		Total	17	4	21
	Total	Yes	7	2	9
		No	27	6	33
		Total	34	8	42
Severe	Child	Yes	5	0	5
		No	14	4	18
		Total	19	4	23
	Adult	Yes	2	0	2
		No	14	0	14
		Total	16	0	16
	Total	Yes	7	0	7
		No	28	4	32
		Total	35	4	39
Total	Child	Yes	9	0	9
		No	27	8	35
		Total	36	8	44
	Adult	Yes	5	2	7
		No	28	2	30
		Total	33	4	37
	Total	Yes	14	2	16
		No	55	10	65
		Total	69	12	81

Appendix B
Study Case Summary

Please read the following description of a criminal case. Below you will read a short description of the case. In this case, you are to act as a juror who is to decide the verdict and, if appropriate, the sentence based on the description that you read.

IT IS EXTREMELY IMPORTANT THAT YOU READ ALL OF THE MATERIALS BELOW VERY CAREFULLY.

Initial Instructions:

It is your duty as a juror to determine the facts in this case and then apply the law to the facts (as you find them). Below, the law will be provided to you in the form of a criminal charge, and then you must determine if the evidence supports the charge for which the defendant is accused.

INSTRUCTION PRESENT CONDITION

The following instruction was provided in the Instruction Present Condition.

IMPORTANT:

- You must not allow any feelings or judgments about the harm that has been caused or sympathy that you may have for the victim to influence your decision about the facts of the case.
- You must decide the case solely on the evidence and the law before you.
- Again it is very important that you not allow your personal feelings about the harm that occurred to influence your verdict decision.

INSTRUCTION ABSENT CONDITION

No addition instruction was provided in the Instruction Absent condition.

I will now provide you with the charge for which the defendant is accused:

Arson, First Degree—

The defendant, is accused of one count of Arson in the First Degree. Under our law, a person is guilty of Arson in the First Degree when that person intentionally damages a building by causing

a fire, and when such a fire causes physical injury to another person.

In order for you to find the defendant guilty of this crime, the People are required to prove, from all of the evidence in the case, beyond a reasonable doubt, the defendant, intentionally caused a fire, which caused physical injury to another person.

On the other hand, if you find that the People have not proven beyond a reasonable doubt any one or more of those elements, you must find the defendant not guilty of the crime of Arson in the First Degree as charged in the count.

As the jury you are to limit your judgment to a determination of the facts. **You are to determine whether the defendant committed the act and whether he did so intentionally. Both of the elements are required for a guilty verdict.** Next you will read a brief summary of case you are to decide.

James Parker stands accused of arson in the First Degree.

Below are facts that both sides agree to:

- On the afternoon of February 7th, 2013, at 3:00 PM, James Parker went to a meeting with Luis Cardoza, the property manager of the Silver Oaks apartment complex, where Mr. Parker lived. In that meeting, Mr. Cardoza informed Mr. Parker that he was being fined \$150 for parking in another tenant's parking stall. According to Mr. Cardoza, Mr. Parker was very upset about the fine when he left the meeting. At 3:15 PM, Mr. Cardoza says that he watched through a window as Mr. Parker walked out of his office. Mr. Cardoza then watched Mr. Parker smoke a cigarette near the fence of the apartment complex's property. Mr. Cardoza then watched Mr. Parker throw the cigarette in to the trashcan. Fifteen minutes later when the property manager looked out the window he saw that the trashcan was on fire and was spreading to the building next door. He immediately called the fire department. When the fire department arrived, the fire had already spread to the building next door.
- As the Fire Marshall will testify, there is forensic evidence that the fire originated from a lit cigarette being thrown into the trashcan.

SEVERE HARM/CHILD CONDITION

The result of Mr. Parker's actions was that the fire spread to a building next door where a child was harmed. Although the child did not suffer any burns, the child did suffer serious smoke inhalation resulting in a 3-week hospitalization and will require the use of oxygen, indefinitely.

MILD HARM/CHILD CONDITION

The result of Mr. Parker's actions was that the fire spread to a building next door where a child was harmed. Although the child did not suffer any burns, the child did suffer smoke inhalation resulting in a 3-hour hospital visit.

SEVERE HARM/ADULT CONDITION

The result of Mr. Parker's actions was that the fire spread to a building next door where a person was harmed. Although the person did not suffer any burns, the person did suffer serious smoke inhalation resulting in a 3-week hospitalization and will require the use of oxygen, indefinitely.

MILD HARM/ADULT CONDITION

The result of Mr. Parker's actions was that the fire spread to a building next door where a person was harmed. Although the person did not suffer any burns, the person did suffer smoke inhalation resulting in a 3-hour hospital visit.

The prosecution argues that Mr. Parker threw the lit cigarette into the trashcan to intentionally start the fire to retaliate against the property manager and, therefore, is guilty of arson because he started the fire and did so intentionally.

- The defense does not dispute that Mr. Parker did discard the cigarette into the trashcan, and that it may have been lit, but that he did not intend to start the fire, and that the fire was accidental. The defense argues that Mr. Parker did not commit the act intentionally and, therefore, he is not guilty of arson.
- According to the law, if Mr. Parker is to be found guilty of the crime of arson, it must be proved that Mr. Parker both committed the act of starting the fire and did so intentionally.
- Based on the information you have read, you are to decide if Mr. Parker is guilty of the crime of arson in the first degree.
- It is now time for you, the jury, to render a verdict. I will once again provide you with the criminal charge in this case:

Arson, First Degree—

The defendant, is accused of one count of Arson in the First Degree. Under our law, a person is guilty of Arson in the First Degree when that person intentionally damages a building by causing a fire, and when such a fire causes physical injury to another person.

In order for you to find the defendant guilty of this crime, the People are required to prove, from all of the evidence in the case, beyond a reasonable doubt, the defendant, intentionally caused a fire, which caused physical injury to another person.

On the other hand, if you find that the People have not proven beyond a reasonable doubt any one or more of those elements, you must find the defendant not guilty of the crime of Arson in the First Degree as charged in the count.

Very liberal

Moderate

Very conservative

11. Please rate your political affiliation regarding social issues.

1	2	3	4	5	6	7
Very liberal			Moderate			Very conservative

12. Please rate your political affiliation regarding economic issues.

1	2	3	4	5	6	7
Very liberal			Moderate			Very conservative

Just-World Scale

Now, we will ask you to indicate your degree of agreement or disagreement on a 6-point continuum for the following set of questions.

1. I've found that a person rarely deserves the reputation he has.
2. Basically, the world is a just place.
3. People who get "lucky breaks" have usually earned their good fortune.
4. Careful drivers are just as likely to get hurt in traffic accidents as careless ones.
5. It is a common occurrence for a guilty person to get off free in American courts.
6. Students almost always deserve the grades they receive in school.
7. Men who keep in shape have little chance of suffering a heart attack.
8. The political candidate who sticks up for his principles rarely gets elected.
9. It is rare for an innocent man to be wrongly sent to jail.
10. In professional sports, many fouls and infractions never get called by the referee.
11. By and large, people deserve what they get.
12. When parents punish their children, it is almost always for good reasons.
13. Good deeds often go unnoticed and unrewarded.
14. Although evil men may hold political power for a while, in the general course of history good wins out.
15. In almost any business or profession, people who do their job well rise to the top.
16. American parents tend to overlook the things most to be admired in their children.
17. It is often impossible for a person to receive a fair trial in the USA.
18. People who meet with misfortune have often brought it on themselves.
19. Crime doesn't pay.
20. Many people suffer through absolutely no fault of their own.

Manipulation Checks

1. Who was injured in the fire?

A. a child

Appendix D
Informed Consent

THE CITY UNIVERSITY OF NEW YORK
City University of New York Graduate Center
Psychology

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Title of Research Study: Criminal Justice Study

Principal Investigator: Donal Barnard
Doctoral Candidate

Faculty Advisor: Herbert Saltzstein
Professor

You are being asked to participate in a research study because you are a resident of the United States who is 18 years of age or older.

Purpose:

The purpose of this research study is to understand how people think about crimes and more generally, the criminal justice system. Your participation will help us to better understand the processes involved in our ability to represent a variety of information about an incident, and what people think is important when thinking about these issues. Please read this form about what participation entails before agreeing to be in the study.

Procedures:

If you volunteer to participate in this research study, you will be asked to complete one session, using your computer and this survey website, which will take approximately 30 minutes. We will ask you to read a summary of a trial transcript. Following this, you will be asked to respond to a series of questions. These include demographic questions about yourself and questions about your opinion on the trial proceedings that you read. There will also be survey questions about your personal opinions and stances on topics related to the criminal justice system, and your values and beliefs about politics.

Time Commitment:

Your participation in this research study is expected to last for approximately 30 minutes.

Potential Risks or Discomforts:

No physical risks are involved in this study. The risks posed to you are no greater than you would likely encounter reading a newspaper or magazine article. It is possible that you will experience some psychological discomfort as a result of thinking about crime. Considering some of these topics may cause you to feel unpleasant emotions or remind you of negative

information. If you become uncomfortable with any aspect of the tasks you are asked to engage in, you may discontinue participation at any time.

Potential Benefits:

You will be paid \$2 for your participation in this research project. Aside from that, there are no direct benefits to you for participating. You may find it interesting to explore your thoughts on the topics investigated in this study. This project is part of a larger research effort to understand how people think about the criminal justice system in this country. Your participation will help us, and the broader scientific community, to increase our understanding.

Payment for Participation:

You will be a paid participant in this study, and you will be reimbursed \$2 for your participation.

Confidentiality:

All records and data resulting from your participation will be kept confidential. The results of your participation in this study may be used for publication or for scientific purposes, but neither your name nor your identity will be disclosed, and in any sort of report that we publish we will not include any information that may make it possible to identify a participant. All information will be coded and secured using a password protected electronic file. Identifying information will be kept separately from your responses in a way that will not allow them to be linked to your responses. Access to the records will be limited to the researchers; however, please note that the Institutional Review Board and internal City University of New York auditors may review the research records. The research team, authorized CUNY staff, and government agencies that oversee this type of research may have access to research data and records in order to monitor the research. Research records provided to authorized, non-CUNY individuals will not contain identifiable information about you.

Participants' Rights:

Your participation in this research study is entirely voluntary. If you decide not to participate, there will be no penalty to you, and you may discontinue participation without penalty at any time. If you decide to participate, you are free to withdraw your consent and discontinue at any time, for any reason. If you choose not to participate or to withdraw, it will in no way affect your current or future relations with the MTurk survey service.

Questions, Comments or Concerns:

This study has been reviewed the City University of New York Institutional Review Board. The researcher conducting this study is Donal Barnard. For questions or additional information concerning this research, you may contact the principal investigator by mail at the The Graduate Center, CUNY, 365 5th Avenue, New York, New York, 10016.

If you have questions about your rights as a research participant, or you have comments or concerns that you would like to discuss with someone other than the researchers, please call the CUNY Research Compliance Administrator at 646-664-8918. Alternately, you can write to:

CUNY Office of the Vice Chancellor for Research
Attn: Research Compliance Administrator
205 East 42nd Street
New York, NY 10017

Signature of Participant:

If you agree to participate in this research study, please sign and date below. You will be given a copy of this consent form to keep.

Printed Name of Participant

Signature of Participant

Date

Signature of Individual Obtaining Consent

Printed Name of Individual Obtaining Consent

Signature of Individual Obtaining Consent

Date

Appendix E
Pilot Data Descriptive Statistics

Table E1
Mean Verdict Confidence Scores for Pilot Data

Harm	Victim	Instructions	Mean	SD	N
Mild	Child	Yes	3.7	2.45	10
		No	3.5	2.65	4
		Total	3.64	2.41	14
	Adult	Yes	5.2	8.32	5
		No	6.13	6.29	8
		Total	5.77	6.81	13
	Total	Yes	4.2	4.92	15
		No	5.25	5.36	12
		Total	4.67	5.05	27
Severe	Child	Yes	9.33	9.14	6
		No	6.46	6.16	13
		Total	7.37	7.1	19
	Adult	Yes	6.56	7.73	9
		No	4	2.35	5
		Total	5.64	6.33	14
	Total	Yes	7.67	8.12	15
		No	5.78	5.42	18
		Total	6.64	6.74	33
Total	Child	Yes	5.81	6.27	16
		No	5.76	5.61	17
		Total	5.79	5.85	33
	Adult	Yes	6.07	7.65	14
		No	5.31	5.11	13
		Total	5.71	6.44	27
	Total	Yes	5.93	6.83	30
		No	5.57	5.31	30
		Total	5.75	6.07	60

Note. Verdict confidence scores (Scale: 1 to 22) are a composite measure of dichotomous verdicts and confidence in verdict. Higher scores indicate greater confidence in guilt.

Table E2
Mean Intentionality Ratings for Pilot Data

Harm	Victim	Instructions	Mean	SD	N
Mild	Child	Yes	2	0.94	10
		No	1.75	0.5	4
		Total	1.93	0.83	14
	Adult	Yes	2	1.73	5
		No	2.88	1.55	8
		Total	2.54	1.61	13
	Total	Yes	2	1.2	15
		No	2.5	1.38	12
		Total	2.22	1.28	27
Severe	Child	Yes	3.5	2.35	6
		No	3.15	1.82	13
		Total	3.26	1.94	19
	Adult	Yes	2.67	1.66	9
		No	2	0.71	5
		Total	2.43	1.4	14
	Total	Yes	3	1.93	15
		No	2.83	1.65	18
		Total	2.91	1.76	33
Total	Child	Yes	2.56	1.71	16
		No	2.82	1.7	17
		Total	2.7	1.69	33
	Adult	Yes	2.43	1.65	14
		No	2.54	1.33	13
		Total	2.48	1.48	27
	Total	Yes	2.5	1.66	30
		No	2.7	1.54	30
		Total	2.6	1.59	60

Note. Higher intentionality ratings represent greater attribution of intentionality (Scale: 1 to 7).

Table E3
Mean Recommended Sentence Length for Pilot Data

Harm	Victim	Instructions	Mean	SD	N
Mild	Child	Yes	3.57	4.45	10
		No	1.79	2.06	4
		Total	3.06	3.93	14
	Adult	Yes	3.57	7.99	5
		No	7.59	9.04	8
		Total	6.04	8.55	13
	Total	Yes	3.57	5.57	15
		No	5.66	7.83	12
		Total	4.5	6.61	27
Severe	Child	Yes	8.93	5.42	6
		No	8.79	9.95	13
		Total	8.83	8.62	19
	Adult	Yes	7.14	8.56	9
		No	1.43	3.19	5
		Total	5.1	7.51	14
	Total	Yes	7.86	7.3	15
		No	6.75	9.16	18
		Total	7.25	8.26	33
Total	Child	Yes	5.58	5.37	16
		No	7.14	9.19	17
		Total	6.39	7.51	33
	Adult	Yes	5.87	8.24	14
		No	5.22	7.8	13
		Total	5.56	7.88	27
	Total	Yes	5.71	6.74	30
		No	6.31	8.53	30
		Total	6.01	7.63	60

Note. Longer recommended sentences represent greater deserved punishment (Scale: 0 to 25 years).

Table E4
Dichotomous Verdicts for Pilot Data

Harm	Victim	Instructions	Not Guilty	Guilty	N	
Mild	Child	Yes	10	0	10	
		No	4	0	4	
		Total	14	0	14	
	Adult	Yes	4	1	5	
		No	7	1	8	
		Total	11	2	13	
	Total	Yes	14	1	15	
		No	11	1	12	
		Total	25	2	27	
Severe	Child	Yes	4	2	6	
		No	11	2	13	
		Total	15	4	19	
	Adult	Yes	7	2	9	
		No	5	0	5	
		Total	12	2	14	
	Total	Yes	11	4	15	
		No	16	2	18	
		Total	Total	27	6	33
	Total	Child	Yes	14	2	16
			No	15	2	17
			Total	29	4	33
Adult		Yes	11	3	14	
		No	12	1	13	
		Total	23	4	27	
Total		Yes	25	5	30	
		No	27	3	30	
		Total	52	8	60	

Appendix F
Statistical Analysis Including Participants Failing Instruction IMC

Results were analyzed with the 68 participants who failed only the instruction IMC included. With these participants included, the number of participants in the sample totaled 327. This will be denoted to as the “327-sample” and the sample with participants who failed the instruction manipulation check excluded as the “259-sample.”

The 327-sample demonstrated similar results as the 259-sample with some exceptions. Unlike the 259-sample, harm did not reach the threshold of significance for affecting attribution of intentionality, $F = 4.01$, $p = .18$ (see Table F1). The relationship between intentionality and verdict confidence scores remained significant ($\beta = .783$, $p < .000$) (see Table F2). The relationship between harm and recommended sentence remained significant ($\beta = .158$, $p = .001$). as well as the relationship between intentionality and recommended sentence ($\beta = .432$, $p < .000$) (see Table F3). The effect of instruction did not deviate from those observed with the 259-sample (see Table F4 and Table F5).

Table F1
Factorial ANOVA Results (DV = Intentionality)

Source	Type III SS	df	Mean Square	F	Sig.
Corrected Model	9.786 ^a	3	3.262	1.457	.226
Intercept	2104.924	1	2104.924	940.339	.000
Harm	4.011	1	4.011	1.792	.182
Victim	0.674	1	0.674	0.301	.584
Harm * Victim	5.494	1	5.494	2.454	.118
Error	723.027	323	2.238		
Total	2865.000	327			
Corrected Total	732.813	326			

a. $R^2 = .013$ (Adjusted $R^2 = .004$)

Table F2
Multiple Regression Analysis for Verdict Confidence

Model		Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	-2.066	.822		-2.513	.012		
	Harm	.363	.353	.035	1.029	.304	.994	1.006
	Victim	-.268	.353	-.026	-.783	.447	.999	1.001
	Intentionality*	2.675	.118	.783	22.720	.000	.994	1.006

**p < .001.

Table F3
Regression Summary for Recommended Sentence Length

Model		Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	-1.846	1.562		-1.182	.238		
	Harm*	2.152	.671	.158	3.208	.001	.994	1.006
	Victim	-.712	.668	-.052	-1.066	.287	.999	1.001
	Intentionality**	1.964	.224	.432	8.785	.000	.994	1.006

*p < .05. **p < .001.

Table F4
 Model Summary of Hierarchical Linear Regression (DV= Verdict Confidence) for the 327
 Sample

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	-2.066	0.822		-2.513	0.012		
Harm	0.363	0.353	0.035	1.029	0.304	0.994	1.006
Victim	-0.268	0.352	-0.026	-0.761	0.447	0.999	1.001
Intentionality*	2.675	0.118	0.783	22.720	0.000	0.994	1.006
2 (Constant)	-1.928	0.972		-1.984	0.048		
Instruction	-0.094	0.353	-0.009	-0.267	0.790	0.998	1.002
Harm	0.367	0.354	0.036	1.037	0.300	0.992	1.008
Victim	-0.267	0.352	-0.026	-0.759	0.448	0.999	1.001
Intentionality*	2.675	0.118	0.783	22.687	0.000	0.994	1.006

*p < .001.

Table F5
Model Summary of Hierarchical Linear Regression (DV = Sentence Length)

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	T	Sig.	Tolerance	VIF
1 (Constant)	-1.846	1.562		-1.182	.238		
Harm*	2.152	.671	.158	3.208	.001	.994	1.006
Victim	-.712	.668	-.052	-1.066	.287	.999	1.001
Intentionality**	1.964	.224	.432	8.785	.000	.994	1.006
2 (Constant)	-3.822	1.834		-2.083	.038		
Instruction	1.351	.666	.099	2.028	.043	.998	
Harm*	2.095	.668	.154	3.135	.002	.992	
Victim	-.717	.665	-.053	-1.078	.282	.999	
Intentionality**	1.964	.223	.432	8.828	.000	.994	

* $p < .05$. ** $p < .001$.

Appendix G

Descriptive Statistics and Analysis of Dichotomous Verdicts

Hypothesis 3, 4, and 5 were also analyzed for dichotomous verdict (guilty/not guilty) in place of verdict confidence scores as the dependent measures. A binary logistic regression was utilized with harm, victim, and intentionality as independent variables entered simultaneously into the equation. Collinearity diagnostics showed that the independent variables were not correlated with each other, and, therefore, there were no concerns of multicollinearity. The dependent variable was dichotomous verdict (guilty vs. not guilty). The results of the binary logistic regression in Table G1 show that harm significantly contributes to dichotomous verdict, $Wald = 3.914, p = .048$. In the severe harm condition, more participants (11.6%) found the defendant guilty than in the mild harm condition (5%) (see Table G2). Intentionality also significantly contributed to dichotomous verdict, $Wald = 31.153, p < .001$. When there was greater attribution of intentionality, participants were more likely to find the defendant guilty. The model could explain 67.6% of the variability in decorous verdict, based on the Nagelkerke R^2 statistic.

Table G1

Binary Logistic Regression Analysis for Dichotomous Verdict (Guilty/ Not Guilty)

Model		Unstandardized Coefficients			Sig.
		B	Std. Error	Wald	
1	(Constant)	-11.237	2.622	18.363	.000
	Harm*	1.787	0.903	3.914	.048
	Victim	-.375	.764	.241	.624
	Intentionality**	1.709	.306	31.153	.000

* $p < .05$. ** $p < .001$.

Table G2
Dichotomous Verdicts by Condition

Harm	Victim	Instructions	Not Guilty	Guilty	N
Mild	Child	Yes	35	1	36
		No	23	0	23
		Total	58	1	59
	Adult	Yes	33	2	35
		No	24	3	27
		Total	57	5	62
	Total	Yes	68	3	71
		No	47	3	50
		Total	115	6	121
Severe	Child	Yes	32	4	36
		No	28	4	32
		Total	60	8	68
	Adult	Yes	31	5	36
		No	31	3	34
		Total	62	8	70
	Total	Yes	63	9	72
		No	59	7	66
		Total	122	16	138
Total	Child	Yes	67	5	72
		No	51	4	55
		Total	118	9	127
	Adult	Yes	64	7	71
		No	55	6	61
		Total	119	13	132
	Total	Yes	131	12	143
		No	106	10	116
		Total	237	22	259

Research Question 4 and its hypotheses relating to verdict confidence were re-evaluated for dichotomous verdict. A hierarchical binary logistic regression was utilized with level of harm, victim, and intentionality as independent variables entered in the first step and intentionality as a covariate entered in the second step. Collinearity diagnostics showed that the

independent variables were not correlated with each other, and, therefore, there were no concerns of multicollinearity. The results of the binary logistic regression in Table G3 shows that only intentionality (Hypothesis 4) significantly contributed to verdict ($Wald = 31.575, p = .000$). An increase of one on the intentionality scale leads to an increase of 1.770 times in the odds ratio of finding a guilty verdict. The Nagelkerke R^2 indicates that 67.6% of the variability in dichotomous verdict could be accounted for by the model.

Table G3
Hierarchical Logistic Regression Analysis for Verdict (Guilty/ Not Guilty) with Intentionality as Covariate.

		Unstandardized Coefficients			
Model		B	Std. Error	Wald	Sig.
1	(Constant)	-11.237	2.622	18.363	.000
	Harm*	1.787	0.903	3.914	.048
	Victim	-.375	.764	.241	.624
	Intentionality**	1.709	.306	31.153	.000
2	(Constant)	-10.693	2.559	17.468	.000
	Instruction	-.975	.756	1.663	.197
	Harm*	1.720	.899	3.659	.056
	Victim	-.500	.784	.407	.523
	Intentionality**	1.770	.315	31.575	.000

* $p < .05$. ** $p < .001$.

Appendix H Analysis of Just-World Scale by Condition

To examine whether participants' performance on the JWS (Rubin & Peplau, 1975) was indicative of the attribution of intentionality, a median split of scores on the JWS scale divided participants between the upper 50th percentile, high JWS, and the lower 50th percentile, low JWS. Tables H1, H2, and H3 display mean intentionality ratings, verdict confidence scores, and recommended sentence lengths by condition for the JWS split, respectively.

Table H1
Mean Intentionality Ratings for JWS Split by Condition

Harm	Victim	Instruction	JWS Split	Mean	SD	N
Mild	Child	Yes	Low	2.14	.95	14
			High	2.05	1.21	22
			Total	2.08	1.11	36
		No	Low	2.08	1.12	13
			High	1.80	.63	10
			Total	1.96	.93	23
		Total	Low	2.11	1.01	27
			High	1.97	1.06	32
			Total	2.03	1.03	59
	Adult	Yes	Low	2.47	1.91	17
			High	2.39	1.69	18
			Total	2.43	1.77	35
		No	Low	2.47	1.55	17
			High	3.10	2.08	10
			Total	2.70	1.75	27
		Total	Low	2.47	1.71	34
			High	2.64	1.83	28
			Total	2.55	1.75	62
Total	Yes	Low	2.32	1.54	31	
		High	2.20	1.44	40	
		Total	2.25	1.47	71	
	No	Low	2.30	1.37	30	
		High	2.45	1.64	20	
		Total	2.36	1.47	50	
	Total	Low	2.31	1.44	61	
		High	2.28	1.50	60	
		Total	2.30	1.46	121	
Severe	Child	Yes	Low	2.58	1.30	19
			High	3.24	1.89	17
			Total	2.89	1.62	36
		No	Low	2.33	1.29	15
			High	2.47	1.23	17
			Total	2.41	1.24	32
	Total	Low	2.47	1.28	34	
		High	2.85	1.62	34	
		Total	2.66	1.46	68	
	Adult	Yes	Low	3.07	1.58	15
			High	2.71	1.62	21
			Total	2.86	1.59	36
No		Low	2.82	1.24	17	
		High	2.47	1.12	17	

			Total	2.65	1.18	34
		Total	Low	2.94	1.39	32
			High	2.61	1.41	38
			Total	2.76	1.40	70
	Total	Yes	Low	2.79	1.43	34
			High	2.95	1.74	38
			Total	2.88	1.59	72
		No	Low	2.59	1.27	32
			High	2.47	1.16	34
			Total	2.53	1.21	66
		Total	Low	2.70	1.35	66
			High	2.72	1.50	72
			Total	2.71	1.43	138
Total	Child	Yes	Low	2.39	1.17	33
			High	2.56	1.64	39
			Total	2.49	1.43	72
		No	Low	2.21	1.20	28
			High	2.22	1.09	27
			Total	2.22	1.13	55
		Total	Low	2.31	1.18	61
			High	2.42	1.44	66
			Total	2.37	1.31	127
	Adult	Yes	Low	2.75	1.76	32
			High	2.56	1.64	39
			Total	2.65	1.68	71
		No	Low	2.65	1.39	34
			High	2.70	1.54	27
			Total	2.67	1.45	61
		Total	Low	2.70	1.57	66
			High	2.62	1.59	66
			Total	2.66	1.57	132
	Total	Yes	Low	2.57	1.49	65
			High	2.56	1.62	78
			Total	2.57	1.56	143
		No	Low	2.45	1.31	62
			High	2.46	1.34	54
			Total	2.46	1.32	116
		Total	Low	2.51	1.40	127
			High	2.52	1.51	132
			Total	2.52	1.46	259

Note. Higher intentionality ratings represent greater attribution of intentionality (Scale: 1 to 7).

Table H2
Mean Verdict Confidence Score for JWS Split by Condition

Harm	Victim	Instruction	JWS Split	Mean	SD	N
Mild	Child	Yes	Low	3.71	1.64	14
			High	3.91	4.29	22
			Total	3.83	3.47	36
		No	Low	3.00	1.63	13
			High	3.30	2.06	10
			Total	3.13	1.79	23
		Total	Low	3.37	1.64	27
			High	3.72	3.71	32
			Total	3.56	2.93	59
	Adult	Yes	Low	3.76	4.15	17
			High	4.39	4.59	18
			Total	4.09	4.33	35
		No	Low	4.06	4.92	17
			High	6.40	7.86	10
			Total	4.93	6.13	27
		Total	Low	3.91	4.48	34
			High	5.11	5.90	28
			Total	4.45	5.16	62
Total	Yes	Low	3.74	3.21	31	
		High	4.13	4.37	40	
		Total	3.96	3.89	71	
	No	Low	3.60	3.84	30	
		High	4.85	5.82	20	
		Total	4.10	4.71	50	
	Total	Low	3.67	3.51	61	
		High	4.37	4.86	60	
		Total	4.02	4.23	121	
Severe	Child	Yes	Low	5.11	4.31	19
			High	6.76	7.22	17
			Total	5.89	5.84	36
		No	Low	4.53	5.45	15
			High	5.47	5.37	17
			Total	5.03	5.34	32
		Total	Low	4.85	4.77	34
			High	6.12	6.30	34
			Total	5.49	5.59	68
	Adult	Yes	Low	5.87	6.00	15
			High	6.19	6.33	21
			Total	6.06	6.11	36
		No	Low	5.71	5.74	17
			High	4.00	2.87	17
			Total	4.85	4.55	34

		Total	Low	5.78	5.77	32
			High	5.21	5.14	38
			Total	5.47	5.40	70
	Total	Yes	Low	5.44	5.05	34
			High	6.45	6.66	38
			Total	5.97	5.93	72
		No	Low	5.16	5.55	32
			High	4.74	4.31	34
			Total	4.94	4.91	66
		Total	Low	5.30	5.26	66
			High	5.64	5.70	72
			Total	5.48	5.47	138
Total	Child	Yes	Low	4.52	3.47	33
			High	5.15	5.85	39
			Total	4.86	4.88	72
		No	Low	3.82	4.15	28
			High	4.67	4.51	27
			Total	4.24	4.31	55
		Total	Low	4.20	3.78	61
			High	4.95	5.31	66
			Total	4.59	4.63	127
	Adult	Yes	Low	4.75	5.12	32
			High	5.36	5.60	39
			Total	5.08	5.36	71
		No	Low	4.88	5.33	34
			High	4.89	5.28	27
			Total	4.89	5.26	61
		Total	Low	4.82	5.19	66
			High	5.17	5.43	66
			Total	4.99	5.30	132
	Total	Yes	Low	4.63	4.33	65
			High	5.26	5.69	78
			Total	4.97	5.11	143
		No	Low	4.40	4.82	62
			High	4.78	4.87	54
			Total	4.58	4.83	116
		Total	Low	4.52	4.56	127
			High	5.06	5.35	132
			Total	4.80	4.98	259

Note. Verdict confidence scores (Scale: 1 to 22) are a composite measure of dichotomous verdicts and confidence in verdict. Higher scores indicate greater confidence in guilt.

Table H3
Mean Recommended Sentence Length for JWS Split by Condition

Harm	Victim	Instruction	JWS Split	Mean	SD	N
Mild	Child	Yes	Low	3.83	4.95	14
			High	4.38	5.61	22
			Total	4.17	5.30	36
		No	Low	4.12	4.58	13
			High	3.57	4.76	10
			Total	3.88	4.56	23
		Total	Low	3.97	4.68	27
			High	4.13	5.30	32
			Total	4.06	4.98	59
	Adult	Yes	Low	4.20	7.39	17
			High	2.38	4.90	18
			Total	3.27	6.21	35
		No	Low	.84	2.01	17
			High	8.57	10.41	10
			Total	3.70	7.38	27
		Total	Low	2.52	5.60	34
			High	4.59	7.77	28
			Total	3.46	6.69	62
	Total	Yes	Low	4.03	6.30	31
			High	3.48	5.33	40
			Total	3.72	5.74	71
No		Low	2.26	3.69	30	
		High	6.07	8.28	20	
		Total	3.79	6.18	50	
Total		Low	3.16	5.22	61	
		High	4.35	6.51	60	
		Total	3.75	5.90	121	
Severe	Child	Yes	Low	5.83	7.64	19
			High	5.25	4.40	17
			Total	5.56	6.24	36
		No	Low	5.71	6.30	15
			High	8.82	7.90	17
			Total	7.37	7.25	32
	Total	Low	5.78	6.98	34	
		High	7.04	6.55	34	
		Total	6.41	6.75	68	
	Adult	Yes	Low	7.14	7.99	15
			High	4.76	6.32	21
			Total	5.75	7.05	36
No		Low	7.77	8.11	17	
		High	7.14	8.09	17	
		Total				

			Total	7.46	7.98	34
		Total	Low	7.48	7.93	32
			High	5.83	7.16	38
			Total	6.58	7.51	70
	Total	Yes	Low	6.41	7.70	34
			High	4.98	5.48	38
			Total	5.65	6.61	72
		No	Low	6.81	7.28	32
			High	7.98	7.92	34
			Total	7.41	7.58	66
		Total	Low	6.60	7.45	66
			High	6.40	6.86	72
			Total	6.50	7.12	138
Total	Child	Yes	Low	4.98	6.62	33
			High	4.76	5.07	39
			Total	4.86	5.79	72
		No	Low	4.97	5.53	28
			High	6.88	7.27	27
			Total	5.91	6.46	55
		Total	Low	4.98	6.09	61
			High	5.63	6.11	66
			Total	5.32	6.08	127
	Adult	Yes	Low	5.58	7.69	32
			High	3.66	5.76	39
			Total	4.53	6.72	71
		No	Low	4.31	6.80	34
			High	7.67	8.84	27
			Total	5.80	7.88	61
		Total	Low	4.92	7.22	66
			High	5.30	7.39	66
			Total	5.11	7.28	132
	Total	Yes	Low	5.27	7.12	65
			High	4.21	5.42	78
			Total	4.70	6.25	143
		No	Low	4.61	6.22	62
			High	7.28	8.03	54
			Total	5.85	7.21	116
		Total	Low	4.95	6.67	127
			High	5.47	6.76	132
			Total	5.21	6.71	259

Note. Longer recommended sentences represent greater deserved punishment (Scale: 0 to 25 years).

To determine if participants who were high and low on the JWS differed in their attribution of intentionality as a result of harm severity and victim, a two-way analysis of variance was utilized with intentionality ratings as the dependent measure and harm, victim, and JWS split as factors. No significant main effect for JWS split, $F = .012$, $p = .912$, was observed (see Table H4). Further, JWS split did not significantly interact with harm, $F = .001$, $p = .978$, or victim, $F = .308$, $p = .580$.

Table H4
Factorial ANOVA Results (DV = Intentionality)

Source	Type III SS	Df	Mean Square	F	Sig.
Corrected Model	24.448	7	3.493	1.679	.115
Intercept	1610.823	1	1610.823	774.221	.000
Harm*	11.204	1	11.204	5.385	.021
Victim	6.283	1	6.283	3.020	.083
JWS Split	.026	1	.026	.012	.912
Harm X Victim	2.655	1	2.655	1.276	.260
Harm X JWS Split	.002	1	.002	.001	.978
Victim X JWS Split	.640	1	.640	.308	.580
Harm X Victim X JWS Split	4.241	1	4.241	2.038	.155
Error	522.224	251	2.081		
Total	2188.000	259			
Corrected Total	546.672	258			

Note. $R^2 = .045$ (Adjusted $R^2 = .018$). * $p < .05$.

To determine if participants' JWS scores affected the relationship of harm, intentionality, and victim on verdict confidence score, a hierarchical regression analysis was conducted with JWS score entered as a covariate. For the regression models, the JWS score, as opposed to the JWS split, was entered in the model. Higher scores indicating a greater belief in a just world. The JWS score was not statistically significant in the model ($\beta = .042, p = .310$) with verdict confidence as the dependent variable and harm, victim, instruction, and JWS Score as independent factors (see Table H5).

Table H5
Hierarchical Regression Analysis for Verdict Confidence with JWS Score as a Covariate

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
1 (Constant)	-1.765	.930		-1.898	.059		
Harm	.403	.414	.040	.972	.332	.980	1.021
Victim	-.337	.411	-.034	-.819	.414	.990	1.010
Intentionality**	2.563	.143	.749	17.933	.000	.970	1.031
2 (Constant)	-1.590	1.081		-1.471	.143		
Harm	.412	.416	.041	.991	.323	.974	1.026
Victim	-.332	.412	-.033	-.806	.421	.989	1.012
Intentionality**	2.561	.143	.749	17.863	.000	.967	1.034
Instruction	-.131	.413	-.013	-.317	.751	.992	1.008
3 (Constant)	-2.752	1.573		-1.749	.081		
Harm	.410	.416	.041	.985	.326	.974	1.026
Victim	-.325	.412	-.033	-.788	.432	.988	1.012
Intentionality**	2.559	.143	.748	17.850	.000	.967	1.034
Instruction	-.120	.414	-.012	-.290	.772	.992	1.008
JWS Score	.324	.319	.042	1.017	.310	.999	1.001

** $p < .001$.

To determine if participants' JWS scores affected the relationship of harm, intentionality, and victim on recommended sentence, a hierarchical regression analysis was conducted with the JWS score entered as a covariate. JWS score was a statistically significant predictor of recommended sentence, $\beta = .112$, $p = .045$ (see Table H6). As JWS scores increased, so did length of recommended sentence. The inclusion of the JWS score into the model did not significantly affect the findings for harm, victim, or attribution of intentionality.

Table H6
Hierarchical Regression Analysis for Recommended Sentence Length with JWS Score as a Covariate

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
1 (Constant)	-1.349	1.711		-.788	.431		
Harm*	1.991	.762	.148	2.611	.010	.980	1.021
Victim	-.719	.757	-.054	-.950	.343	.990	1.010
Intentionality**	1.825	.263	.396	6.938	.000	.970	1.031
2 (Constant)	-3.016	1.980		-1.523	.129		
Harm*	1.900	.762	.142	2.494	.013	.974	1.026
Victim	-.762	.755	-.057	-1.010	.314	.989	1.012
Intentionality**	1.847	.263	.401	7.037	.000	.967	1.034
Instruction	1.255	.757	.093	1.657	.099	.992	1.008
3 (Constant)	-7.213	2.864		-2.519	.012		
Harm*	1.891	.757	.141	2.498	.013	.974	1.026
Victim	-.734	.750	-.055	-.979	.329	.988	1.012
Intentionality**	1.841	.261	.399	7.054	.000	.967	1.034
Instruction	1.295	.753	.096	1.720	.087	.992	1.008
JWS Score*	1.171	.580	.112	2.018	.045	.999	1.001

* $p < .05$. ** $p < .001$.

Appendix I
Descriptive Statistics and Analysis of Additional Dependent Measures

Although no hypotheses were stated for other measures of defendants' accountability, these items were ascertained and analyzed. The investigation included the degree to which participants agreed that the defendant 1) intentionally caused injury to the victim (see Table I1); 2) was responsible for the fire (see Table I2); 3) was responsible for injury to the victim (see Table I3); 4) was to blame for the fire (see Table I4); and was to blame for injury to the victim (see Table I5).

Table I1

Mean Ratings for Intentional Injury to Victim

Harm	Victim	Instructions	Mean	SD	N
Mild	Child	Yes	1.42	0.77	36
		No	1.17	0.49	23
		Total	1.32	0.68	59
	Adult	Yes	1.66	1.24	35
		No	1.89	1.72	27
		Total	1.76	1.46	62
	Total	Yes	1.54	1.026	71
		No	1.56	1.343	50
		Total	1.55	1.16	121
Severe	Child	Yes	1.69	1.12	36
		No	1.44	0.76	32
		Total	1.57	0.97	68
	Adult	Yes	1.72	.815	36
		No	1.94	1.32	34
		Total	1.83	1.09	70
	Total	Yes	1.71	0.97	72
		No	1.70	1.12	66
		Total	1.70	1.04	138
Total	Child	Yes	1.56	0.96	72
		No	1.33	0.67	55
		Total	1.46	0.85	127
	Adult	Yes	1.69	1.04	71
		No	1.92	1.5	61
		Total	1.8	1.27	132
	Total	Yes	1.62	1.00	143
		No	1.64	1.21	116
		Total	1.63	1.10	259

Note: Participants were asked to indicate their level of agreement that, “The defendant intentionally caused injury to another person.” Higher scores indicate greater agreement. Scale: 1 to 7.

Table I2
Mean Ratings for Responsibility for Fire

Harm	Victim	Instructions	Mean	SD	N
Mild	Child	Yes	6	1.24	36
		No	6	1.54	23
		Total	6	1.35	59
	Adult	Yes	6.17	1.22	35
		No	6.11	1.55	27
		Total	6.15	1.37	62
	Total	Yes	6.08	1.23	71
		No	6.06	1.53	50
		Total	6.07	1.36	121
Severe	Child	Yes	6.17	0.97	36
		No	6.38	1.01	32
		Total	6.26	0.99	68
	Adult	Yes	5.89	1.67	36
		No	6.18	1.19	34
		Total	6.03	1.18	70
	Total	Yes	6.03	1.07	72
		No	6.27	1.10	66
		Total	6.14	1.09	138
Total	Child	Yes	6.08	1.11	72
		No	6.22	1.26	55
		Total	6.14	1.17	127
	Adult	Yes	6.03	1.2	71
		No	6.15	1.35	61
		Total	6.08	1.27	132
	Total	Yes	6.06	1.15	143
		No	6.18	1.30	116
		Total	6.11	1.22	259

Note: Participants were asked to indicate their level of agreement that, "The defendant is responsible for starting the fire." Higher scores indicate greater agreement. Scale: 1 to 7.

Table I3
Mean Ratings for Responsibility for Injury to Victim

Harm	Victim	Instructions	Mean	SD	N
Mild	Child	Yes	5.39	1.46	36
		No	5.22	1.54	23
		Total	5.32	1.48	59
	Adult	Yes	4.94	1.97	35
		No	5.48	1.87	27
		Total	5.18	1.93	62
	Total	Yes	5.17	1.73	71
		No	5.36	1.71	50
		Total	5.25	1.72	121
Severe	Child	Yes	5.11	1.55	36
		No	5.56	1.56	32
		Total	5.32	1.56	68
	Adult	Yes	4.92	1.76	36
		No	5.09	2.11	34
		Total	5.00	1.93	70
	Total	Yes	5.01	1.649	72
		No	5.32	1.866	66
		Total	5.16	1.76	138
Total	Child	Yes	5.25	1.5	72
		No	5.42	1.55	55
		Total	5.32	1.52	127
	Adult	Yes	4.93	1.85	71
		No	5.26	2	61
		Total	5.08	1.92	132
	Total	Yes	5.09	1.686	143
		No	5.34	1.793	116
		Total	5.2	1.74	259

Note: Participants were asked to indicate their level of agreement that, “The defendant is responsible for causing injury to another person.” Higher scores indicate greater agreement. Scale: 1 to 7.

Table I4
Mean Ratings for Blame for Fire

Harm	Victim	Instructions	Mean	SD	N
Mild	Child	Yes	5.89	1.24	36
		No	6.13	1.22	23
		Total	5.98	1.23	59
	Adult	Yes	5.86	1.42	35
		No	6.04	1.06	27
		Total	5.94	1.27	62
	Total	Yes	5.87	1.32	71
		No	6.08	1.12	50
		Total	5.96	1.24	121
Severe	Child	Yes	5.75	1.23	36
		No	6.03	1.31	32
		Total	5.88	1.26	68
	Adult	Yes	5.89	1.19	36
		No	6.21	1.01	34
		Total	6.04	1.11	70
	Total	Yes	5.82	1.20	72
		No	6.12	1.16	66
		Total	5.96	1.19	138
Total	Child	Yes	5.82	1.23	72
		No	6.07	1.26	55
		Total	5.93	1.24	127
	Adult	Yes	5.87	1.3	71
		No	6.13	1.02	61
		Total	5.99	1.18	132
	Total	Yes	5.85	1.26	143
		No	6.10	1.14	116
		Total	5.96	1.21	259

Note: Participants were asked to indicate their level of agreement that, “The defendant is to blame for starting the fire.” Higher scores indicate greater agreement. Scale: 1 to 7.

Table I5
Mean Ratings for Blame for Injury to Victim

Harm	Victim	Instructions	Mean	SD	N
Mild	Child	Yes	5.44	1.42	36
		No	5.35	1.37	23
		Total	5.41	1.39	59
	Adult	Yes	4.94	1.94	35
		No	5.19	1.96	27
		Total	5.05	1.94	62
	Total	Yes	5.20	1.704	71
		No	5.26	1.700	50
		Total	5.22	1.70	121
Severe	Child	Yes	5.22	1.42	36
		No	5.66	1.36	32
		Total	5.43	1.4	68
	Adult	Yes	4.81	1.83	36
		No	5.26	2.05	34
		Total	5.03	1.94	70
	Total	Yes	5.01	1.64	72
		No	5.45	1.75	66
		Total	5.22	1.7	138
Total	Child	Yes	5.33	1.41	72
		No	5.53	1.36	55
		Total	5.42	1.39	127
	Adult	Yes	4.87	1.87	71
		No	5.23	2	61
		Total	5.04	1.93	132
	Total	Yes	5.10	1.669	143
		No	5.37	1.722	116
		Total	5.22	1.7	259

Note: Participants were asked to indicate their level of agreement that, “The defendant is to blame for injury to another person.” Higher scores indicate greater agreement. Scale: 1 to 7).

Participants were asked to indicate their level of agreement or disagreement with the statement, “The defendant intentionally caused injury to another person.” Responses ranged from 1 (Strongly Disagree) to 7 (Strongly Agree). To examine whether harm and victim influenced agreement that the defendant intentionally caused injury to another person, a two-way analysis of variance was conducted with intentional injury as the dependent variable. The analysis yielded a

significant main effect for victim, $F(1, 255) = 6.522, p = .011$ (see Table I6), such that when the victim was an adult, there were higher intentional injury ratings ($M = 1.80, SD = 1.27$) than when the victim was a child ($M = 1.46, SD = .85$). Harm did not significantly influence intentional injury ratings, $F(1, 255) = 1.416, p = .235$.

Table I6

Factorial ANOVA Results (DV = Intentionality Injury)

Source	Type III SS	df	Mean Square	F	Sig.
Corrected Model	9.589	3	3.196	2.710	.046
Intercept	676.962	1	676.962	573.835	.000
Harm	1.670	1	1.670	1.416	.235
Victim*	7.694	1	7.694	6.522	.011
Harm X Victim	.528	1	.528	.447	.504
Error	300.828	255	1.180		
Total	998.000	259			
Corrected Total	310.417	258			

Note. $R^2 = .031$ (Adjusted $R^2 = .019$). * $p < .05$.

Participants were asked to indicate their level of agreement or disagreement with the statement, “The defendant is responsible for starting the fire.” Responses ranged from 1 (Strongly Disagree) to 7 (Strongly Agree). To examine whether harm and victim influenced agreement that the defendant was responsible for starting the fire, a two-way analysis of variance was conducted with responsibility for fire as the dependent variable. The analysis yielded no significant effect for harm, $F(1, 255) = .237, p = .627$, or victim, $F(1, 255) = .089, p = .765$ (see Table I7).

Table I7

Factorial ANOVA Results (DV = Responsibility for Fire)

Source	Type III SS	df	Mean Square	F	Sig.
Corrected Model	2.881	3	.960	.643	.588
Intercept	9622.030	1	9622.030	6442.111	.000
Harm	.353	1	.353	.237	.627
Victim	.133	1	.133	.089	.765
Harm X Victim	2.342	1	2.342	1.568	.212
Error	380.872	255	1.494		
Total	10059.000	259			
Corrected Total	383.753	258			

Note. $R^2 = .008$ (Adjusted $R^2 = .004$).

Participants were asked to indicate their level of agreement or disagreement with the statement, “The defendant is responsible for causing injury to another person.” Responses ranged from 1 (Strongly Disagree) to 7 (Strongly Agree). To examine whether harm and victim influenced agreement that the defendant was responsible for injury to another person, a two-way analysis of variance was conducted with responsibility for injury as the dependent variable. The analysis yielded no significant effect for harm, $F(1, 255) = .165, p = .685$, or victim, $F(1, 255) = 1.165, p = .281$ (see Table I8).

Table I8

Factorial ANOVA Results (DV = Responsibility for Injury)

Source	Type III SS	df	Mean Square	F	Sig.
Corrected Model	4.748	3	1.583	.522	.667
Intercept	6985.631	1	6985.631	2305.005	.000
Harm	.499	1	.499	.165	.685
Victim	3.531	1	3.531	1.165	.281
Harm X Victim	.516	1	.516	.170	.680
Error	772.812	255	3.031		
Total	7783.000	259			
Corrected Total	777.560	258			

Note. $R^2 = .006$ (Adjusted $R^2 = -.006$).

Participants were asked to indicate their level of agreement or disagreement with the statement, “The defendant is to blame for starting the fire.” Responses ranged from 1 (Strongly Disagree) to 7 (Strongly Agree). To examine whether harm and victim influenced agreement that the defendant was to blame for starting the fire, a two-way analysis of variance was conducted with blame for fire as the dependent variable. The analysis yielded no significant effect for harm, $F(1, 255) = .000, p = .982$, or victim, $F(1, 255) = .139, p = .709$ (see Table I9).

Table I9

Factorial ANOVA Results (DV = Blame for Fire)

Source	Type III SS	df	Mean Square	F	Sig.
Corrected Model	.959	3	.320	.216	.885
Intercept	9159.436	1	9159.436	6201.045	.000
Harm	.001	1	.001	.000	.982
Victim	.205	1	.205	.139	.709
Harm X Victim	.697	1	.697	.472	.493
Error	376.655	255	1.477		
Total	9582.000	259			
Corrected Total	377.614	258			

Note. $R^2 = .003$ (Adjusted $R^2 = -.009$).

Participants were asked to indicate their level of agreement or disagreement with the statement, “The defendant is to blame for causing injury to another person.” Responses ranged from 1 (Strongly Disagree) to 7 (Strongly Agree). To examine whether harm and victim influenced agreement that the defendant was to blame for injury to another person, a two-way analysis of variance was conducted with blame for injury as the dependent variable. The analysis yielded no significant effect for harm, $F(1, 255) = .000, p = 1.0$, or victim, $F(1, 255) = 3.212, p = .074$ (see Table I10).

Table I10

Factorial ANOVA Results (DV = Blame for Injury)

Source	Type III SS	df	Mean Square	F	Sig.
Corrected Model	9.344	3	3.115	1.086	.356
Intercept	7044.279	1	7044.279	2455.065	.000
Harm	2.507E-7	1	2.507E-7	.000	1.000
Victim	9.215	1	9.215	3.212	.074
Harm X Victim	.025	1	.025	.009	.925
Error	731.667	255	2.869		
Total	7809.000	259			
Corrected Total	741.012	258			

Note. $R^2 = .013$ (Adjusted $R^2 = .001$).

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