

AGGRAVATING, AMBIGUOUS, AND ARBITRARY:
PERCEPTIONS OF HEINOUSNESS IN CAPITAL PUNISHMENT

by

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ABSTRACT

Of the 32 states with the death penalty, 25 states identify some variation of “heinous, atrocious, or cruel” as a statutory aggravating factor. In recognition of the vague nature of this factor, some states have enacted legislation that limits jurors’ discretion by providing guidance regarding how to define “heinousness,” or by outlining essential characteristics of heinous crimes. Despite this guidance, indiscriminate application is still a concern. Research has explored how heinousness affects juror decision-making, sentencing outcomes, and perceptions of the defendant; however, these studies have varied in their definitions and have not always ensured that perceptions of heinousness were different across conditions. The purpose of the current study was to better understand what elements of crimes are viewed as more or less heinous in the eyes of undergraduate mock jurors. Using a within-subject, vignette-based design, ratings of heinousness were collected for 53 vignettes and eight variables were studied (i.e., method of killing, relationship, victim age, victim vulnerability, mental suffering, physical suffering, gruesomeness, and time). Significant differences were found within each factor ($p < .001$). Results provide researchers with a framework for future heinousness research, as well as information for the legal system with regard to what constitutes heinousness.

DEDICATION

In memory of my Poppy

*Your absence has gone through me
Like thread through a needle.
Everything I do is stitched with its color.*
-W.S. Merwin

LIST OF ABBREVIATIONS AND SYMBOLS

SCOTUS	Supreme Court of the United States
HAC	Heinous, Atrocious, or Cruel
DPIC	Death Penalty Information Center
BFTO	Blunt Force Trauma with Object
BFTH	Blunt Force Trauma with Hands
QCAE	Questionnaire of Cognitive and Affective Empathy
POMC	The National Organization of Parents of Murdered Children Inc.
ANOVA	Analysis of Variance
<	Less than
>	Greater than
=	Equal to
<i>r</i>	Pearson product-moment correlation coefficient
<i>n</i>	Number of participants in a given group
<i>N</i>	Number of participants in a given sample
<i>M</i>	Mean: The sum of a set of values divided by the number of values in the set
<i>SD</i>	Standard deviation: Value of variation from the mean
<i>t</i>	T Statistic: Value determining whether sample means differ
<i>p</i>	Probability associated with the occurrence under the null hypothesis of a value extreme as or more extreme than the other observed value
χ^2	Chi-square test of significance of model fit

ϵ	Estimated epsilon
F	F statistic: Value calculated by the ratio of two sample variances
Partial η^2	Partial Eta-Squared: Value of effect size
CI	Confidence Interval
df	Degrees of Freedom

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CHAPTER 1

INTRODUCTION

With the exception of four years (1972-1976), capital punishment has always been a sentencing option in the United States (*Furman v. Georgia*, 1972). In 1972, the Supreme Court of the United States (SCOTUS or High Court) suspended the death penalty and voided 40 death penalty statutes, but within four years it was again an option. Three cases were fundamental in the reinstatement of the death penalty. In *Gregg v. Georgia* (1976), *Proffitt v. Florida* (1976), and *Jurek v. Texas* (1976), the High Court rendered decisions that changed the sentencing guidelines for capital cases; together these cases are referred to as the *Gregg* decision. The Chief Justice in *Gregg v. Georgia* concluded:

Georgia's new statutory scheme, enacted to overcome the constitutional deficiencies found in *Furman v. Georgia* (1972), to exist under the old system, not only guides the jury in its exercise of discretion as to whether or not it will impose the death penalty for first-degree murder, but also gives the Georgia Supreme Court the power and imposes the obligation to decide whether in fact the death penalty was being administered for any given class of crime in a discriminatory, standardless, or rare fashion. If that court properly performs the task assigned to it under the Georgia statutes, death sentences imposed for discriminatory reasons or wantonly or freakishly for any given category of crime will be set aside. (p. 220-224)

Similar schemes were approved in the *Proffitt v. Florida* (1976) and *Jurek v. Texas* (1976). It was believed that the new statutory scheme, proposed in these three cases, would reduce the

number of capital defendants sentenced to death and would individualize the process to ensure due process for said capital defendants. One of the most important changes to the capital sentencing process was the inclusion of two factors that jurors were instructed to consider before they render a sentencing decision. These factors are known as aggravating and mitigating factors. Aggravating and mitigating factors are circumstances related to characteristics of the offender and/or elements of the crime that must be considered to determine the penalty for a capital crime. Aggravating factors are circumstances that justify a more severe penalty. If the jury determines an aggravating factor is present, then the death sentence can be imposed; if not, the only option is life without the possibility of parole. Overall, aggravating factors must be relevant to the crime, supported by evidence, and provide reason for why the offense is worse relative to other first-degree murders (Kirchmeier, 1998; Rosen, 1985). These factors can be characteristics of the crime itself, the defendant, or the victim.

While the addition of aggravating and mitigating factors had the potential to decrease juror discretion, the High Court acknowledged that some factors could be interpreted subjectively. In the *Gregg* decision, the Justices acknowledged that the subjective interpretation of factors could lead to indiscriminate determinations of death sentences based on biases and personal opinion, and as such, the defendant's constitutional rights may not adequately be protected. For example, "outrageously wanton or vile, horrible or inhuman in that it involved torture, depravity of the mind or an aggravated battery to the victim" (O.C.G.A. § 17-10-30(b)(7)) was an example of a factor that the High Court identified as inherently subjective (*Gregg v. Georgia*, 1976). In an attempt to limit the impact of subjectivity, the Court stated that neither aggravating nor mitigating factors should be too broad or too vague (*Gregg v. Georgia*, 1976).

As a result of the *Gregg* decision, each state determined its own list of aggravating factors to be considered in capital cases. Typically, aggravating factors are related to the characteristics of the offense, offender, and victim (Acker, Bohm, & Lanier, 1998), but due to the leeway given to the states, small differences exist across the country (Vollum, Del Carmen, Frantzen, San Miguel, & Cheeseman, 2015). What is consistent, however, is that in each state the prosecution must prove beyond a reasonable doubt that at least one statutorily defined aggravator exists in their case (*Presnell v. Georgia*, 1978).

In *Lockett v. Ohio* (1978) the Court took a step back from their decision in *Gregg* and allowed for complete subjectivity in terms of mitigating factors. As per *Lockett*, Alabama included the following in the criminal code:

Mitigating circumstances shall include any aspect of a defendant's character or record and any of the circumstances of the offense that the defendant offers as a basis for a sentence of life imprisonment without parole instead of death, and any other relevant mitigating circumstance which the defendant offers as a basis for a sentence of life imprisonment without parole instead of death. (Alabama Code § 13-A-5-52)

In *Godfrey v. Georgia* (1980) the question of subjectivity was once again at issue. In this case, the High Court decided Georgia's aggravating factor of "outrageously wanton or vile, horrible or inhuman" was applied in an unconstitutionally vague way. They further noted that capital offenses must be identified in a fair and consistent manner based on aggravating factors, and only individuals charged with these offenses are death penalty eligible. If the aggravating factor is vague, the Court must provide clear guidelines and standards to limit the use of juror discretion through statutory definitions of aggravating factors (*Godfrey v. Georgia*, 1980).

The use of aggravating factors was reaffirmed in *Zant v. Stephens* (1983) when the High Court stated the following:

An aggravating circumstance must genuinely narrow the class of persons eligible for the death penalty and must reasonably justify the imposition of a more severe sentence on the defendant compared to others found guilty of murder . . . Statutory aggravating circumstances play a constitutionally necessary function at the state of legislative definition: they circumscribe the class of persons eligible for death penalty. (p. 877-888)

In 28 states and within the federal government, juries decide upon the existence of aggravating factors and make a sentencing determination, while in two states (i.e., Delaware and Alabama) judges make the determination with juror input. Prior to 2016, judges in Florida also made the sentencing decision with juror input of an “advisory sentence.” This sentencing scheme was found unconstitutional as it violated the defendant’s 6th Amendment right (*Hurst v. Florida*, 2016). Capital punishment within the military has its own unique process involving a panel of enlisted personnel and the approval of the President of the United States (Death Penalty Information center [DPIC], n.d.).

With regard to the unanimity of decisions, almost all states, with the exception of two, require the sentencing decision of the jury to be unanimous. Alabama and Delaware do not require a unanimous decision; juries in these two states can submit a non-unanimous recommendation, which is one factor that can be considered by the judge (DPIC, n.d.; Vollum et al., 2015). Prior to *Hurst v. Florida* (2016), Florida only required a majority vote. Similarly, the number of aggravating factors varies by state with some states requiring only one. Generally, the burden of proof is on the State and the standard is beyond a reasonable doubt (DPIC, n.d.).

The lists of aggravating factors developed by each state must meet the holding in *Gregg*

v. Georgia (1976). A review of state statutes revealed that many aggravating circumstances are defined by non-subjective criteria such as the defendant's prior criminal record, age or status of the victim, how the murder was carried out, and the intended purpose of the murder, among others. In contrast, other statutorily defined aggravating circumstances are vaguely defined and subjective in nature and as such, are open to interpretation (Adger, 2010; DPIC, n.d.; Rosen, 1985; Vollum et al., 2015). One example of such a factor is whether the crime was deemed to be "heinous, atrocious, or cruel," also referred to as "HAC."

Heinous, Atrocious, or Cruel

Of the 32 states with the death penalty, 25 identify some variation of "heinous, atrocious, or cruel" (HAC) as a statutory aggravating factor. According to Adger (2010), HAC is intended to help determine homicides in which the victims experienced more pain and suffering in comparison to other murders. Due to its highly subjective nature, this factor has resulted in a great amount of litigation (e.g., *Keller v. State*, 1979; *State v. Goodman*, 1979; *Godfrey v. Georgia*, 1980; *State v. Pritchett*, 1981; *Bui v. State*, 1988; *Maynard v. Cartwright*, 1988; *Lewis v. Jeffers*, 1990, *Shell v. Mississippi*, 1990, amongst many others). At its core, the issue is subject to jury or judicial discretion and therefore it can lead to violations of a defendant's due process rights as protected under the 5th and 14th Amendments.

In recognition of the vague nature of HAC, some states have enacted legislation that limits jurors' discretion and have done so by providing jurors guidance regarding what is meant by the terms and/or by outlining the essential characteristics of heinous crimes (Kessler, 1994; Vollum et al., 2015). For example, Tennessee requires evidence of "torture or serious physical abuse of the victim" (Tenn. Code Ann. § 39-13-204(i)(5)), and Utah requires "physical torture, serious physical abuse, or serious bodily injury of the victim before death" (Utah 76-5-201 (r)).

In order to help jurors decipher the terms, Arizona (*State v. Knapp*, 1977) and Oklahoma (*Eddings v. State*, 1980) provide jurors instructions that include the definitions of heinous, atrocious, cruel, and depraved. Alabama's definition of "heinous, atrocious, or cruel" is known as the *Kyzer* standard: "those conscienceless or pitiless homicides which are unnecessarily torturous to the victim" (*Ex parte Kyzer*, 1981). In 1989, Alabama further outlined three common characteristics of "heinous, atrocious, or cruel" homicides: psychological torture, appreciable suffering, and overkill (*Norris v. State*, 1989).

While some states have provided jurors with more structured guidelines regarding how to determine whether a crime is "heinous, atrocious, or cruel" (e.g., *Eddings v. State*, 1980; *Ex parte Kyzer*, 1981; *Norris v. State*, 1989; *State v. Knapp*, 1977), indiscriminate application is still a concern. As discussed below, Rosen (1985) identified numerous examples in which the trier-of-fact (sometimes the jury and sometimes the judge) determined that the crime was "heinous, atrocious, or cruel" and what was deemed important in one case was deemed unimportant in another.

Using cases out of Florida, Rosen demonstrated that heinous, atrocious, and cruel is in the "eyes of the beholder" rather than dictated by law. For instance, in one case (*Sireci v. State*, 1981), lack of remorse was sufficient to the finding of "heinous, atrocious, or cruel," while in another (*Pope v. State*, 1983) a lack of remorse was identified as irrelevant. A similar pattern was shown in other cases with elements of the crime, such as the victim's intoxication (*Herzog v. State*, 1983; *White v. State*, 1982), victim's helplessness (*Ford v. State*, 1980; *Lewis v. State*, 1979), victim's awareness of his or her impending death (*Adams v. State*, 1982; *Breedlove v. State*, 1982), the amount of time the victim suffered (*Mason v. State*, 1984; *Teffeteller v. State*, 1984), the method of killing (*Antone v. State*, 1980; *Palmes v. State*, 1981), among many others,

were considered to be heinous, atrocious or cruel in one case, but not another (Rosen, 1985).

The vague, inconsistent, and subjective nature of the HAC aggravating factor is best described in Justice Blackmun's dissent in *Tuilaepa v. California* (1994):

Prosecutors have argued, and jurors are free to find, that "circumstances of the crime" constitutes an aggravating factor because the defendant killed the victim for some purportedly aggravating motive, such as money, or because the defendant killed the victim for no motive at all; ... because the defendant attempted to conceal his crime, or made no attempt to conceal it; because the defendant made the victim endure the terror of anticipating a violent death, or because the defendant killed without any warning; and because the defendant had a prior relationship with the victim, or because the victim was a complete stranger. (pp. 984-986)

A review of the aggravating circumstances, as listed on DPIC (n.d.), and more recent literature (Vollum et al., 2015) clearly shows that the subjective nature of the criterion remains a concern. As noted by Rosen (1985) almost 20 years ago, "to say that a murder is especially heinous if it is 'grossly bad' or 'shockingly evil' is to say nothing" (p. 970).

Previous Research on the Role of Heinousness in Jury Decision-Making

To date, few studies have evaluated the role that HAC plays in jury decision-making, and those that do exist differ in important ways such as sample (i.e., real versus mock jurors), the ways in which heinousness was manipulated (e.g., victim age; victim gender; method of killing; location of killing; post-mortem mutilation; defendant characteristics), and the way in which heinousness was defined. Moreover, as will become clear, the findings from research are difficult to interpret because the meaning of the term heinous has not been held constant. For example, McPherson (2002) defined heinousness as, "a domain of activity related to the character of

criminals who cannot be rehabilitated or ‘cured’ of their violent propensities” (p. 460). In contrast, Reamer (2007) defined heinousness based on crimes rather than offender characteristics: “heinous crimes involve offenses that are odious, shockingly cruel, and abhorrent” (p. 307).

Hendrick and Shaffer (1975) investigated mock jurors’ judgments regarding the presence of post-mortem mutilation. These researchers hypothesized that, due to participants’ emotional reactions to mutilation (i.e., the victim’s head and hands were severed with a knife), heinousness would be related to harsher sentences. Participants who received conditions with post-mortem mutilation imposed sentences that were on average 50 years longer, were less likely to include the option of parole, and were more in favor of the death penalty, as compared to participants in the non-mutilation condition. Further, these participants were also more likely to view the defendant as “insane” and viewed the crime as more morally evil and intentional (Hendrick & Shaffer, 1975). Though significant, the results may or may not reflect findings related to heinousness, as explicit ratings of heinousness were not garnered from participants. Hence, participants may have considered factors other than heinousness when making their sentencing determination.

White (1987) asked mock jurors to listen to a mock trial and determine whether life without parole or the death penalty was an appropriate sentence for the crime. They were also asked to answer additional questions regarding their perceptions of the defendant. The researcher created three vignettes that varied on the basis of type of crime, method of killing, number of victims, and vulnerability of the victim. In the first vignette, a store clerk attempted to escape a robbery and was shot in the head once while running away. In the second vignette, the clerk was bound to the chair and shot two times at close range. In the “heinous” condition proposed in the

third vignette, the perpetrator picked up female hitchhikers, on three separate occasions, and strangled and shot each victim in a remote location. He attempted to murder a fourth victim; however, she was able to escape and contact police. The results revealed participants who were exposed to the heinous crime scenario were more punitive and more often identified the defendant as a future danger to others (White, 1987). Similar to Hendrick and Shaffer (1975), it is unclear whether the perceived level of heinousness was the explanatory factor in this study, as the researcher did not assess participants' direct perception of heinousness.

In a two-part study, researchers (Finkel & Duff, 1991) investigated community sentiments regarding capital felony-murder with more than one defendant. Participants first read one of four vignettes, all involved the death of a store clerk during a robbery, but varied on the way in which the victim died (i.e., heart attack, accidentally shot, "heinous" murder/beaten and shot, or premeditated murder/purposefully shot), as well as the role of each of the four defendants (i.e., getaway driver, lookout, sidekick, or triggerman). The "heinous" condition was described as follows: "Following the clerk grabbing for the gun, the triggerman wantonly beats the clerk with the pistol and empties six shots into him" (p. 409). The heinous condition differed from the other three in that it depicted a more physical attack that involved more gunshot wounds. Participants were asked to render a verdict and assign a sentence, with one option being the death penalty. The results revealed participants were more likely to find the triggerman guilty and subsequently sentence the individual to death more often in the heinous condition, as compared to the other three (Finkel & Duff, 1991).

In the second part of the Finkel and Duff (1991) experiment, participants were told that there was a four-four split regarding the imposition of the death penalty and were instructed to give the final vote to determine the defendant's sentence. When the defendant was the

triggerman in the heinous condition, the results were 68% in favor of the death penalty; this was the only condition to exceed 50%. Participants in other conditions reversed and remanded the death sentence 53% to 97% of the time depending on the defendant's role in the crime (Finkel & Duff, 1991). Of note, there was no a priori investigation of the stimulus materials to ensure that the condition deemed to be heinous reflected a higher perceived level of heinousness. Similar to research that preceded this study, it is unclear whether the decisions were based on levels of heinousness or some other factor.

More recently, Adger (2010) sought to evaluate crime characteristics in homicides deemed "heinous, atrocious, or cruel." Using judicial opinions from the Alabama Court of Criminal Appeals and Supreme Court, between 1976 and 2008, Adger evaluated 414 cases in which a sentence of death was imposed. Crime, victim, defendant, and procedural characteristics were coded for each case and the data were analyzed through correlations and logistic regressions. Weakness of the victim, evidence of increased physical and mental suffering, a subsequent attack despite impending death, and various methods of killing were all positively correlated with a finding of HAC. Interestingly, the only method of killing that was negatively associated with HAC findings was the use of a gun as the murder weapon (Adger, 2010).

In Adger's (2010) study of the relation between crime characteristics and perception of heinousness, many factors emerged as significant predictors of a HAC finding. Evidence that the victim pled for his or her life, the continuation of a painful attack, and defendant-victim relationship (i.e., intimate) significantly predicted a finding of HAC. Particular methods of killing (i.e., knife, beating, and strangulation), additional physical pain (i.e., clubbing and stomping), and victim age (i.e., victim was a child) were also found to be significant predictors. Moreover, evidence of mutilation during the murder was a significant predictor across all

models. The number and contextual breadth of predictors led Adger to conclude that there is a great deal of variation in what leads to a jury finding of HAC. The researcher also identified inconsistencies in the finding of HAC as an aggravating factor in these cases. By considering the variables consistently found to predict a HAC finding, Adger discovered that in “about 25% of all cases in Alabama in which the defendant was sentenced to death, there is no significant difference between the cases in which HAC was found and those in which it was not found” (p. 22). The results suggest judges and juries, at times, apply the aggravating factor “heinous, atrocious, or cruel” inconsistently and potentially arbitrarily (Adger, 2010).

One limitation to the Adger (2010) study was the use of judicial opinions. While this methodology revealed evidence of findings from real cases, it is possible that details were missed or misinterpreted given that judicial opinions provided limited information. The direct relationship between these elements of the crime and the jurors’ perceptions of heinousness cannot be known from this methodology. In addition, the information included in the opinion may not be reflective of those deemed important by jurors at the time of trial. Despite this, this study provides future researchers with information regarding the prevalence of particular crime characteristics found in cases deemed heinous, atrocious, or cruel.

The Current Study

The purpose of the current study was to better understand which elements of crimes are viewed to be more or less heinous in the eyes of jurors. It is essential for research to address the lack of clarity in what jurors consider heinous based on the inclusion of “especially heinous, atrocious, or cruel” as an aggravating factor in capital cases. In a legal system where someone can be sentenced to death based on the presence of one or more aggravating factor, it is crucial to understand the elements that contribute to jurors’ determinations in sentencing. In Alabama this

aggravator was found in approximately 40% of cases¹ where the death penalty was imposed between 1976 and 2008; however, there was no pattern or link amongst the characteristics that made a crime particularly heinous (Adger, 2010).

As previously discussed, to date, researchers have looked at how heinousness affects juror decision-making, sentencing outcomes, and perceptions of the defendant; however, these studies have not always ensured that perceptions of heinousness were different across conditions. Without piloting participants' perceptions of heinousness, results cannot be confidently interpreted as being due to heinousness and not another factor. The results of this study will provide information with regard to what constitutes heinousness in a juror's mind. In regard to future research, it is the hope that these results will provide ways to appropriately manipulate levels of perceived crime heinousness. Further, results may provide the legal system with information to develop more structured guidelines for the application of this aggravator.

In order to accomplish the aforementioned goals, the study will be conducted using a vignette-based design to assess individuals' perceptions of crime heinousness. Subsequently, this study was conducted in two phases: (1) evaluation of perceptions of heinousness based on the method of killing using a vignette-based design, and (2) evaluation of the remaining seven IVs (method of killing, relationship to the victim, victim age, victim vulnerability, increased mental suffering, increased physical suffering, gruesomeness, and time elapsed before death) using a vignette-based design developed with the results from Phase 1.

¹ It is unknown how many of these cases had HAC as a sole aggravator or included multiple aggravators.

Phase 1

In Phase 1, 10 vignettes were created and each included the murder of an individual during a home burglary. The vignettes varied on the method by which the defendant killed the victim (e.g., shooting, stabbing, strangulation, etc.). Across conditions the gender of the victim and perpetrator were held constant (i.e., victim was female and perpetrator was male). Results from Phase 1 were used to determine the method of killing that people viewed to be of “moderate” heinousness. The term “moderate” was used as a descriptive term for a crime that, though heinous in nature, was not rated very high or very low in terms of heinousness.

Phase 2

The method identified as “moderate” in heinousness was used in all Phase 2 vignettes. The aim was to reduce the influence of the method of killing on the participants’ ratings of heinousness by keeping the method consistent across all variables and levels. In the second phase, vignettes were separated into seven categories (i.e., relationship to the victim; age of the victim; vulnerability of the victim; increased mental suffering; increased physical suffering; gruesomeness; time elapsed before death), each with subcategories that provide finer distinctions. In all, 43 vignettes were created. The vignettes differed by the variables of interest; only one detail related to the specific variable of interest changed and all other aspects were held constant or left out.

In all, the eight IVs were derived from previous research (Adger, 2010; Finkel & Duff, 1991; Hendrick & Shaffer, 1975; Hester & Smith, 1973; and White, 1987), legal constructs, and crime statistics. Table 1 outlines the sources of information considered in the development of the current study’s IVs and associated levels.

Table 1

Sources of Independent Variables and Associated Levels

Method of Killing	White (1987), Adger (2010), and Department of Justice Crime Statistics
Relationship to the Victim	Adger (2010) and Department of Justice Crime Statistics
Age of the Victim	Adger (2010) and existing aggravating factors
Vulnerability of the Victim	Adger (2010)
Increased Mental Suffering	Adger (2010)
Increased Physical Suffering	Finkel and Duff (1991), Hendrick and Shaffer (1975), and Adger (2010)
Gruesomeness	Exploratory
Time Elapsed before Death	Adger (2010)

Limitations of previous research revolve around failure to ensure the researchers' manipulations represented varying levels of heinousness; therefore, it is unclear whether the manipulations have accurately represented perceived heinousness or if conclusions were based on alternative factors unknown to the researcher. The purpose of the current study is to evaluate how these elements are perceived relative to one another. For this reason, participants' ratings of heinousness will serve as the basis for statistical analyses.

The IV for Phase 1 and its levels are displayed in Table 2. The remaining seven IVs and their varying levels that make up the vignettes in Phase 2 are displayed in Table 3.

Table 2

Factor and Levels for Phase 1

<u>Factor</u>	<u>Levels</u>
Method of Killing	1) Shooting 2) Stabbing 3) Blunt Force Trauma with Object (BFTO) 4) Blunt Force Trauma with Hands (BFTH) 5) Poisoning 6) Explosives 7) Fire 8) Drowning 9) Strangulation 10) Asphyxiation

Table 3
Factors and Levels for Phase 2

<u>Factor</u>	<u>Levels</u>
Relationship to the Victim	1) Stranger 2) Acquaintance 3) Friend 4) Father 5) Brother 6) Uncle 7) Cousin 8) Grandfather 9) Boyfriend 10) Husband 11) Ex-Boyfriend 12) Ex-Husband
Age of the Victim	1) Baby (6 months old) 2) Child (8 years old) 3) Teenager (15 years old) 4) Young Adult (24 years old) 5) Middle Adult (40 years old) 6) Older Adult (75 years old)
Vulnerability of the Victim	1) Average intelligence without any significant problems 2) Severe Mental Illness 3) Intellectually Disabled 4) Pregnant 5) Intoxicated 6) Physically Disabled
Increased Mental Suffering	1) No additional mental suffering 2) Pled for her life 3) Bound and Gagged 4) Mentally Torture/Verbal Abuse 5) Resumed Attack
Increased Physical Suffering	1) No additional physical suffering 2) Stomping 3) Sexual Perversion 4) Pre-mortem Mutilation 5) Post-mortem Mutilation 6) Fire
Gruesomeness	1) Low 2) Medium 3) High
Time Elapsed before Death	1) Died Instantly 2) Less than 1 hour 3) 2.5 hours 4) 10 hours 5) Over 24 hours

Hypotheses

Phase 1

In Phase 1, participants rated 10 vignettes that depicted a murder via different methods (see Table 2). The goal was to better understand how the different methods of killing varied with regard to perceptions of heinousness. It was hypothesized that there would be a main effect for method of killing. The main effect was tested using within-subjects ANOVA; the dependent variable was heinousness (rated on a scale of 0 to 100) and the levels of the IV were the 10 independent factors (e.g., shooting, stabbing, blunt force trauma with an object, etc.). A planned contrast and additional post-hoc analyses were run using the Bonferroni procedure. The rationale for this prediction is provided below:

1. The use of a gun was expected to be the least heinous method of killing relative to all others. This hypothesis is based on Adger's (2010) findings and hypothesized explanation related to reduced suffering associated with this type of death. Additionally, murder via use of a firearm is the most common method of killing in the United States, potentially making it less shocking to the average person. According to the U.S. Department of Justice, firearms were used in 73% and 49% of male and female murders in 2011 (Smith & Cooper, 2013).

Phase 2

In Phase 2, participants rated 43 vignettes that depicted a murder in which the perpetrator killed the victim with an object. The method of killing was based on ratings of "moderate" heinousness in Phase 1 (i.e., blunt force trauma with an object). These vignettes varied only on characteristics of the crime and the victim. The goal was to better understand how crime and victim characteristics impact perceptions of heinousness. It was hypothesized there would be a

main effect for each of the seven independent variables (refer to Table 3 for additional details regarding all factors and levels). The main effects were tested using one-way repeated measures ANOVAs; the dependent variable was ratings of heinousness (scale of 0 to 100) and the levels of the IVs were the independent factors. Planned contrasts and post-hoc analyses were run using the Bonferroni procedure. Rationale for each prediction is provided below:

1. It was hypothesized that when the perpetrator is a stranger, the crime would be viewed as less heinous in comparison to when the victim and perpetrator were acquainted. This is similar to Adger's (2010) finding that crimes were judged as "heinous, atrocious, or cruel" more often when the perpetrator knew the victim.
2. It was hypothesized that when the victim is under the age of 12 or over the age of 65, the crime would be viewed as more heinous than when the victim was between these ages. This hypothesis is based on the findings of Adger (2010) indicating that murder of a child and elderly adult more often results in a finding of HAC. Further, murder of a child or elderly adult is an aggravating circumstance in 17 and 6 of the 32 death penalty states, respectively.
3. It was hypothesized that a crime would be judged as more heinous when the victim was physically disabled, in comparison to the other vulnerabilities. This is similar to Adger's (2010) finding that the physical weakness of the victim, defined as a physical condition or weakness causing the individual to be defenseless, was strongly correlated with a finding of "heinous, atrocious, or cruel."
4. It was hypothesized that a crime would be judged as more heinous when the victim pled for his or her life and when the perpetrator resumed a painful attack even though it was clear that the victim was going to die. These forms of mental suffering will be viewed as

more heinous compared to other forms of mental suffering similar to findings in Adger (2010).

5. It was hypothesized that a crime would be judged as more heinous when there was evidence of pre-mortem mutilation, as compared to other forms of physical suffering (i.e., stomping, sexual perversion, post-mortem mutilation, fire), similar to findings in Adger (2010) and Hendrick and Schaffer (1975).
6. It was hypothesized that the crime with the highest level of gruesomeness would be viewed as more heinous than lower levels. This hypothesis was exploratory, as it has not been investigated in previous research. However, there seems to be a link between gruesomeness and heinousness based on definitions of the terms alone.
7. It was hypothesized that the more time it took for the victim to die, the more heinous the crime would be judged. This hypothesis is in line with the findings of Adger (2010) which indicated length between the onset of an attack and death is positively correlated with heinousness.

CHAPTER 2
METHODOLOGY

Phase 1

Participants

Participants were recruited from the Psychology 101 subject pool at a southern university, which consisted of undergraduate students enrolled in the Introduction to Psychology course. As compensation for participation, the students received course credit. Inclusion criteria for the study were modeled after national juror qualifications: The person must be (1) a citizen of the United States, (2) at least 18 years of age, (3) proficient in the English language, and (4) must not have been convicted of a felony. Participants who did not meet these criteria were not recruited for the study. Students who met inclusion criteria and chose to participate in the study were directed to the university's survey software (Qualtrics).

A total of 101 participants completed Phase 1 of this study. Participants were excluded if they failed an embedded check for attention ($n = 24$). Additionally, participants who indicated they had either been a victim or close to a victim of a violent crime were excluded ($n = 16$). The resulting 61 participants ranged in age from 18 to 21 years ($M = 18.52$, $SD = .81$) and 88.5% were female. The majority of the sample identified as Caucasian (86.9%), while the remaining participants identified as African American (4.9%), Asian (3.3%), Hispanic (3.3%), and Other (1.6%). The majority of participants identified as Republican (54.1%), followed by no affiliation (32.8%), Democrat (11.5%), and Other (1.6%). The participant demographics of this phase were

fairly consistent with the demographics of students enrolled in the university's Psychology 101 course.

Measures

Phase 1 was completed via the Internet using the university's survey software (Qualtrics). First, participants reviewed the Participant Information Sheet (Appendix A). Each participant then filled out the following materials: (1) Demographic Survey (Appendix B); (2) Exposure to Violence Questionnaire (Appendix C); (3) Preferences for Aggressive Media Questionnaire (Appendix D); (4) Survey of Crime Television Exposure (developed for the current project; Appendix E); (5) Crime Vignettes and Survey of Heinousness (developed for the current project; Appendix F); and were provided a Debriefing Form (Appendix G).

Demographic Survey. Participants were asked to report basic demographic information including age, gender, and race/ethnicity. Information including place of birth, political orientation, and political affiliation were also requested. All participants were enrolled in college at the time of participation in this study. As a result, participants were asked to report the number of semesters they had completed, their academic major, and both college and high school GPA. Further, participants were asked to indicate whether they had ever served on a jury, been the victim of a violent crime, or been close to someone who has been the victim of a violent crime. If they felt comfortable, they were asked to provide additional information about the crime. Participants who indicated they have been a victim or close to a victim of a violent crime on the demographic survey were excluded from the analyses.

Exposure to Violence Questionnaire. The Exposure to Violence Questionnaire (Gladstein, Rusonis, & Heald, 1992) is a 33-item inventory developed to gauge the frequency at which a participant has been the victim of violent crime, known a victim, or witnessed various

violent acts. The measure includes three subscales: (1) Victim, (2) Knew Victim, (3) Witness. Participants are asked to circle yes or no with regard to each item on the three subscales. This survey was administered to gauge the participants' exposure to crimes through personal experience. Participants who answered yes on the subscale "Victim" were excluded from all analyses. No psychometric information was provided by test developers.

Preferences for Aggressive Media. The Preferences for Aggressive Media questionnaire (Huh, 2011) is a nine-item Likert-style measure designed to assess the media preferences of participants. In particular, the measure addresses preferences for different forms of media (e.g., sports, films, video games, etc.) with regard to varying levels of violence and aggression. This rating scale was not used for the current study and was included for use in future studies. No psychometric information was provided by test developers.

Survey of Crime Television Exposure. The Media Preference Questionnaire was created to gather information regarding the participants' preferences for television shows involving crimes. It was modeled after Part 1 of a survey used in Shelton, Kim, and Barak's (2006) study that assessed how often the participants watched crime and law-related television shows and movies (e.g., "Criminal Minds," "Law & Order," "CSI: Crime Scene Investigation," etc.). The measure is broken into two parts. On the first part, participants are asked to rank their top three preferred types of television shows from a list of 10 options (e.g., drama, reality shows, crime, etc.).

The second part of the Survey of Crime Television Exposure consists of 18 Likert-style items. Participants are asked to indicate how often they watch shows that are currently, or have recently been, on television. Ratings ranged from "Never" to "Regularly" with an additional response to indicate they have never heard of a particular show. A list of 16 shows, one crime

related channel (e.g., “Investigation Discovery”), and an “other shows featuring crimes” item comprised the 18 items. This survey was administered to gauge the participants’ exposure to crimes through television. Future studies will use these data in order to assess whether the participant may be desensitized to the heinousness of crimes through exposure to crime-related television.

Phase 1: Crime Vignettes and Survey of Heinousness. Each participant was presented with 11 vignettes, one designed as a check for random responding. Phase 1 focused solely on the method of killing. The 10 vignettes depicted the murder of a female by a male defendant and differed only in the manner in which the victim was killed. After reading the brief vignette, participants were instructed to answer one question regarding each crime:

1. On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

Procedure

Phase 1 of the study followed a within-subjects, one-factor design. As previously noted, the conditions of the factor varied based on the method of killing (10 levels): (1) gunshot, (2) stabbing, (3) blunt force trauma with an object (BFTO), (4) blunt force trauma with hands (BFTH), (5) poisoning, (6) explosives, (7) fire, (8) drowning, (9) strangulation, and (10) asphyxiation. Potential participants were provided a brief description of the study and the inclusion criteria on the university’s online experiment management system portal (i.e., Sona). If a participant stated that they met inclusion criteria and wanted to participate, they were provided an external link to the survey. The external link directed participants to the university’s survey software (Qualtrics).

In order to ensure no one had mistakenly signed up for the study, participants were provided with the inclusion criteria at the outset of the study. Once again, participants had to

confirm they met the criteria before being able to proceed. If eligible, participants were provided with information about the study (Appendix A) regarding the purpose, procedures, possible risks, and benefits. Participants then completed the study materials listed in the Measures section (see pages 20-22).

Phase 2

Participants

Participants were recruited from the Psychology 101 subject pool at the university, which consisted of undergraduate students enrolled in lower level Psychology classes. As compensation for their participation, the students received course credit. Inclusion criteria for the study were modeled after national juror qualifications: The person must be (1) a citizen of the United States, (2) at least 18 years of age, (3) proficient in the English language, and (4) must not have been convicted of a felony. Individuals who did not meet these inclusion criteria were not recruited for the study.

A total of 385 participants completed Phase 2 of the current study, of which 29 were excluded because they failed embedded checks for attention. An additional 117 participants were excluded because he or she had either been a victim or close to a victim of a violent crime. The resulting 239 participants ranged in age from 18 to 26 years ($M = 18.67$, $SD = 1.06$) and 65.3% were female. The majority of the sample identified as Caucasian (82.4%). The remaining participants identified as African American (10.5%), Asian (1.7%), Hispanic (2.5%), Biracial (1.7%), and Other (1.2%). The majority of participants identified as Republican (57.8%), followed by no affiliation (24.1%), Democrat (14.3%), and Other (3.8%). The participant demographics of this phase were fairly consistent with the demographics of students enrolled in the university's Psychology 101 course.

Measures

Similar to Phase 1, each participant completed the following surveys/questionnaires after reviewing the Participant Information Sheet (Appendix H): (1) Demographic Survey (Appendix B); (2) Exposure to Violence Questionnaire (Appendix C); (3) Preferences for Aggressive Media Questionnaire (Appendix D); (4) Survey of Crime Television Exposure that was developed for the current project (Appendix E). Phase 2 differed from Phase 1 in that, upon completion, participants completed two additional questionnaires: (1) the Questionnaire of Cognitive and Affective Empathy (QCAE; Appendix I) and (2) the Crime Vignettes and Survey of Heinousness (Appendix J). All participants were debriefed about the purpose of the study and provided with a copy of the Debriefing Form (Appendix K).²

The Questionnaire of Cognitive and Affective Empathy (QCAE). Each participant completed the QCAE (Reniers, Corcoran, Drake, Shryane, & Völlm, 2011). The QCAE is a 31-item measure designed to assess participants' cognitive and affective empathy using a four-point Likert-scale. Cognitive empathy is defined as "a comprehension of other people's experience," whereas affective empathy is "the ability to vicariously experience the emotional experience of others" (Reniers et al., 2011; p. 85). This measure was derived from existing validated empathy questionnaires, such as the Empathy Quotient (Baron-Cohen & Wheelwright, 2004) and the Hogan Empathy Scale (Hogan, 1969).

² See Phase 1 Method for descriptions of the Demographic Survey, Exposure to Violence Questionnaire, Preferences for Aggressive Media, and Survey of Crime Television Exposure as these measures were identical to those in Phase 1.

A five-factor structure was identified by Principal Component Analysis and confirmed by Confirmatory Factor Analysis. Two of the five components measure cognitive empathy: Perspective Taking and Online Simulation. The remaining three measure affective empathy: Emotion Contagion, Peripheral Responsivity, and Proximal Responsivity. The QCAE showed good convergent validity with another measure of empathy, the Basic Empathy Scale (Jolliffe & Farrington, 2006) (cognitive empathy: $r = .62, p < .001$; affective empathy: $r = .76, p < .001$). Good construct validity was also established in the process of its development. Exploratory analyses will be conducted in future studies using these data.

Phase 2: Crime Vignettes and Survey of Heinousness. Each participant was presented with 46 vignettes, 43 of which addressed seven IVs and three vignettes were included to check for random responding. As previously described, the vignettes were similar in that all depicted the murder in the same fashion (i.e., having resulted from blunt force trauma with an object). The vignettes were written to provide minimal information and to isolate the variable of interest. To account for order effects, three forms (A, B, and C) were created to present the 43 vignettes in a randomized order. Approximately equal numbers of each form were administered to the 385 participants (32.7%, 34.3%, and 33%, respectively). Of the 239 participants included in the final analyses, 29.3% received Form A, 33.9% received Form B, and 36.8% received Form C. Average heinousness ratings did not differ between groups (i.e., $F(2, 208) = .895, p = .410$). After reading each brief vignette, participants were instructed to answer two questions regarding each crime:

1. On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____
2. What factor was most important in your decision?

The three additional vignettes to check for random responding were written similarly to the study's vignettes. They were dispersed throughout the survey to serve as an attention check. They were consistently placed near the beginning, middle, and end of the survey. These vignettes instructed the participant to answer and rate the questions in a specific way, allowing for the identification of potential random responding (i.e., Please write down the number 10 and indicate that the factor most important to your decision was "lack of information"). The inclusion of similar style questions, but with specific instructions, provided a means to detect whether a participant was putting forth substantial effort in their responses; that is, the participant read the vignette and rated it on its content. Through the detection of random responding, invalid data was removed. This allowed for a reduction of measurement error and a better representation of the relationship between the construct being measured (i.e., crime characteristics and perceived heinousness) (Huang, Curran, Keeney, Poposki, & DeShon, 2012).

Procedure

Phase 2 of the current study was a within-subjects, seven-factor design. The factors' levels varied based on characteristics of the crime and victim. The independent variables were: (1) Relationship to the victim (12 levels), (2) Age of the victim (six levels), (3) Vulnerability of the Victim (six levels), (4) Increased Mental Suffering (five levels), (5) Increased Physical Suffering (six levels), (6) Gruesomeness (three levels), and (7) Time elapsed before death (five levels) (see Table 3 for additional details).

Potential participants were provided a brief description of the study and the inclusion criteria on the university's online experiment management system portal (i.e., Sona). If an individual wanted to and was able to participate, they signed up on Sona for a particular data collection session. Data collection sessions were held in various classrooms in the university's

psychology building on weekdays.

When participants arrived at the data collection session, they were first provided with the inclusion criteria again before being able to proceed with the study. Protocol dictated participants were to be excused if they did not meet the inclusion criteria; however, this did not occur.

Participants were then provided with a brief information sheet (Appendix H) that contained information regarding the purpose, procedures, possible risks, and benefits of the current study.

Participants then completed the study materials listed in the Measures section.

CHAPTER 3

RESULTS

Phase 1

In order to determine the method of killing judged to be of “moderate” heinousness, means and standard deviations were calculated for each level of the “method of killing” variable. Based on the mean ratings of heinousness for each method of killing, select pairs were analyzed with paired samples t-tests. The fourth, fifth, and sixth highest were compared to the lowest and highest rated methods: the aim was to determine which method significantly differed from both the lowest and the highest rated method. Table 4 provides the means and standard deviations for all methods.

Table 4
Means and Standard Deviations for Levels of Method of Killing

Method of Killing	Mean	Standard Deviation
Poisoning	82.95	19.37
Asphyxiation	84.17	19.35
Gunshot	86.02	16.95
Blunt Force Trauma with an Object	87.48	13.84
Drowning	88.17	14.84
Stabbing	88.69	13.53
Strangulation	89.57	12.47
Fire	89.89	12.52
Blunt Force Trauma with Hands	90.30	10.17
Explosives	92.60	11.81

Note. $N = 58$.

As can be seen in Table 4, the method of killing with the lowest rating of heinousness was poisoning, whereas explosives produced the highest ratings. Blunt force trauma with an object (BFTO), drowning, and stabbing were the fourth, fifth, and sixth highest rated methods,

respectively. As a result, all three were compared to poisoning and explosives through paired samples t-tests. Blunt force trauma elicited higher ratings of heinousness than poisoning, $t(58) = 2.56, p = .013$. Compared to explosives, blunt force trauma with an object evidenced lower ratings of heinousness, $t(58) = 3.14, p = .003$. Drowning was viewed as significantly more heinous than poisoning, $t(59) = 2.97, p = .004$, and significantly less heinous than explosives, $t(58) = 2.50, p = .015$. Finally, stabbing was rated as significantly more heinous than poisoning, $t(59) = 2.67, p = .010$ and significantly less heinous than explosives ($t(59) = 2.04, p = .046$).

These results are summarized in Table 5.

Table 5
Method of Killing: Paired Samples Tests

	<i>t</i>	df	Sig. (2-tailed)
Pair 1: BFTO/Poisoning	2.56	58	.013
Pair 2: BFTO/Explosives	3.14	58	.003
Pair 3: Drowning/Poisoning	2.97	59	.004
Pair 4: Drowning/Explosives	2.50	58	.015
Pair 5: Stabbing/Poisoning	2.67	59	.010
Pair 6: Stabbing/Explosives	2.04	59	.046

Note. *df* = degrees of freedom.

In order to compare differences between the three methods with “moderately” rated scores of heinousness, paired samples t-tests were conducted. Stabbing was not significantly different from blunt force trauma with an object, $t(59) = .916, p = .364$. Stabbing was also not significantly different from drowning, $t(59) = .448, p = .656$. Furthermore, blunt force trauma with an object was not significantly different from drowning, $t(58) = .656, p = .514$.

Blunt force trauma with an object was the method of killing for all vignettes in Phase 2. The differences between the means of these three methods and the means of the lowest and highest methods were considered. Because stabbing differed the least from the highest rated method of killing (i.e. explosives), it was ruled out. Second, because drowning is far less common than blunt force trauma with an object, as a method of murder, blunt force trauma was

chosen. According to the Department of Justice statistics, a total of 58 individuals were killed by drowning, as compared to 3,031 individuals murdered with a blunt object between 2006 and 2010 (Smith & Cooper, 2013). This decision was further supported by the lack of a significant difference between these three methods. Therefore, the rationale for this decision was based on the lack of significant differences between the three variables and frequency of method in the real world.

Hypothesis 1

In order to test the hypothesized difference between methods of killing, a one-way repeated measures ANOVA was conducted with ratings of heinousness as the dependent factor and methods of killing (10 levels) as the independent factor. A main effect was hypothesized. It was further hypothesized that the use of a gun would be rated as the least heinous in comparison to other methods.

Outliers ± 3.29 standard deviations from the mean were removed from the analysis, which resulted in the removal of six heinousness ratings across the 10 levels of method of killing. Appendix L provides additional information regarding all outliers. The ratings of heinousness were not normally distributed at each level, as assessed by the Shapiro-Wilk's test ($p < .001$). Although ANOVA is generally robust to this violation, a non-parametric test was also conducted to check the ANOVA results. For the non-normally distributed ANOVA, the Friedman test was also performed; similar results were seen. Mauchly's test of sphericity indicated that the assumption of sphericity had been violated, $\chi^2(44) = 164.681, p < .001$. Therefore, a Greenhouse-Geisser correction was applied ($\epsilon = 0.625$). Results indicated ratings of heinousness significantly differed when the method of killing varied, $F(5.62, 320.47) = 5.41, p < .001$, partial $\eta^2 = .09$. However, a planned contrast revealed the use of a gun was not viewed as

less heinous in comparison to the average of all other methods, a mean difference of -0.843 , 95% CI $[-2.72, 1.04]$, $p = .373$.

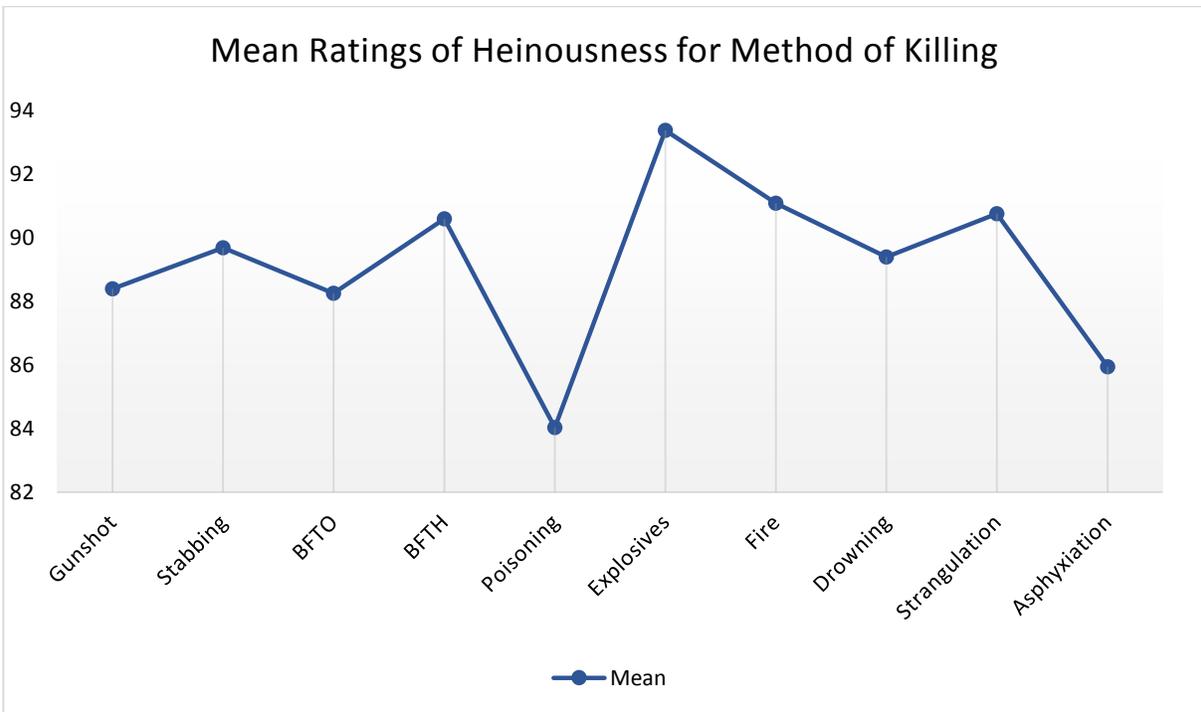


Figure 1. Mean Ratings of Heinousness for Method of Killing

Post-hoc pairwise comparisons, accounting for multiple comparisons by using the Bonferroni correction, revealed which methods of killing significantly differed in their heinousness ratings. With the exception of a few, most methods were not significantly different when the level of significance was adjusted to $p = .025$. Explosives had the highest mean rating of heinousness ($M = 92.60$). Three significant differences were found between explosives and other methods; it was rated significantly more heinous than gunshot, poisoning, and asphyxiation. Poisoning was rated significantly less heinous than both fire and strangulation. See Table 6 for details of all pairwise comparisons.

Table 6

Method of Killing: Significance Levels of Pairwise Comparisons

Level	1	2	3	4	5	6	7	8	9	10
1	-									
2	1.00	-								
3	1.00	1.00	-							
4	1.00	1.00	1.00	-						
5	.582	.693	1.00	.132	-					
6	.009	1.00	.194	1.00	.003	-				
7	1.00	1.00	1.00	1.00	.008	1.00	-			
8	1.00	1.00	1.00	1.00	.113	.881	1.00	-		
9	1.00	1.00	.158	1.00	.029	1.00	1.00	1.00	-	
10	1.00	1.00	1.00	.662	1.00	.041	.731	.398	.156	-

Note. $N = 58$. Significance levels of pairwise comparisons based on estimated marginal means. Values reported are significance levels adjusted for multiple comparisons using the Bonferroni correction. If significant, comparisons are significant at the .025 level. Significant differences are bolded. Methods of killing are as follows: (1) Gunshot, (2) Stabbing, (3) BFTO, (4) BFTH, (5) Poisoning, (6) Explosives, (7) Fire, (8) Drowning, (9) Strangulation, and (10) Asphyxiation.

Phase 2

Data Analysis

In the selection of juries, particularly for capital murder crimes, potential members who have been victims, or been close to someone who has been a victim, of a violent crime are often removed from the potential pool of jurors to avoid potential bias (Arbetman & O'Brien, 2009). In order to increase the generalizability of our results to those of actual jurors, participants who identified themselves as having been a victim, or close to someone who had been a victim, of a violent crime were removed from the analyses. This resulted in the removal of 117 participants, bringing the sample size from 356 to 239.

Assumptions of ANOVA

In order to test the hypotheses of this phase of the study, seven one-way repeated measures ANOVAs were conducted. The assumptions of one-way repeated measures ANOVAs include that the data do not have any significant outliers, are normally distributed in each

condition (i.e., normality), and have similar variances across conditions (i.e. sphericity). The data were screened for outliers by evaluating standardized z-scores. Heinousness ratings with extreme z-scores (i.e., ± 3.29) were removed from the dataset and coded as missing. This resulted in the removal of 66 ratings across the 43 levels of the seven factors. Appendix M provides additional details regarding the removed outliers. Of note, the analyses were run with outliers included, and results did not significantly differ when outliers were included or removed. The presented results do not include outliers.

Normality was assessed for each independent variable using the Shapiro-Wilk's test. In all cases, the assumption of normality was violated (all $p < .001$). In other words, the ratings of heinousness were not normally distributed at any level. Although ANOVA is generally robust to this violation (Glass, Peckham, & Sanders, 1972), nonparametric tests were also conducted for each IV. For each factor, Friedman tests, which do not assume a normal distribution of scores, were conducted to determine whether the non-normality of the data impacted results. Results did not differ from analyses which did assume normal distributions. Therefore, all indications suggested the ANOVA results should be trusted despite the assumption violations.

In each analysis the assumption of sphericity was also violated as measured by Mauchly's test of sphericity. Therefore, all reported results use the Greenhouse-Geisser or Huyn-Feldt correction when reporting the F value and p levels. Table 7 provides Mauchly's test results for each factor.

Table 7
Mauchly's Test of Sphericity Results for each Factor

Factor	<i>df</i>	χ^2	<i>p</i>
Relationship to the Victim	65	796.611	< .001
Age of the Victim	14	576.65	< .001
Vulnerability of the Victim	14	196.41	< .001
Increased Mental Suffering	9	208.70	< .001
Increased Physical Suffering	14	519.27	< .001
Gruesomeness	2	53.88	< .001
Time Elapsed before Death	9	312.25	< .001

Note. *df* = degrees of freedom; χ^2 = chi-squared.

Hypothesis 1

In order to evaluate whether the relationship between the perpetrator and the victim had an effect on ratings of heinousness, a one-way repeated measures ANOVA was conducted. The Greenhouse-Geisser correction was applied ($\epsilon = 0.500$) and the results indicated that ratings of heinousness were significantly different across levels of relationships, $F(5.50, 1247.50) = 69.312, p < .001, \text{partial } \eta^2 = .23$.

A planned contrast was conducted to compare the stranger to the average of all other acquainted levels. Results revealed that vignettes were rated as significantly less heinous when the perpetrator and victim were strangers than when they were acquainted in any way, a mean difference of 8.97, 95% CI [6.93, 11.01], $p < .001$. In order to ensure the distinction between stranger and acquaintance was significantly different, an additional planned contrast between the stranger and acquaintance was completed. Results revealed ratings of heinousness were significantly lower when the perpetrator was a stranger compared to an acquaintance, a mean difference of 2.22, 95% CI [.32, 4.11], $p = .018$. When compared using the Bonferroni correction, significant at $p = .025$ level, the difference between stranger and acquaintance was

not significant ($p = .588$); however, stranger was rated significantly less heinous than all other relationships.

Table 8
Means and Standard Deviations for Levels of Relationship to the Victim

Level	Mean	Standard Deviation
Stranger	73.81	20.00
Acquaintance	76.03	17.35
Friend	80.15	14.80
Father	88.66	12.45
Brother	86.25	13.12
Uncle	82.80	14.81
Cousin	81.50	15.47
Grandfather	84.90	14.76
Boyfriend	83.57	13.87
Husband	86.22	13.47
Ex-Boyfriend	79.40	15.46
Ex-Husband	81.12	15.10

Note. $N = 228$.

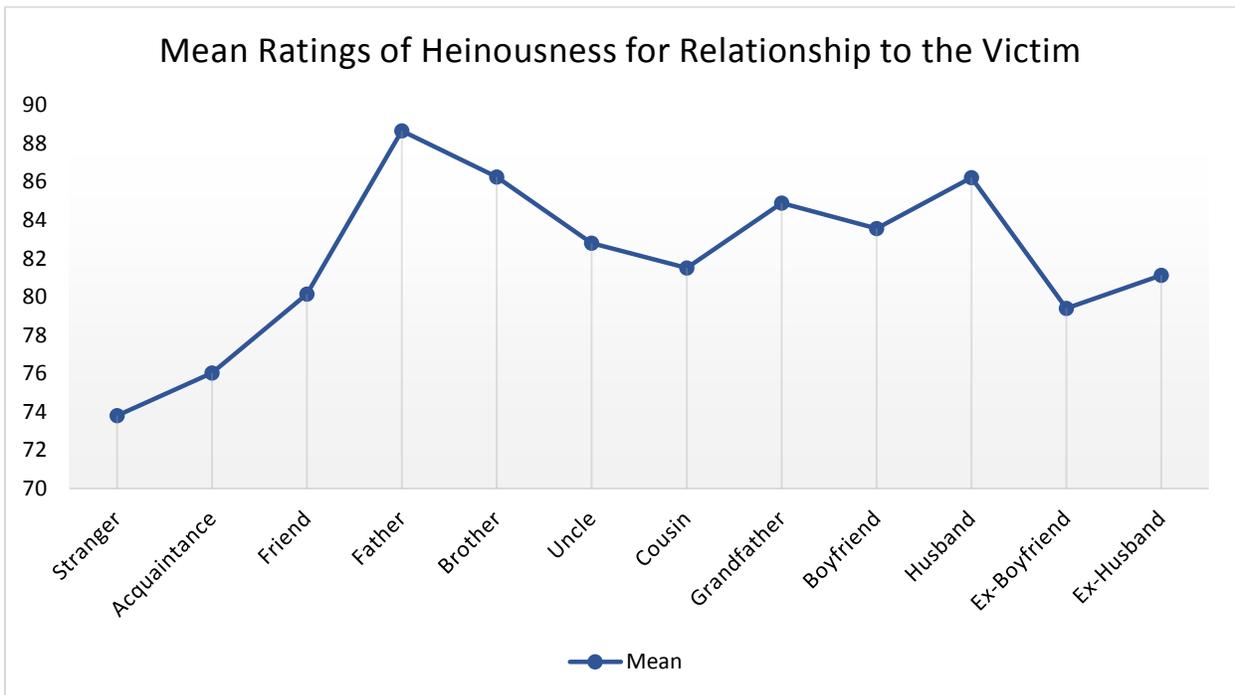


Figure 2. Mean Ratings of Heinousness for Relationship to the Victim

Post-hoc pairwise comparisons revealed numerous significant differences between the various relationships. Table 9 summarizes the significant differences found between all pairwise comparisons.

Table 9
Relationship to the Victim: Significance Levels of Pairwise Comparisons

Level	1	2	3	4	5	6	7	8	9	10	11	12
1	-											
2	.588	-										
3	<.001	<.001	-									
4	<.001	<.001	<.001	-								
5	<.001	<.001	<.001	<.001	-							
6	<.001	<.001	.001	<.001	<.001	-						
7	<.001	<.001	1.00	<.001	<.001	.340	-					
8	<.001	<.001	<.001	<.001	1.00	.008	<.001	-				
9	<.001	<.001	<.001	<.001	<.001	1.00	.043	1.00	-			
10	<.001	<.001	<.001	.001	1.00	<.001	<.001	1.00	.004	-		
11	<.001	.001	1.00	<.001	<.001	.000	.291	<.001	<.001	<.001	-	
12	<.001	<.001	1.00	<.001	<.001	.326	1.00	<.001	.003	<.001	.280	-

Note. $N = 228$. Significance levels of pairwise comparisons based on estimated marginal means. Values reported are significance levels adjusted for multiple comparisons using the Bonferroni correction. If significant, comparisons are significant at the .025 level. Non-significant differences are bolded. Relationships to the Victim are as follows: (1) Stranger, (2) Acquaintance, (3) Friend, (4) Father, (5) Brother, (6) Uncle, (7) Cousin, (8) Grandfather, (9) Boyfriend, (10) Husband, (11) Ex-Boyfriend, and (12) Ex-Husband.

Hypothesis 2

A one-way repeated measures ANOVA was conducted to determine whether there were statistically significant differences in ratings of heinousness when the age of the victim differed.

A Greenhouse-Geisser correction was applied ($\epsilon = 0.479$). Results indicated ratings of heinousness were significantly different depending on the victim's age, $F(2.40, 548.820) = 158.22, p < .001, \text{partial } \eta^2 = .41$.

A planned contrast comparing the average of baby, child, and older adult (i.e., levels under the age of 12 and over the age 65) to the average of teenager, young adult, and middle adult was conducted. Results revealed vignettes in which victims were either under the age of 12 or over the age of 65 were rated as significantly more heinous than when the victim was either a

teenager, young adult, or middle adult. The mean difference was 9.71, 95% CI [8.51, 10.90], $p < .001$.

Table 10
Means and Standard Deviations for Levels of Age of the Victim

Level	Mean	Standard Deviation
Baby	93.32	9.61
Child	90.78	11.07
Teenager	86.30	13.20
Young Adult	74.90	19.42
Middle Adult	75.00	19.06
Older Adult	81.21	16.52

Note. $N = 230$.

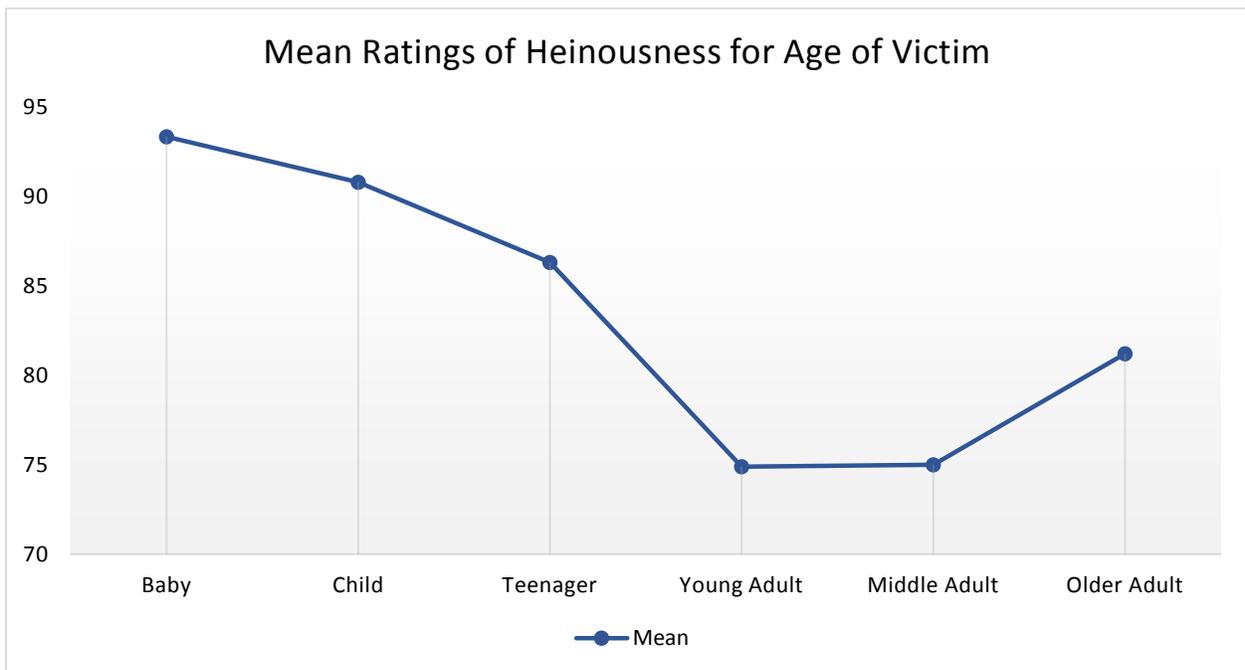


Figure 3. Mean Ratings of Heinousness Ratings for Age of the Victim

Pairwise comparisons revealed many significant differences between the various ages. Only young adult and middle adult did not significantly differ after accounting for multiple comparisons using the Bonferroni correction ($p = 1.00$). Of note, although the murders of a victim under the age of 12 and over the age of 65 were viewed as more heinous than the average

of other ages in the planned comparison, post-hoc analyses demonstrated that the murder of a teenager was significantly more heinous than an elderly adult ($p < .001$).

Table 11
Age of Victim: Significance Levels of Pairwise Comparisons

Level	1	2	3	4	5	6
1	-					
2	< .001	-				
3	< .001	< .001	-			
4	< .001	< .001	< .001	-		
5	< .001	< .001	< .001	1.00	-	
6	< .001	< .001	< .001	< .001	< .001	-

Note. $N = 230$. Significance levels of pairwise comparisons based on estimated marginal means. Values reported are significance levels adjusted for multiple comparisons using the Bonferroni correction. If significant, comparisons are significant at the .025 level. Non-significant differences are bolded. Ages of the Victim are as follows: (1) Baby, (2) Child, (3) Teenager, (4) Young Adult, (5) Middle Adult, and (6) Older Adult.

Hypothesis 3

A one-way repeated measures ANOVA was conducted to determine whether there were statistically significant differences in ratings of heinousness when the vulnerability of the victim varied. A Greenhouse-Geisser correction was applied ($\epsilon = 0.719$). Results indicated ratings of heinousness were significantly different depending on the vulnerability of the victim, $F(3.60, 823.35) = 117.498, p < .001, \text{partial } \eta^2 = .34$.

Two planned contrasts were carried out. First, to ensure a victim with a vulnerability significantly differed from a victim without any noted vulnerabilities, the non-impaired group was compared to the average of all other levels. Participants rated the vignettes containing victims with vulnerabilities significantly higher than without, a difference of 7.22, 95% CI [5.61, 8.84], $p < .001$. To determine whether the vulnerability of a physical disability was significantly more heinous than other vulnerabilities (i.e., severe mental illness, intellectual disability, pregnancy, and intoxication), a second planned contrast was completed. Results revealed

vignettes that contained a victim with a physical disability were viewed as more heinous than the average of other vulnerabilities, a mean difference of 9.29, 95% CI [7.69, 10.88], $p < .001$.

Table 12
Means and Standard Deviations for Levels of Vulnerability of the Victim

Level	Mean	Standard Deviation
None	72.99	20.49
Severe Mental Illness	76.41	17.53
Intellectual Disability	75.80	18.78
Pregnant	88.24	13.41
Intoxicated	72.97	19.58
Physical Disability	87.64	13.97

Note. $N = 230$.

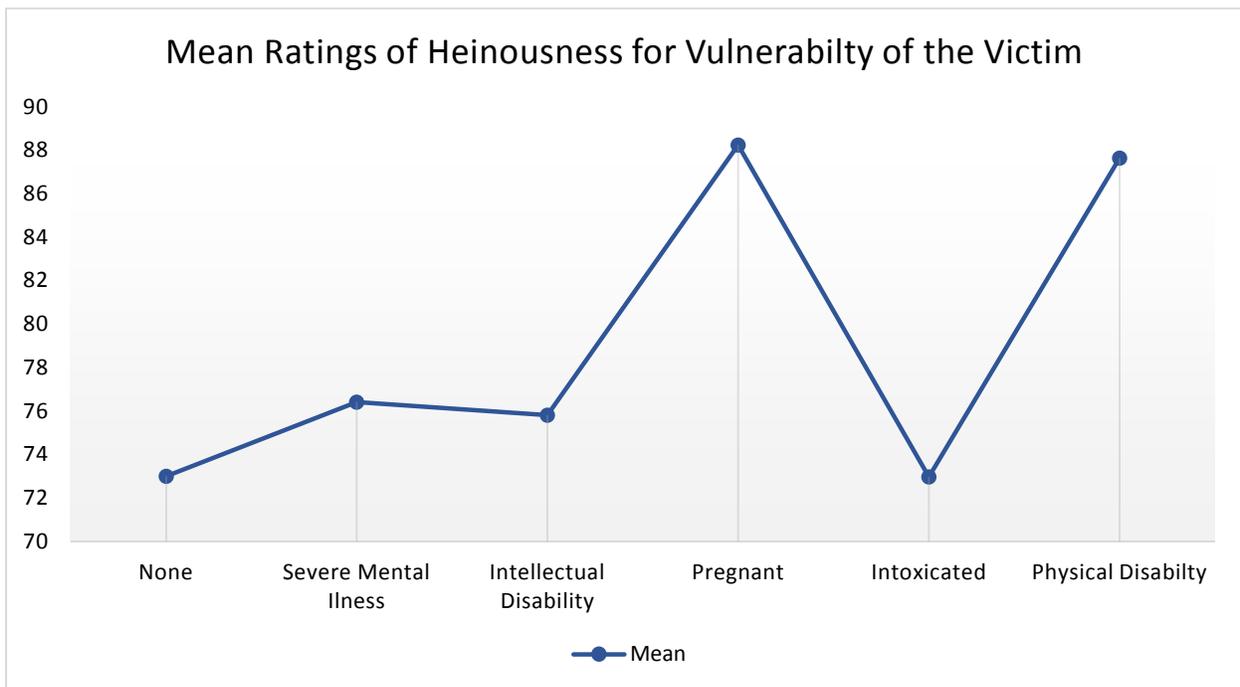


Figure 4. Mean Ratings of Heinousness for Vulnerability of the Victim

Pairwise comparisons revealed many significant differences between the vulnerabilities. Interestingly, there was not a significant difference in heinousness ratings between the vignette wherein the victim had no vulnerability and the one in which the victim was intoxicated. Severe mental illness and intellectual disability also did not significantly differ from one another.

Further, there was no significant difference between a pregnant victim and a physically disabled victim. Table 13 summarizes the significance levels of all pairwise comparisons.

Table 13
Vulnerability of the Victim: Significance Levels of Pairwise Comparisons

Level	1	2	3	4	5	6
1	-					
2	.002	-				
3	.014	1.00	-			
4	<.001	<.001	<.001	-		
5	1.00	<.001	.014	<.001	-	
6	<.001	<.001	<.001	1.00	<.001	-

Note. $N = 230$. Significance levels of pairwise comparisons based on estimated marginal means. Values reported are significance levels adjusted for multiple comparisons using the Bonferroni correction. If significant, comparisons are significant at the .025 level. Non-significant differences are bolded. Vulnerabilities of the victim are as follows: (1) Average intelligence without any significant problems, (2) Severe mental illness, (3) Intellectually disabled, (4) Pregnant, (5) Intoxicated, and (6) Physically disabled.

Hypothesis 4

In order to assess whether increased mental suffering impacted ratings of heinousness, a one-way repeated measures ANOVA was conducted to determine whether there were statistically significant differences in ratings of heinousness when the perpetrator inflicted various types of mental suffering on the victim (i.e., pled for life, bound and gagged, verbal abuse, resumed attack). A Greenhouse-Geisser correction was applied ($\epsilon = 0.677$). Results indicated a main effect for the mental suffering inflicted on the victim, $F(2.71, 622.75) = 150.47$, $p < .001$, partial $\eta^2 = .40$.

Two planned contrasts were completed. First, to ensure the presence of increased mental suffering on the victim was significantly different than no mention of additional mental suffering, the control was compared to the average of the other levels. Results revealed participant ratings were significantly higher for vignettes that contained evidence of mental suffering, a mean difference of 12.66, 95% CI [10.68, 14.63], $p < .001$ was found. Second, to

address the hypothesis regarding increased mental suffering, a second planned contrast revealed when the victim pled for her life or suffered from a resumed attack, ratings of heinousness were higher than the average of the other increased mental suffering levels (i.e., bound and gagged and verbal abuse), a mean difference of 1.28, 95% CI [.41, 2.15], $p = .002$.

Table 14
Means and Standard Deviations for Levels of Increased Mental Suffering

Level	Mean	Standard Deviation
None	73.79	18.94
Pled for life	82.55	14.46
Bound and Gagged	88.52	11.42
Mental Torture/Verbal Abuse	83.10	14.68
Resumed Physical Attack	91.62	9.77

Note. $N = 231$.

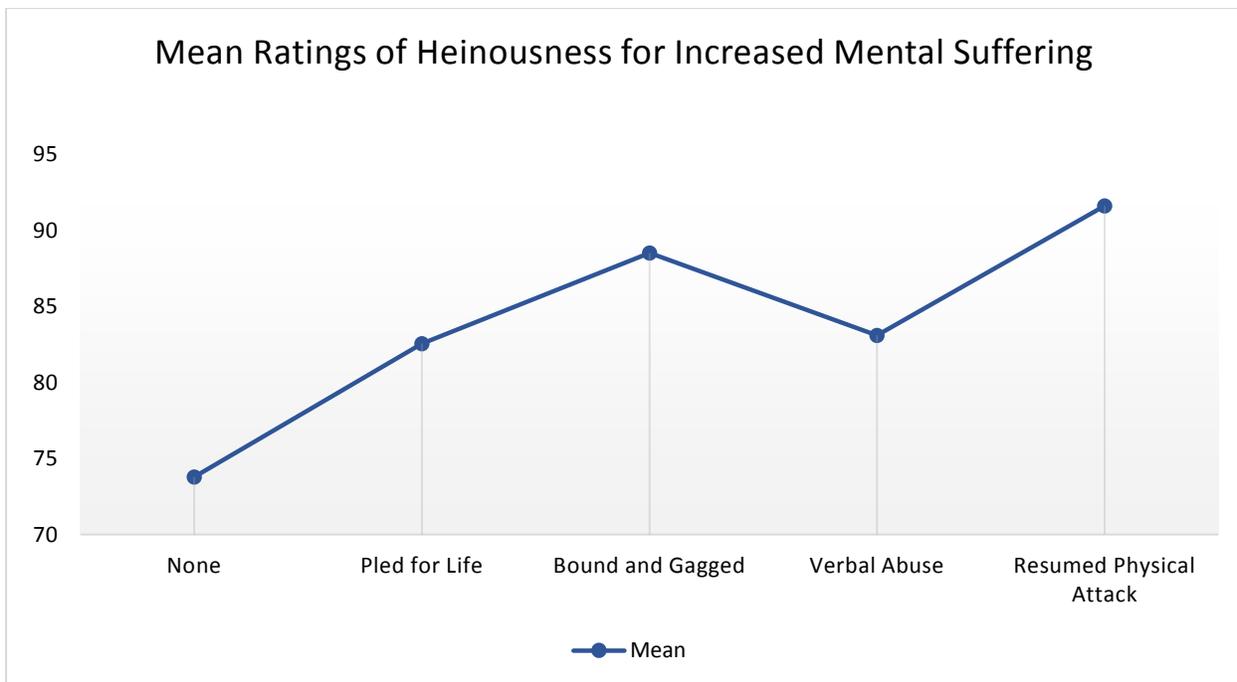


Figure 5. Mean Ratings of Heinousness for Increased Mental Suffering

With one exception, post-hoc pairwise comparisons with Bonferroni correction revealed that all levels of mental suffering were significantly different from each other at the $p < .001$ level. A significant difference in heinousness ratings was not found when comparing conditions in which

the victim pled for her life and when she was verbally abused ($p = 1.00$). Table 15 summarizes the pairwise comparisons for all levels.

Table 15
Increased Mental Suffering: Significance Levels of Pairwise Comparisons

Level	1	2	3	4	5
1	-				
2	< .001	-			
3	< .001	< .001	-		
4	< .001	1.00	< .001	-	
5	< .001	< .001	< .001	< .001	-

Note. $N = 231$. Significance levels of pairwise comparisons based on estimated marginal means. Values reported are significance levels adjusted for multiple comparisons using the Bonferroni correction. If significant, comparisons are significant at the .025 level. Non-significant differences are bolded. Levels of increased mental suffering are as follows: (1) No additional mental suffering, (2) Pled for life, (3) Bound and Gagged, (4) Verbal Abuse, and (5) Resumed Attack

Hypothesis 5

A repeated measures ANOVA was conducted to determine whether there were statistically significant differences in ratings of heinousness when the perpetrator inflicted various forms of physical suffering on the victim; a Greenhouse-Geisser correction was applied ($\epsilon = 0.482$). Results indicated that ratings of heinousness were significantly different depending on the type of physical suffering inflicted, $F(2.41, 545.10) = 209.70, p < .001$, partial $\eta^2 = .48$

Two planned contrasts were carried out. First, to ensure the presence of increased physical suffering significantly differed from the control, the control was compared to the average of all other levels. Participants rated the murders with increased physical suffering significantly higher than the one without, a mean difference of 20.29, 95% CI [17.73, 22.85], $p < .001$. A second planned contrast revealed that mutilation of the victim before death had significantly higher ratings of heinousness than did the average of other levels of physical suffering, a mean difference of 3.60, 95% CI [2.42, 4.77], $p < .001$.

Table 16

Means and Standard Deviations for Levels of Increased Physical Suffering

Level	Mean	Standard Deviation
None	70.67	21.78
Stomping	85.04	13.78
Sexual Perversion	93.82	7.85
Pre-mortem Mutilation	93.83	8.77
Post-mortem Mutilation	93.98	8.08
Fire	88.11	13.41

Note. $N = 227$.

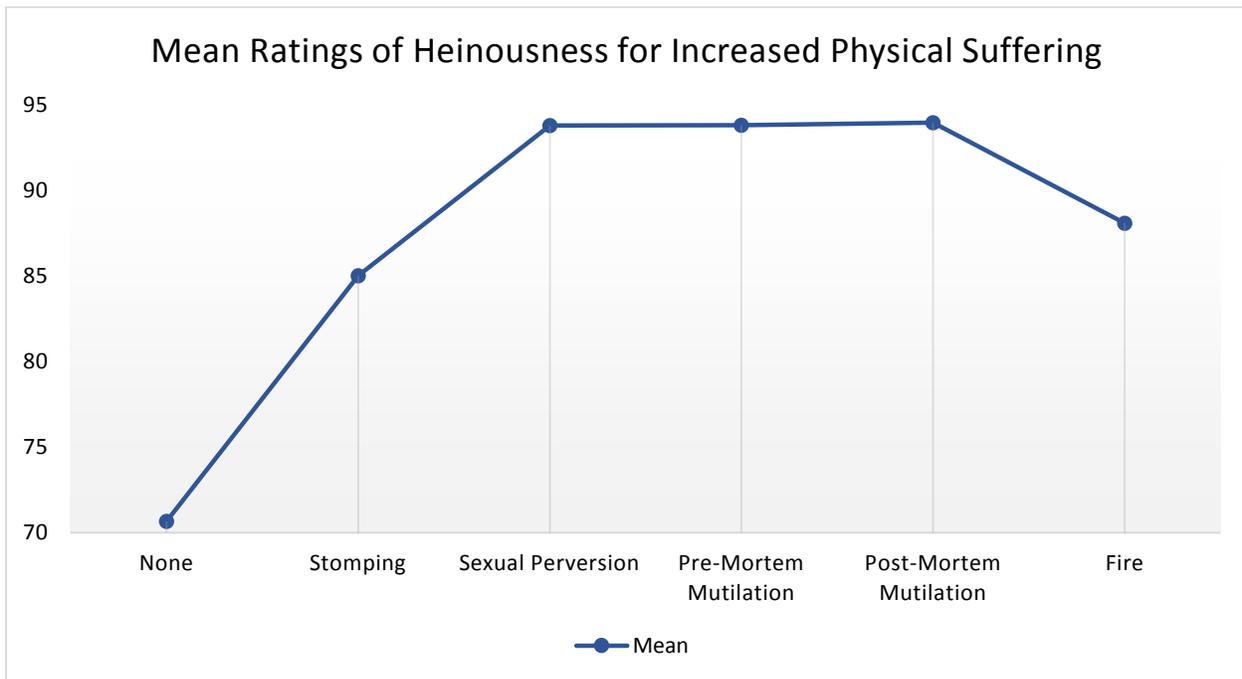


Figure 6. Mean Ratings of Heinousness for Increased Physical Suffering.

Post-hoc pairwise comparisons revealed significant differences between the levels of increased physical suffering existed at the $p \leq .001$ level, even after the use of the Bonferroni correction to account for multiple comparisons. Of note, sexual perversion, pre-mortem mutilation, and post-mortem mutilation were not significantly different ($p = 1.00$). Table 17 summarizes the pairwise comparisons for all levels.

Table 17

Increased Physical Suffering: Significance Levels of Pairwise Comparisons

Level	1	2	3	4	5	6
1	-					
2	< .001	-				
3	< .001	< .001	-			
4	< .001	< .001	1.00	-		
5	< .001	< .001	1.00	1.00	-	
6	< .001	.001	< .001	< .001	< .001	-

Note. $N = 227$. Significance levels of pairwise comparisons based on estimated marginal means. Values reported are significance levels adjusted for multiple comparisons using the Bonferroni correction. If significant, comparisons are significant at the .025 level. Non-significant differences are bolded. Levels of increased mental suffering are as follows: (1) No additional physical suffering, (2) Stomping, (3) Sexual Perversion, (4) Pre-Mortem Mutilation, (5) Post-Mortem Mutilation, and (6) Fire.

Hypothesis 6

A one-way repeated measures ANOVA was conducted to determine whether there were statistically significant differences in ratings of heinousness when the gruesomeness of the crime varied. Due to the Greenhouse-Geisser correction being too conservative in this case ($\epsilon = 0.829$), it is likely this correction would lead to the incorrect rejection of the null hypothesis of sphericity. As a result, the Huyn-Feldt correction was applied ($\epsilon = 0.834$). Results demonstrated significant differences between ratings of heinousness and level of gruesomeness of the crime scene, $F(1.67, 390.34) = 104.18, p < .001, \text{partial } \eta^2 = .31$. A planned contrast revealed significantly higher ratings of heinousness at the high level of gruesomeness, as compared to the average of the two lower levels. A mean difference of 10.53, 95% CI [8.53, 12.53], $p < .001$ was observed.

Table 18

Means and Standard Deviations for Levels of Gruesomeness

Level	Mean	Standard Deviation
Low	68.28	21.66
Medium	79.01	17.22
High	84.17	14.03

Note. $N = 235$.

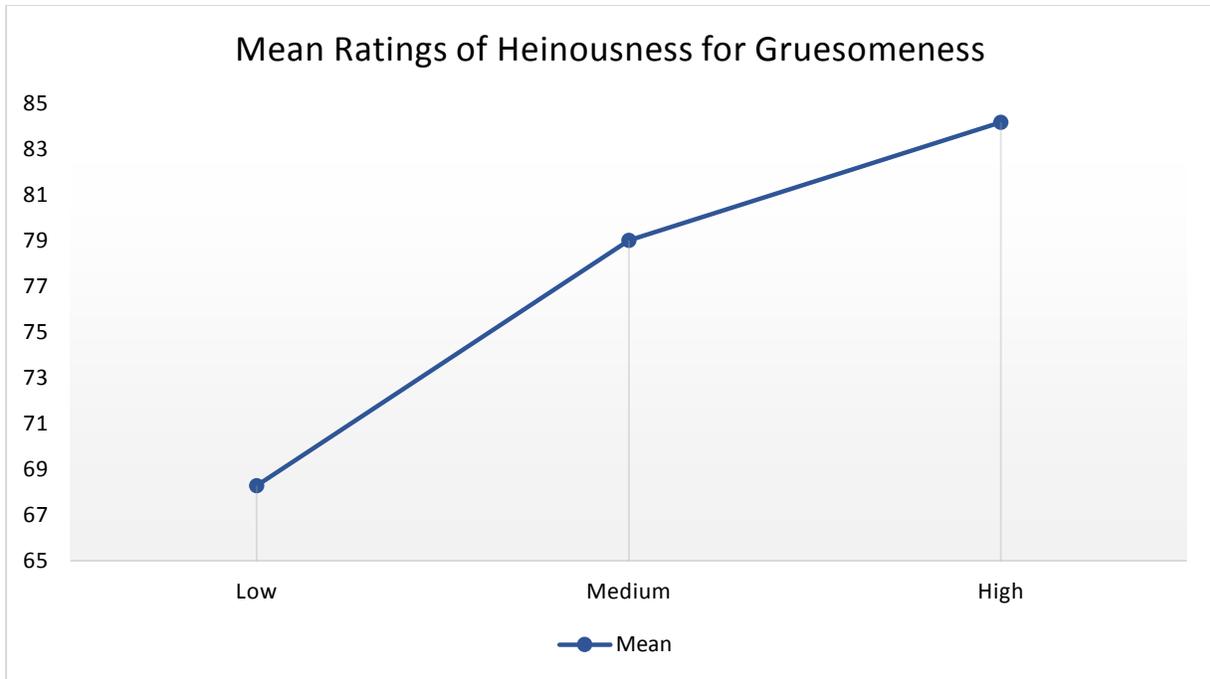


Figure 7. Mean Ratings of Heinousness for Gruesomeness

Post-hoc pairwise comparisons revealed significant differences between the levels of gruesomeness existed at the $p < .001$ level, even after the use of the Bonferroni correction to account for multiple comparisons.

Table 19
Gruesomeness: Significance Levels of Pairwise Comparisons

Level	1	2	3
1	-		
2	< .001	-	
3	< .001	< .001	-

Note. $N = 235$. Significance levels of pairwise comparisons based on estimated marginal means. Values reported are significance levels adjusted for multiple comparisons using the Bonferroni correction. Comparisons are significant at the .025 level. Levels gruesomeness are as follows: (1) Low, (2) Medium, and (3) High.

Hypothesis 7

A one-way repeated measures ANOVA was conducted to determine whether there were statistically significant differences in ratings of heinousness depending on the length of time it took for the victim to die. A Greenhouse-Geisser correction was applied ($\epsilon = 0.554$) and the

results demonstrated significant differences, $F(2.22, 516.52) = 63.54, p < .001$, partial $\eta^2 = .21$.

A planned contrast revealed significantly higher heinousness ratings when it took the victim over 24 hours to die in comparison to the average of all lesser amounts of time, a mean difference of 7.99, 95% CI [6.43, 9.57], $p < .001$.

Table 20
Means and Standard Deviations for Time Elapsed before Death

Level	Mean	Standard Deviation
Died Instantly	70.75	22.35
Less than 1 Hour	76.82	18.30
2.5 Hours	79.29	18.05
10 Hours	81.51	16.87
Over 24 Hours	85.09	17.23

Note. $N = 234$.

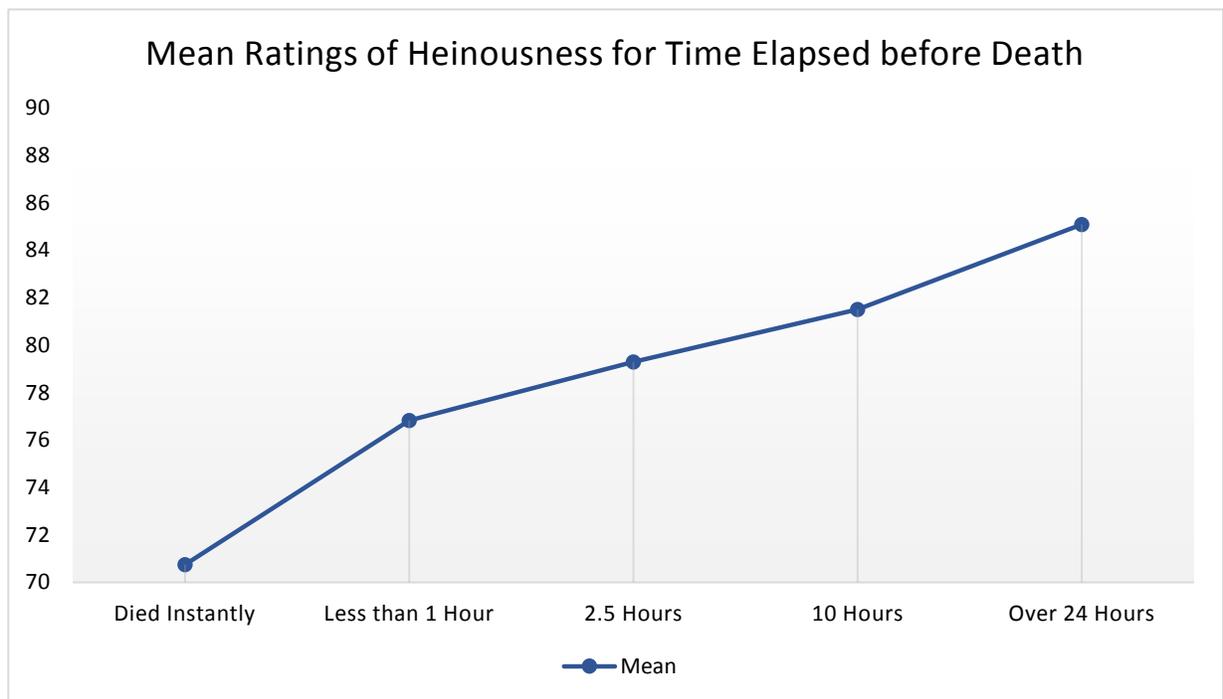


Figure 8. Mean Ratings of Heinousness for Time Elapsed before Death

Post-hoc pairwise comparisons revealed all levels of time were significantly different at the $p < .01$ level, even after accounting for multiple comparisons. Table 21 provides the significance levels for all comparisons.

Table 21

Time Elapsed before Death: Significance Levels of Pairwise Comparisons

Level	1	2	3	4	5
1	-				
2	< .001	-			
3	< .001	.003	-		
4	< .001	< .001	.006	-	
5	< .001	< .001	< .001	< .001	-

Note. $N = 234$. Significance levels of pairwise comparisons based on estimated marginal means. Values reported are significance levels adjusted for multiple comparisons using the Bonferroni correction. Comparisons are significant at the .025 level. Levels time elapsed before death are as follows: (1) Died instantly, (2) Less than 1 hour, (3) 2.5 hours. (4) 10 hours, and (5) Over 24 hours.

CHAPTER 4

DISCUSSION

Phase 1

As previously mentioned, the goal of Phase 1 of the study was twofold. First, it served to determine which method of killing was viewed as “moderate” in ratings of heinousness. Based on an evaluation of method means, the 4th, 5th, and 6th rated methods (i.e., blunt force trauma with an object, drowning, and stabbing) were compared to the lowest (i.e., poisoning) and highest (i.e., explosives) rated methods. Paired samples t-tests revealed statistically significant differences between the three middle range methods from the two methods at the extremes (i.e., least heinous and most heinous). Paired samples t-tests further revealed the three “moderately” rated methods were not rated significantly different from one another. Ultimately, the researcher chose to use blunt force trauma with an object as the method of killing for Phase 2 of the current study.

Method of Killing

Overall, as expected in Hypothesis 1, there was a significant difference in ratings of heinousness across the different methods of killing. Although the researcher further expected the use of a gun would be rated as less heinous than other methods of killing, this piece of the hypothesis was not confirmed. Post-hoc pairwise comparisons revealed the use of a gun was only rated significantly less heinous than the method of explosives ($p = .009$), when Bonferroni correction was used in order to account for multiple comparisons. While significant differences were found between the least (poisoning) and most (explosives) heinous methods of killing with

other methods, few other differences were found after accounting for multiple post-hoc pairwise comparisons.

It is possible this result is due to a common cognitive bias: the anchoring bias. This bias holds that humans make judgments and decisions with too much reliance on the information they first encountered (i.e., the anchor) (Tversky & Kahneman, 1974). In this study, participants rated all 10 methods of killing. One could argue that a participant used the first vignette as an anchor for future heinousness determinations. It is possible that once the participant thought one murder was heinous, it would be difficult to say any of the rest were not, which may contribute to a possible ceiling effect.

The results of this study lead one to question how large a role method of killing plays in perceptions of heinousness, as there are limited differences with regard to ratings of heinousness between the methods. Of note, the means of all 10 methods ranged from 82.95 ($SD = 19.37$) to 92.60 ($SD = 11.81$). These means reflect an overall opinion that all methods of killing are judged as heinous. These results are consistent with those of Adger (2010), who found numerous methods of killing to be significant predictors of a HAC finding. It is possible this is due to the overall vague nature of the term heinous. Murder in it of itself is considered heinous, regardless of how it is committed. As Rosen (1985) pointed out, attorneys argue for the application of this aggravating factor based on various methods of killing (e.g., *Antone v. State*, 1980; *Palmer v. State*, 1981). The perception of all methods of killing being viewed as heinous opens the door for dangerous misuse of the aggravating factor “heinous, atrocious, or cruel.” As will be discussed in Phase 2, it is hypothesized that differences in perceptions of heinousness may be better defined by other factors related to characteristics of the victim and the crime, beyond the method of killing.

An interesting finding of this study was that participants rated explosives as the most heinous method of killing. A possible explanation for this may be increased media exposure to terrorism. Past research has demonstrated that increased media exposure to crime has resulted in elevated perceptions of risk and fear associated with potential crime victimization (Altheide, 2002; Bryant, Carveth & Brown, 1981; Lowry, Nio, & Lietner, 2003; Shrum, 1996; Shrum & O'Guinn, 1993). Overall, exposure to media has the power to impact individuals' emotions in many ways, fear being only one (DeRoma, et al., 2003).

Since the attacks on September 11th, 2001, terrorism has been at the forefront of the media world. As a result of this increased media coverage, individuals' fear of terrorism has increasingly been researched since 2001. Schuster and colleagues (2001) conducted a national survey of Americans after September 11th, which revealed elevated levels of stress after the attack. These results were found across the country, which suggested media exposure contributed to the stress of individuals not located near New York City or Washington D.C. Similarly, Deroma and colleagues (2003) found a relationship between symptoms of Post-Traumatic Stress Disorder and media exposure about September 11th in people who were not geographically close to the event. In an experimental design, Slone (2000) found increased levels of anxiety when participants were exposed to media related to terrorism. Further, increased exposure to news on television was significantly related to an increased perception of risk of terrorism to both self and others (Nellis & Savage, 2012).

Since 2001, there have been numerous terrorist attacks. Many of these attacks such as the bombings in London in 2005 and Mumbai in 2009 received a great deal of attention from the media (Kern, Just, & Norris, 2003). Additional attacks such as the Boston Marathon bombings, Paris attacks, and San Bernardino attack were likely at the forefront of participants' minds.

Subsequently, though terrorism occurs in many ways, it is likely that many individuals associate explosives with a method of killing that is terroristic in nature. Despite the current study's vignette depicting explosives not being related to terrorism in any way, it is possible that research participants rated this method as more heinous as a result of increased fear of terrorism and the current climate regarding terroristic events represented in various media outlets. Of note, five states have an aggravating factor specific for when a defendant uses explosives a means to kill (i.e., Arkansas, Indiana, Montana, Oregon, and Tennessee) (DPIC, n.d.).

Phase 2

As previously mentioned, the goal of the current study was to determine which crime characteristics are judged to be more or less heinous. Seven factors were examined to evaluate the various levels of each factor with regard to heinousness (i.e., relationship to the victim, age of the victim, vulnerability of the victim, increased mental suffering, increased physical suffering, gruesomeness, and time elapsed before death). The factors and their levels were based on previous research on heinousness, as well as exploratory hypotheses. As hypothesized, a significant main effect for each factor was found. The findings within each of the seven factors are discussed in the following sections.

Relationship to the Victim

Scores of heinousness varied depending on the relationship between the victim and perpetrator. Consistent with the hypothesis and findings from Adger (2010), murders were judged to be more heinous when the victim knew the perpetrator in some way. A review of means and pairwise comparisons revealed that ratings appeared to increase as levels of intimacy increased. That is, in most cases, vignettes in which the victim was a family member or a romantic partner were judged to be more heinous than those where the victim was a friend,

acquaintance, or former romantic partner. An exception to this was when the perpetrator was either the victim's cousin or uncle. A possible explanation for this finding is that the perception of intimacy is higher for a former romantic partner than that of a distant relative (i.e., cousin or uncle). Perceptions of intimacy may also contribute to the significant difference found between current romantic partners and former romantic partners.

These results reflect the social and moral development perceptions of domestic violence (e.g., familial violence and intimate partner violence [IPV]). Over time, with changes in society, domestic abuse (physical, emotional, and sexual) has become less accepted and more criminalized. Prior to the 1970s, domestic violence was very rarely prosecuted (Lindgren, Taub, Wolfson, Palumbo, 2005). These changes are reflected in protective developments in the legal system (e.g., protection orders; Violence Against Women Act [18 U.S.C. § 2265-66], Family Violence Prevention and Services Act) and community (e.g., domestic violence shelters, hotlines, etc.).

Overall, a murder was judged to be most heinous when the perpetrator was the victim's father. As evident by years of research, parents play a significant role in the lives of their children (e.g., Crouter, Helms-Erikson, Updergraff, & McHale, 1999; Edler, Van Nguyen, & Caspi, 1985; Parcel & Menaghan, 1994; Pomerantz, Moorman, & Litwack, 2007; Prilleltensky, Nelson, & Peirson, 2001; Wentzel, 1998). Generally, parental figures are perceived as "protectors." They are responsible for the safety and well-being of their children (Levine & Munsch, 2011). Historically, mothers have been viewed as the loving and patient parent. Despite these gendered stereotypes, the dynamic of fatherhood has shifted to also encompass a nurturing role (Drakich, 1989). Up to this point, perceptions of fatherhood have primarily been researched by assessing the experience of fathers themselves (Jordan, 2009; Olmstead, Futris, and Pasley,

2009; Summers, Boller, Schiffman, & Raikes, 2006). These studies displayed the shift of perceptions about the father's role as a parent from being solely the provider to one who shares in the responsibilities of parenting.

Based on the above listed studies, characteristics of a good father were identified. Good fathers are considered those who nurture, teach, and provide for their children. Further, fathers who are involved in their children's lives are viewed more positively. Furstenburg (1988) noted fathers are "good" when they play an equal role in parenting and express love toward their children. Bad fathers, on the other hand, were described as those who are absent from their children's lives and reject the duties of fatherhood. Jordan (2009) found the characteristics fathers considered representative of bad fatherhood included the failure to provide financial support for the child, the abuse of substances (e.g., alcohol and drugs), and display of violence.

Looking only at the father-daughter relationship, research has shown that this relationship can greatly impact the daughter's lifespan development in many different examples. The impacts of this relationship can be seen in the daughter's mental health (Demidenko, Manion, & Lee, 2015; Horesh, Sommerfield, Wolf, Zubery, & Zalsman, 2015), personality development (Biller & Weiss, 1970), and attachment styles and satisfaction with romantic relationships (Baggett, Shaffer, & Muetzelfeld, 2015). The literature in this area supports the importance of a healthy father-daughter relationship. Combined with the social construct of good versus bad fathers, it is likely participants felt a father's murder of his daughter was particularly heinous due to the violation of this archetype of the parent and child relationship. This is further supported by many of the participants' qualitative responses.

Age of the Victim

Perceptions of heinousness varied depending on the victim's age. As hypothesized, the murder of a child under the age of 12 or an adult over the age of 65 was viewed as significantly more heinous. This finding supported the results of Adger's (2010) study, where HAC was more often identified as an aggravator in cases where a child or elderly adult was the victim. In the current study, two levels (i.e., baby and child) were included to assess perceptions when victims were under the age of 12; the baby was six months old and the child was eight years old. As noted in Table 10, the murder of the infant evidenced the highest mean score, followed closely by the eight year old. Based on research, there are two likely explanations for this finding; one is based on the frequency of events and the other based on affective responses to vulnerable populations.

As evident in the Department of Justice crime statistics, murders of children and elderly adults are rare in the United States. Between 2002 and 2011, approximately 7,660 children under the age of 11 and 7,155 adults over the age of 65 were murdered (Smith & Cooper, 2013). Combined, these murders made up slightly over 10% of approximately 144,155 murders in that timeframe. In 2013, 1,027 individuals under the age 18 and 263 individuals over the age of 65 were murdered. This frequency is quite low in comparison to over 10,500 individuals murdered between the ages of 19 and 64 that same year (United States Department of Justice, 2014). It is possible these crimes are more shocking and perceived as more heinous due to the low rate in comparison to other murders. It is also possible that over time individuals have become desensitized to more common elements of crime through media sources (e.g., television, movies, news, video games, etc.) and current events in their area (Funk, Baldacci, Pasold, & Baumgardner, 2004; Pettus & Diener, 1977; Weinrath & Gartrell, 1996). As a result of this

desensitization to things we know to be fearful, it is conceivable that the experience of more uncommon crimes evoke more negative reactions (e.g., fear, anxiety, etc.) when they are exposed to these crimes (Altheide, 2002; Lowry, Nio, & Lietner, 2003). In fact, statistics support the notion that the most common, and possibly the most ignored or accepted murders, have victims in the age range of 18 to 49. Between 1980 and 2008, 24.4% of homicide victims were between ages 18 and 24, 28.7% were between 25 and 34, and 22.8% were between 35 and 49; a total of 75.9% of homicide victims (Cooper & Smith, 2011).

The second explanation, and possibly the most likely, for this finding relates to perceived vulnerability of the victim (i.e., children and the elderly). In the past, children were often viewed as small adults. In the late 15th century, John Locke published his treatise, *Some Thoughts Concerning Education* (1693), which initiated societal changes to better understand the unique nature of childhood. Over the next couple of centuries, children continued to be viewed and treated in ways similar to adults. By the end of the 19th century, economic, social, and attitudinal changes contributed to a shift in society's perception of children; the view of children as parental possessions shifted to one of parental responsibility for their care and development. This shift ultimately led to the perception of children being viewed as innocent and vulnerable (Ariès, 1962; DeMause, 1974; Cunningham, 1991). Social historian, Viviana Zelizer, labeled this shift toward children being viewed as innocent, vulnerable, and priceless as the "sacralization" of children (1985). As a result of this societal shift, protections and safeguards of children were put in place (e.g., focus on education, child labor laws, legal protections against child abuse, etc.).

With the development of psychology in the early 20th century, researchers began to focus on further understanding how children were different from adults. Due to the attention given to child development, society has a better appreciation for the physical, cognitive, social, and

emotional differences between adults and children (Levine & Munsch, 2011). Psychiatrists, psychologists, and other scientists (e.g., such as Sigmund Freud, Erik Erikson, Jean Piaget, John Bowlby, and Lev Vygotsky, among others) developed numerous theories regarding the stages of childhood development, and the unique vulnerabilities that come along with these various stages (Harwood, Miller, & Vasta, 2008). As a result of this better understanding, children continue to be viewed as innocent persons that require protection in Western culture (Lancy, 2010).

To this day, the legal system has laws and policies in place to ensure the protection of children. From specific laws that protect child victims of abuse or neglect, to laws that protect children who themselves are accused and/or convicted of a crime – safeguards are in place. Further, children are identified as a vulnerable population by most organizations and within public policy. For example, when conducting research, special protections are enacted when participants are children due to their status as a vulnerable population. It is a common belief that children are meant to be protected. When children are murdered, people may believe an adult in some way failed this child and his or her right to protection. Many children of a young age may be unable to protect themselves, and for these reasons their murder may be perceived as more heinous.

As mentioned earlier, of the 32 states with the death penalty, 17 states include an aggravating circumstance regarding the murder of a child. Although the age-cutoff defining a child in these states varies (i.e., ranges from under 6 to under 17), the majority of these states (i.e., $n = 8$) define this aggravator as the death of a child under the age of 12; Texas specified under the age of six, whereas South Carolina provided a cut-off of 11. Two states specified the murder of a child less than 13 (i.e., Ohio and South Dakota), and four states defined this as under the age 14 (i.e., Delaware, Nevada, Oregon, and Virginia). The two remaining states identified

slightly older ages as cut-offs for this aggravator, 16 and 17 (i.e., Connecticut and Wyoming, respectively). Although New Hampshire did not specify an age, they indicated the murder of an individual “particularly vulnerable due to old age, youth or infirmity” as an aggravating circumstance. Of note, no state reached the age of 18 years as a cut-off (DPIC, n.d.). Based on these ages, it appears vulnerability may have played a role in crafting legislation regarding the imposition of the death penalty. The development of policies with regard to death eligibility has clearly considered the societal perceptions of the murder of children.

Notably, although the murder of a teenager (i.e., a 15-year-old victim in the vignette) was significantly less heinous than the baby and child levels, it evidenced the third highest mean. Further, the murder of a teenager was viewed as more heinous than the murder of an elderly adult, despite findings that the murder of a teenager was less heinous than that of a younger child. This result leads one to conclude that the murder of a “child” under the age of 15 (age indicated in vignette) is likely to be viewed as more heinous than that of an elderly adult. The trend of higher ratings for younger individuals may be related to perspective that younger victims had their entire lives ahead of them.

In contrast to youth, adulthood, no matter what the age, has not been identified as an aggravating factor in death penalty legislation. However, the results of the current study indicate that an adult over the age of 65 (i.e., vignette identified the victim as a 75-year-old) was substantially more heinous than that of younger adults. Similar to children, this finding is likely due to the perception of elderly individuals being vulnerable and unable to defend themselves. As individuals age, they become frail and are subject to a variety of negative outcomes that reduce their quality of life and independence (e.g., falls, health problems, etc.) (Fried, Ferrucci, Darer, Williamson, & Anderson, 2004). Stereotypes of the elderly typically include more

negative traits (Hummert, Garstka, Shaner, & Strahm, 1995) such as ill, weak, worried, and lonely (Brewer, Dull, & Lui, 1981; Brewer & Lui, 1984; Hummert, 1990; & Hummert et al., 1995). As a result of stereotypes of the elderly, aging individuals may often have negative self-perceptions. Research has shown negative self-perceptions related to aging can impact physical and cognitive functioning (Levy, Slade, Kunkel, and Kasl, 2002). Similar to children, elderly adults over the age of 65 are labeled as a vulnerable population by many organizations and public policy. If the societal view of the elderly is that of a weak, defenseless, and helpless person, then it is not surprising this vulnerability contributes to perceptions of heinousness. Further, the murder of an elderly adult is considered an aggravating factor in four states.

From the available research discussed and current results, it appears perceived vulnerability follows the path of a U; vulnerability being highest for children and the elderly, and a plateau seen during young and middle adulthood. This further seems to map on well with the standards set for adulthood in the United States. That is, those under the age of 18 are children and labeled as a vulnerable population, and those at the age of retirement (i.e., 65 years old) are moved back into the protected arena of a vulnerable population. It is possible individuals' perceptions of heinousness are impacted by society's label of adulthood.

Vulnerability of the Victim

As hypothesized, a murder was judged to be more heinous when an individual was physically disabled, as compared to the average of other vulnerabilities. This is consistent with Adger's (2010) finding that the determination of HAC was strongly associated with the victim's physical weakness. An evaluation of differences among factors revealed that perception of heinousness was virtually identical for a victim who was pregnant at the time of death and one

who had a physical disability. Though not hypothesized, this finding was not surprising given societal perceptions of a pregnant woman.

Shields and Cooper (1983) found individuals stereotypically romanticized the experience of pregnancy and motherhood. Women who were happy to be pregnant were associated with the most positive traits and the least negative traits. Further, their futures were predicted to be full of happiness, stability, and good parenting skills. More recent research found pregnant women, or women with a new baby, were associated with more positive traits than women in other menstrual stages (Marván, Islas, Vela, Chrisler, & Warren, 2008). While some of this research is outdated, ongoing debates regarding child-free women vs. mothers and working mothers vs. stay-at-home mothers, among others, lead one to believe stereotypes of women based on their childbearing or rearing status still exist (Dillaway & Parè, 2008; Gillespie, 2003; Steiner, 2007). It is likely individuals perceived a pregnant victim as having more positive traits, especially in comparison to the other vulnerabilities assessed (i.e., intoxicated, severe mental illness, intellectual disability).

Another explanation for this finding is related to the idea that the murder of a pregnant woman resulted in the death of two people. Although individuals differ in their beliefs with regard to when a fetus constitutes life, legal changes have occurred to criminalize the harm of an unborn child. If a child in utero is harmed or killed during the commission of a federal crime, the United States recognizes the child in utero as a legal victim. This was enacted in the Unborn Victims of Violence Act of 2004 (Public Law 108-212). Although this Act does not apply to individual states, fetuses are recognized as victims of crime for the purpose of homicide or feticide in 38 states. A majority of these states ($n = 23$) employ these laws to the earliest stages of pregnancy (National Conference of State Legislatures, 2015).

With regard to death eligibility, Alabama specifies the intentional killing of two or more persons in one act as an aggravating factor for the death penalty. Additionally, 26 states (including Alabama) include “the defendant knowingly created grave risk of death for one or more persons in addition to the victim of the offense” as an aggravating factor. When a pregnant woman and her unborn child are the victims of homicide, it is possible a jury or judge could base their decision on one of these aggravating factors. More specifically, a jury or judge can determine death eligibility with a factor specific to the murder of a pregnant woman in six states. The majority of these states do not specify a stage of pregnancy; however, one requires the fetus have “attained viability” (i.e., Indiana) and another must be in the third trimester (i.e., Pennsylvania) (DPIC, n.d.).

On the other side of vulnerabilities, intoxication was not significantly different from the lack of vulnerabilities condition. One possible explanation for this finding relates to the idea of victim blaming, as related to intoxication. Most research in this area has focused on intoxicated women as victims of sexual assault. Schuller and Wall (1998) found complaints of rape were considered less genuine and the perpetrator was determined less culpable when the victim was intoxicated. Another study also found that less blame was attributed to the perpetrator and more to the victim when she was too intoxicated to resist sexual advances (Krahé, Temkin, & Bieneck, 2007). When comparing a robbery and a rape case, researchers found the victim’s intoxication did not affect the culpability of the perpetrator in a robbery case, but did in the rape case.

A different study looked specifically at victim and perpetrator intoxication in a sexual assault of an acquaintance within a college sample (Starfelt & White, 2015). Results indicated intoxicated perpetrators were perceived as less aware of the wrongfulness and consequences of their actions. Further, male participants indicated a sexual assault was greater in wrongfulness

when the female victim was intoxicated. Intoxicated victims were blamed more than perpetrators in rape cases when compared to the rape of a sober individual (Bieneck & Krahe, 2011). Based on the lack of a significant difference with the control, intoxication was not seen as a vulnerability in the current study. Previous research in conjunction with the current findings lead one to believe there may be an effect of victim blaming resulting in a lower rating of heinousness when murder victims are intoxicated.

Increased Mental Suffering

As hypothesized, scores of heinousness were significantly higher when the victim pled for her life or suffered a resumed attack, than other levels of mental suffering (i.e., bound and gagged and verbal abuse). However, pleading for life was ranked third highest in terms of heinousness and was almost equivalent to verbal abuse. The two rated as most heinous were a resumed physical attack and being bound and gagged. An explanation for this result may be that these methods of increased mental suffering may also increase physical suffering, as compared to the other methods (i.e., pled for life and verbal abuse). One might argue that these are indeed more closely related to forms of physical suffering, as opposed to purely mental suffering. Despite this, all forms of mental suffering were considered more heinous than the control.

Increased Physical Suffering

Some states with a HAC aggravator specify there must be an element of physical torture for a HAC finding (e.g., Louisiana, Utah). Previous research on heinousness has used methods of increased physical suffering as a way to manipulate the heinousness of a crime (Finkel & Duff, 1991; Hendrick & Shaffer, 1975). Although the hypothesis was confirmed in the current study (i.e., pre-mortem mutilation was more heinous than other forms of physical suffering), post-hoc pairwise comparisons revealed important information. Ratings for sexual perversion, pre-mortem

mutilation, and post-mortem mutilation were virtually identical and extremely high (i.e., means of 93.82, 93.83, 93.98, respectively). It is possible these results have to do with the fact that these actions are perceived as purposeful actions that were likely controllable, as opposed to the result of an uncontrolled impulse.

Individuals often have a difficult time understanding someone's ability to take the life of another human on its own. In order to murder someone and cause them additional physical suffering may be even more difficult for them to comprehend. It is possible that individuals believe these acts contribute to the dehumanization of the perpetrator's victim. Bandura (2002) noted perpetrators of violent crime no longer see their victims "as persons with feelings, homes and concerns but as sub-human objects" (p. 109). By blocking awareness of the individual's human qualities, the perpetrator is able to avoid feelings of guilt, remorse, or distress. In fact, research has shown that the presence, or lack thereof, of human qualities impacted individuals treatment of others (i.e., when a person lacked human qualities, they were treated more harshly) (Bandura, Underwood, & Fromson, 1975). The ability to dehumanize a victim and disengage from moral responsibility can lead to more brutal actions against the victim and is associated with individuals who are more aggressive and experience less guilt and remorse (Bandura, Barbaranelli, Caparara, & Pastorelli, 1996). Further, research has linked feelings of power and dehumanization (Lammers & Stapel, 2011). It is possible participants in the current study perceived the perpetrator as domineering (i.e., attempting to exert power and control over the victim) and morally corrupt (i.e., viewing the victim as subhuman), and therefore viewed these crimes as more heinous.

In the current study, the level of sexual perversion involved the rape of the victim prior to her murder. One probable explanation for the perceptions of heinousness, regarding this crime

characteristic, is to consider the demographics of the current sample (i.e., 65.3% college-aged females). In the United States, one in six women have experienced either an attempted or completed rape (National Institute of Justice & Center for Disease Control & Prevention, 1998). In fact, research found women's risk of being a victim of sexual assault increases when in college (e.g., Belknap & Erez, 1995; Fisher, Blevins, Santana, & Cullen, 2004). In a sample of young females, fear of rape might be more pervasive and relevant in their everyday life. Research has shown college-aged females evidence a fear of being raped by both strangers and acquaintances (Ferraro, 1995; Lane & Meeker, 2003; May 2001; Wilcox, Jordan, & Pritchard, 2006). This personal fear and possible connection with rape may contribute to perceptions of heinousness, more so than other characteristics. Furthermore, 20 states have aggravating factors listed as committing a murder in the commission of another felony such as rape (DPIC, n.d.).

With regard to post-mortem mutilation specifically, it is likely that participants perceived the perpetrator as odd or disturbed. Rajs, Lundstrom, Broberg, Lidberg, and Lindquist (1998) identified four types of post-mortem mutilation: defensive, aggressive, offensive, and necromanic mutilation. Individuals who engage in defensive post-mortem mutilation do so in order to dispose of evidence and delay investigations (e.g., mutilation of genitalia after rape), whereas aggressive mutilation is linked to the use of excessive methods (i.e., overkill). Offenders who commit these types of mutilation were perceived as more "disorganized." Offensive and necromanic mutilation was more likely committed by "organized" offenders for a specific purpose of additional torture and gratification. These types of mutilation are often linked with the intent to destroy the identity of the victim or depersonalize them, which relates to the dehumanization of victims.

Post-mortem mutilation is often portrayed in crime television shows, which may contribute to a perception of it being more common than it is in reality (Chaudhary, Murty, & Singh, 2007). Research found only 2.2% of murders committed between 1994 and 2004 in Finland involved post-mortem mutilation (Häkkinen-Nyholm, Weizmann- Henelius, Salenius, Lindberg, & Repo-Tiihonen, 2009). If participants believed the perpetrator committed the action with an intentional motive, their actions may have been perceived as cold, sadistic, and methodical. Further, participants may have found evidence of post-mortem mutilation as shocking, and even potentially gruesome, which may have contributed to their perceptions of heinousness.

Gruesomeness

In the current study, evidence of gruesomeness was introduced in the vignettes by noting the detective's description of the crime scene (e.g., location of blood in the home) and the amount of time they predicted it would take to process and clean the scene of the crime. As predicted, the written description of gruesomeness impacted participants' ratings of heinousness. Low, medium, and high levels were all significantly different from one another, and ratings increased as gruesomeness increased. These results suggested that crime scene details have an impact on juror perceptions, even when minimally discussed or mentioned.

Research on gruesomeness has focused primarily on the effect of crime scene images, as it is not uncommon for the prosecution to display images of the crime scene in order to depict the violent scene for the jury. Jurors' judgments are often heavily influenced by their emotions (Smith & Shaffer, 2000). It is likely that crime scene photos, or descriptions that arouse a mental image, have an impact on jurors' emotions and introduce an element of persuasion toward guilt. To this day, little research has been done with regard to the impact of gruesome verbal evidence.

Bright and Goodman-Delahunty (2004) assessed mock jurors' perceptions of gruesome evidence using trial transcripts. Even when the gruesome evidence lacked legal sufficiency for conviction, participants found the defendant more culpable and were more likely to find a verdict of guilt. The gruesome condition was different from the non-gruesome condition in that the murder included torture and post-mortem mutilation, which further supports the idea that mutilation and gruesomeness are inherently linked. In 2006, these same researchers compared the influence of gruesome photographic and verbal evidence. They found verbal evidence did not affect mock jurors' emotional states or conviction rates, as compared to photographic evidence. Participants exposed to photographic evidence reported greater emotional reactions (i.e., anger), assigned greater weight to the prosecution's evidence, and provided higher conviction rates (Bright and Goodman-Delahunty (2006)).

The experience of gruesome evidence, whether verbal or photographic, may contribute to a variety of emotional responses from jurors (e.g., anger, fear, disgust, among others). Bornstein, Miller, Nemeth, Page, and Musil (2005) found the viewing of crime scene photos was one of the top ten sources of stress when participating in a jury trial. In another study, participants who viewed photos of a crime reported a greater level of negative physical responses and emotional distress compared to those who did not see images, and were more likely to convict the defendant if shown a gruesome image (Douglas, Lyon, & Ogloff, 1997). Given the previous research and the results of the current study, it is possible gruesome evidence (whether verbal or photographic perceptions) leads to significant emotional reactions and prejudices in decisions, resulting in increased perceptions of heinousness and possibly resulting in the determination of an aggravating factor.

Time Elapsed Before Death

Ratings of heinousness increased as the time to death increased. Murders were perceived as most heinous when it took over 24 hours for the victim to succumb to their injuries. This is consistent with findings in Adger (2010) relating a greater amount of suffering to longer periods of time before death. Similar to Adger's framework, it is hypothesized that the perception of heinousness is based on thoughts and feelings regarding both physical and mental suffering of the victim as they wait to die. Little research has been done to study jurors' perceptions of length of time it took for the victim to die. Despite this, given societal perceptions of suffering, it is not surprising that the amount of time would matter.

In Western culture, there is a strong tendency to avoid or attempt to ameliorate any cause of suffering (Byock, 1996). Our society continuously seeks out ways to improve care for those facing death and make them more comfortable (Billings, 2000; Clark, 2007; Davison, 2011; Field & Cassel, 1997; Wolfe et al., 2008). Whether due to age, terminal illness, or unexpected trauma (e.g., car accidents), palliative care is provided in order to ensure the individual's suffering is limited in their final days. Families of the dying may feel a sense of closure knowing their loved ones were not in pain at the end; however, many families report a need for continued development and improvement of palliative care services (Contro, Larson, Scofield, Sourkes, & Cohen, 2002; Kristjanson, Sloan, Dudgeon, & Adaskin, 1995; Lynn, 2001; Lynn et al., 1997; Teno et al., 2004). The National Organization of Parents of Murdered Children Inc. (POMC) reported that family and friends of homicide victims feel comforted when their loved one died instantly. If the victim was subjected to prolonged suffering, families dwell on this suffering for years and relive what their loved one must have endured (POMC, n.d.). These results suggest the emotional consideration of the victim's suffering, as related to the time in which they suffered,

likely contributes to jurors' determinations of heinousness, and may play a role in other decisions.

Overall

Although main effects for all seven factors were found with many significant differences between various levels, the range of means is noteworthy. The scale given to participants was 0 (not at all heinous) to 100 (extremely heinous). Across all seven factors and 43 levels, the lowest mean of any level was 68.28 (i.e., the mean of low gruesomeness) and the highest level mean was 93.98 (i.e., the mean of post-mortem mutilation as a method of increased physical suffering). The average participant mean rating of heinousness for all vignettes was 81.28. Only three participants (1.2% of the sample) had average ratings of heinousness below 50. 6.3% of participants had averages in the range of 50 to 59, 14.2% between 60 and 69, 20.4% in the range of 70 to 79, 26.7% fell between 80 and 89, 27.9% in the range of 90 to 99, and 2.9% of participants ($n = 7$) rated all vignettes as 100. Despite the presentation of a wide variety of murders, 75% of participants averaged ratings over 70.

Acknowledgement of the vast majority of high ratings provides further evidence for the argument that the use of the aggravating factor "heinous, atrocious, or cruel" is vague and indiscriminate. Similar to the large amount of litigation regarding the subjectivity of this aggravator (e.g., *Keller v. State*, 1979; *State v. Goodman*, 1979; *Godfrey v. Georgia*, 1980; *State v. Pritchett*, 1981; *Bui v. State*, 1988; *Maynard v. Cartwright*, 1988; *Lewis v. Jeffers*, 1990, *Shell v. Mississippi*, 1990, among many), results suggest that heinousness is rooted in personal bias. As Adger (2010) noted, this factor is meant to help distinguish murders subject to additional pain and suffering. However, these results suggest many murders can be judged as heinous and the level of heinousness depends on the perceptions of the person making the determination.

Given the life and death determination these perceptions influence, it is important to consider whether this aggravating factor is constitutional. As per *Godfrey v. Georgia* (1980), SCOTUS ruled that capital offenses must be identified in a fair and consistent manner and the Court must provide clear guidelines and standards to limit the use of juror discretion in the determination of an aggravating factor. As further defined in *Zant v. Stephens* (1983), the High Court stated the following: “An aggravating circumstance must genuinely narrow the class of persons eligible for the death penalty and must reasonably justify the imposition of a more severe sentence on the defendant compared to others found guilty of murder” (p. 877-888).

Applied in practice, these results suggest lawyers can argue that nearly anything meets the HAC definition, which Rosen (1985) demonstrated many years ago using Florida case comparisons. While some states with this aggravator have provided additional guidelines regarding this determination, such as homicides with physical abuse, torture, psychological torture, or “appreciable suffering,” these distinctions are limited by the overall inclination that murder in and of itself is judged to be “heinous,” regardless of the specific elements of the crime. Both details of the crime and details regarding the victim were influential in an individual’s decision. Although specific crime and victim characteristics were significantly more or less heinous, the average of all levels (even the controls) was consistently above a mean rating of 70.

Limitations

Phase 1

There are three notable limitations of this phase of the current study. First, there were issues with the composition of the sample. The sample consisted of all undergraduate students enrolled in psychology classes, was made up of over 85% female students, and over 85% of these students were Caucasian. This is a limitation because it does not conform with the gender

or ethnic makeup of the general population. Second, ratings of heinousness were garnered from very brief and non-descriptive vignettes that depicted the 10 methods of killing. While this method was used to reduce the likelihood that extraneous information would influence participant ratings, it is impossible for the researcher to know what other elements participants considered in their ratings. Specifically, although the vignettes were written in a vague manner, participants would have imagined the murders in different ways. Finally, all participants were exposed to all methods of killing. Due to the within-subjects design, it is possible participants rated a method's heinousness in comparison to other methods. Although the researcher randomized vignettes in an attempt to account for order effects, it is unknown how the comparison of vignettes influences individuals' ratings.

Phase 2

There were several limitations to this phase of the current study. First, there were issues with the composition of the sample, as it consisted of all undergraduate students enrolled in psychology classes. Over 65% of participants were female and 82.4% of these students identified as Caucasian. This is a limitation due to it not being representative of the overall population from which juries are drawn.

Second, due to the amount of variables of interest in the current study, a within-subjects design was used. This design was most feasible, as it allowed for statistically powerful results with fewer subjects. The use of this approach was necessary in order to assess all variables and associated levels of interest. However, because of this approach, all participants provided ratings on every level. This may have introduced bias and comparisons based on previous vignettes. In order to reduce this effect, three forms (i.e., A, B, and C) were created with the vignettes randomized in different orders.

Third, participants made judgments of heinousness based on short vignettes with limited details, which might have an impact on the external validity of the findings within a psycho-legal context. While this is a consideration, research has shown this methodology has unique advantages. Vignettes provide researchers with the ability to control and manipulate variables, which might not be possible to accomplish if a study utilized authentic cases (Bieneck, 2009).

Fourth, the design of the study did not mimic the process of jury deliberations and therefore only reflected participants' thoughts in the absence of the influence of others. With the exception of two states in which judges make a determination of an aggravator, juries make the determination of these factors as a group. Research suggests there are differences in biases when an individual juror comes to their decision, as compared to when jurors deliberate together (Kaplan & Miller, 1978; Kerr, Niedermeier, & Kaplan, 1999). As a result of these possible differences, it is unknown what the impact of a deliberation would be on these findings.

Lastly, this study's vignettes were consistent in that the perpetrator was male and the victim was female. Other demographic characteristics of both the perpetrator and victim were left out including race, sexuality, and socioeconomic status, among others. Because of this, our results of generalizability are limited and the potential influence of these other variables is unknown.

Future Directions

The results and limitations of this study provide researchers with numerous future directions. Future research in understanding the concept of heinousness should seek out a more heterogeneous sample. Because the findings in this study are based on predominantly young, white female students, effects related to gender, race, age, and other participant characteristics

were not explored. However, research has shown juror demographics generally have a weak correlation with outcome (Jonakait, 2006; Kressel & Kressel, 2002; Penrod, 1990).

Based on the significant differences within each factor, future research could dedicate entire studies to further understand each of these factors in more detail, along with consideration of new factors. Research should also find ways to minimize differences in the way participants consider these factors. While this may not be entirely possible, methods using images, videos, or other more detailed measures might be a starting place.

In addition to better understanding various characteristics of the crime, research in the future should manipulate the victim and perpetrator's race and gender to explore possible racial and gender biases' effect on perceptions of heinousness. Similarly, this study focused on characteristics of the crime and victim. Future research should address characteristics of the perpetrator beyond the previously mentioned race and gender (e.g., mentally ill, intellectually disabled, intoxicated, criminal history, etc.).

Further, conducting this line of research in a between-subjects design would also be interesting and helpful in comparison to a within-subjects design. Research using a between-subjects design would likely help account for comparison effects (e.g., comparing stabbing to gunshot) and be more in line with the experience of jurors who determine aggravating factors; that is, the role of a juror in a capital case is confined to one crime.

Finally, as mentioned previously, Alabama defines HAC as a crime evidencing "psychological torture, appreciable suffering, and overkill" (*Norris v. State*, 1989). Because of this scheme that Alabama and other states use, future research should examine what is considered psychological torture by jurors. Parsing out psychological torture from any element of physical torture during a murder may be difficult, but it is essential given it is a defining piece

of this aggravating factor in many states. Overall, a better understanding of what jurors consider, when finding this aggravator, could lead clearer guidelines further limiting juror discretion.

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APPENDICES

APPENDIX A
PHASE 1: PARTICIPANT INFORMATION SHEET

PARTICIPANT INFORMATION SHEET

Study title: You be the Judge: How Heinous is this Crime? - Phase 1

Principal Investigator: Kathryn C. Applegate, M.S., Graduate Student

Faculty Supervisor: Karen L. Salekin, Ph.D.

What is this study about? You are being asked to take part in a research study. This study is called You be the Judge: How Heinous is this Crime? – Phase 1. You will receive course credit for your participation as a part of the PY 101 course.

Why is this study important? The main purpose of this study is to learn more about jury decision-making in capital murder cases. The knowledge gained from this study will help psychologists, lawyers, and judges better understand juror decision-making.

Why have I been asked to participate in this study? All students in the PY 101 had access to the description of the study. You have been asked to participate in this study because you met the requirements and signed up for the study.

How many other people will be asked to participate? Up to 400 other people will participate in this study.

What will I be asked to do in this study? You will be asked to complete a questionnaire regarding your personal exposure to crime, read vignettes describing a murder, and rate the heinousness of each crime. You will also be asked to provide basic information about yourself, for example, your age, gender, and political affiliation.

How long will this study last? Participation is expected to last approximately sixty minutes. The only cost to you from this study is your time. You will be awarded partial course credit for your participation. Regardless of the time to complete the study, you will be awarded 1.0 credit if you complete the whole study.

What are the risks and benefits of participation? There are minimal risks involved in this study. In this study, you will be asked to read various vignettes describing a murder, which may be a sensitive topic and some questions could be distressing to you. If you feel distressed by any question, you may skip questions or discontinue the study at any time. If you are feeling distressed or experience any other psychological symptom, please call the University Counseling Center (205) 348-3863 or Psychology Clinic (205) 348-5000. Although there are no direct benefits to you, you may learn more about how jurors perceive crimes, and you will learn some general information about the research process. You may also feel good about knowing that this information could shape the legal system in the future. Individuals involved in the legal system may also benefit from the information learned in this study.

How will my privacy be protected? All of the surveys in this study will be completed on your own. The only people with access to these data will be the trained members of the research team. Because identifying information is not collected with your data (see below), there will be no way to match what you reported with your identifying information.

How will my confidentiality be protected? No identifying information will be paired with your data. You will provide your name at the end of the study for the purpose of awarding credit. This information will not be paired with your data in any way. Also, only trained individuals will have access to the data from this project.

What are the alternatives to being in this study? The alternative to being in this study is to participate in another assignment for course credit. Please contact your instructor for information about this option.

What are my rights as a participant in this study? Taking part in this study is voluntary. It is your free choice. You can refuse to be in it at all. If you start the study, you can stop at any time. There will be no effect on your relations with the University of Alabama. The University of Alabama Institutional Review Board (“the IRB”) is the committee that protects the rights of people in research studies. The IRB may review study records from time to time to be sure that people in research studies are being treated fairly and that the study is being carried out as planned.

Who do I call if I have questions or problems? If you have questions, concerns, or complaints about the study right now, please ask them. If you have questions or concerns about the study later on, please email Kathryn Applegate at kapplegate@crimson.ua.edu or Karen L. Salekin at ksalekin@ua.edu.

If you have questions about your rights as a person in a research study, call Ms. Tanta Myles, the Research Compliance Officer of the University, at 205-348-8461 or toll-free at 1-877-820-3066.

You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach website at http://osp.ua.edu/site/PRCO_Welcome.html or email the Research Compliance office at participantoutreach@bama.ua.edu.

After you participate, you are encouraged to complete the survey for research participants that is online at the outreach website or you may ask the investigator for a copy of it and mail it to the University Office for Research Compliance, Box 870127, 358 Rose Administration Building, Tuscaloosa, AL 35487-0127.

I have read this information sheet. I have had a chance to ask questions. I agree to take part in this study. I will receive a copy of this participant information sheet to keep.

APPENDIX C
EXPOSURE TO VIOLENCE QUESTIONNAIRE

Participant ID: _____

Directions: Please select yes or no to the following questions regarding your exposure to violence. The questions are broken into three sections:

- **Victim:** assesses whether you have personally been the victim of a crime.
- **Knew Victim:** assesses whether you have known anyone who has been a victim to a crime.
- **Witness:** assessing whether you have witnessed a crime occur.

If you answer yes to any of the following, and feel comfortable doing so, please provide additional details regarding the incident(s) on the additional page provided for comments.

<u>Victim</u>		
1. Have you been robbed without a weapon?	YES	NO
2. Have you been robbed with a weapon?	YES	NO
3. Have you been assaulted without a weapon?	YES	NO
4. Have you been assaulted with a weapon?	YES	NO
5. Have you been threatened with rape?	YES	NO
6. Have you been raped without a weapon?	YES	NO
7. Have you been raped with a weapon?	YES	NO
8. Have you been shot with a gun?	YES	NO
9. Have you been knifed?	YES	NO
10. Have you had your life threatened?	YES	NO

11. Have you been the victim of any other violent crime?	YES	NO
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<u>Knew Victim</u>		
12. Do you know someone who has been robbed without a weapon?	YES	NO
13. Do you know someone who has been robbed with a weapon?	YES	NO
14. Do you know someone who has been assaulted without a weapon?	YES	NO
15. Do you know someone who has been assaulted with a weapon?	YES	NO
16. Do you know someone who has been threatened with rape?	YES	NO
17. Do you know someone who has been raped without a weapon?	YES	NO
18. Do you know someone who has been raped with a weapon?	YES	NO
19. Do you know someone who has been shot with a gun?	YES	NO
20. Do you know someone who has been knifed?	YES	NO
21. Do you know someone who has had his or her life threatened?	YES	NO
22. Do you know someone who has been murdered?	YES	NO
23. Do you know someone who has been the victim of any other violent crime?	YES	NO

<u>Witness</u>		
24. Have you ever witnessed someone be robbed without a weapon?	YES	NO
25. Have you ever witnessed someone be robbed with a weapon?	YES	NO
26. Have you ever witnessed someone assaulted without a weapon?	YES	NO
27. Have you ever witnessed someone assaulted with a weapon?	YES	NO
28. Have you ever witnessed someone be raped without a weapon?	YES	NO
29. Have you ever witnessed someone be raped with a weapon?	YES	NO
30. Have you ever witnessed someone be shot with a gun?	YES	NO
31. Have you ever witnessed someone be knifed?	YES	NO
32. Have you ever witnessed someone be murdered?	YES	NO
33. Have you ever witnessed any other violent crime?	YES	NO

Directions: If you answered YES to any of the above questions (in any of the three sections), and you feel comfortable doing so, please provide additional details about the incident(s) on the additional page(s). If you answered more than one item YES, please specify the item number your commentary is referencing.

Appendix E
SURVEY OF CRIME TELEVISION EXPOSURE

Please rank your top three favorite types of television shows by noting 1st, 2nd, and 3rd in the boxes next to your favorites. Only three ranks should be assigned.

Type of Television Show	Rank
Drama	
Reality Shows	
Travel and Cooking	
Educational	
Crime	
Thriller	
Sitcoms	
Paranormal and Horror	
Cartoons	
News	

Directions: The following is a list of television shows. Please indicate how often you watch each show by marking the box closest to your viewing behavior.		Never	Almost Never	Occasionally	Often	Regularly	Never heard of it
1	“CSI”						
2	“Criminal Minds”						
3	“Law and Order”						
4	“NCIS”						
5	“Bones”						
6	“The Killing”						
7	“Dexter”						
8	“Hannibal”						
9	“Boardwalk Empire”						
10	“The Following”						
11	“OZ”						
12	“Sons of Anarchy”						
13	“Game of Thrones”						
14	“The Walking Dead”						
15	“Daredevil”						
16	“Dateline”						
17	Shows on Investigation Discovery						
18	Other shows featuring crimes						

APPENDIX F
PHASE 1 CRIME VIGNETTES AND HEINOUSNESS SURVEY

Directions: You will be presented with a series of vignettes that provide limited information on the details of a murder.

Your task is to read each vignette and determine how heinous you find the murder. Please rate each vignette on a scale of 0 (not at all) to 100 (extremely): 0 meaning “not at all heinous” and 100 meaning “extremely heinous.”

Please type your numerical rating in the blank space provided after each vignette. Your rating can be any number between 0 and 100.

- On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, Travis raised his gun and shot and killed her. The medical examiner indicated Ms. Wilson died from a gunshot wound to the head.
On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

- On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, Travis took out a knife, ran toward her, and stabbed her in the chest. The medical examiner indicated Ms. Wilson died from one stab wound to the chest.
On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

- On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, Travis grabbed a blunt object from the corner of the room, hid behind the door, and then hit Ms. Wilson over the head with the object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.
On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

- On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, Travis ran toward her and tackled her to the ground. He began to punch Ms. Wilson until he rendered her unconscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.
On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

- On the night of September 15th, Travis Smith broke into the home of Mary Wilson. He went into her bathroom and searched through her medicine cabinet. Travis found her prescription bottle and replaced her medication with cyanide pills. In the morning, Ms. Wilson took her medication and died. The medical examiner indicated Ms. Wilson’s death was due to poisoning.
On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

- On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Travis then murdered her. Please answer with the number ten.
On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____
- On the night of September 15th, Travis Smith broke into the home of Mary Wilson. While in the house, he planted a homemade bomb and made a quick escape. Shortly after his departure from the home, Ms. Wilson's home exploded. The medical examiner indicated Ms. Wilson's death was due to blast injuries caused from the explosion.
On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____
- On the night of September 15th, Travis Smith broke into the home of Mary Wilson. While in the house, he poured gasoline on the floor and lit a fire in the kitchen. He escaped from the home without waking Ms. Wilson. By the time she woke up, the flames had engulfed the home and she was unable to escape. The medical examiner indicated Ms. Wilson died from severe burns.
On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____
- On the night of September 15th, Travis Smith broke into the home of Mary Wilson. He first went into the bathroom and filled the bathtub with water. Ms. Wilson woke up to the noise and went into the bathroom to see what was going on. As she walked in, Travis grabbed her and forced her head into the water. Once she had died, Travis left the home. The medical examiner indicated the cause of Ms. Wilson's death was drowning.
On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____
- On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, Travis ran toward her and tackled her to the ground. With his bare hands, he strangled Ms. Wilson until she was no longer breathing. The medical examiner indicated Ms. Wilson died as a result of strangulation.
On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____
- On the night of September 15th, Travis Smith broke into the home of Mary Wilson. He found where Ms. Wilson was sleeping and rolled her over onto her stomach. He then forced her head into the mattress, cutting off all air supply. Once she was no longer breathing, he quickly left the home. The medical examiner indicated Ms. Wilson died as a result of a loss of oxygen to her brain.
On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

APPENDIX G
PHASE 1 DEBRIEFING FORM

Debriefing Form

Dear Participant,

Thank you for your participation in this study. The purpose of this study was to investigate how jurors perceive various crime factors in capital murder trials. In particular, we are interested in understanding what factors are perceived as more or less heinous. The results of this study may influence how the legal system defines aggravating factors (e.g., “heinous, atrocious, or cruel”) in capital murder cases.

Please do not share with others about your participation in this study. It is important that our data is not influenced by bias in any way. Information shared among potential participants could potentially bias future responses from participants. If you have additional questions about this project or the purpose of the study, please contact the principal or secondary investigator directly. Their contact information is below.

Kathryn Applegate, M.S.
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Karen Salekin, Ph.D.
Associate Professor
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Thank you,
Kathryn C. Applegate, M.S.
Principal Investigator
kapplegate@crimson.ua.edu

APPENDIX H
PHASE 2: PARTICIPANT INFORMATION SHEET

PARTICIPANT INFORMATION SHEET

Study title: You be the Judge: How Heinous is this Crime? - Phase 2

Principal Investigator: Kathryn C. Applegate, M.S., Graduate Student

Faculty Supervisor: Karen L. Salekin, Ph.D.

What is this study about? You are being asked to take part in a research study. This study is called *You be the Judge: How Heinous is this Crime? – Phase 2*. You will receive course credit for your participation as a part of the PY 101 course.

Why is this study important? The main purpose of this study is to learn more about jury decision-making in capital murder cases. The knowledge gained from this study will help psychologists, lawyers, and judges better understand juror decision-making.

Why have I been asked to participate in this study? All students in the PY 101 had access to the description of the study. You have been asked to participate in this study because you met the requirements and signed up for the study.

How many other people will be asked to participate? Up to 400 other people will participate in this study.

What will I be asked to do in this study? You will be asked to complete a questionnaire regarding your personal exposure to crime and another short psychological questionnaire. You will then be asked to read brief vignettes describing a murder and rate the heinousness of each crime. You will also be asked to provide basic information about yourself, for example, your age, gender, and political affiliation.

How long will this study last? Participation is expected to last approximately two hours. The only cost to you from this study is your time. You will be awarded partial course credit for your participation. Regardless of the time to complete the study, you will be awarded 3.0 credits if you complete the whole study.

What are the risks and benefits of participation? There are minimal risks involved in this study. In this study, you will be asked to read various vignettes describing a murder, which may be a sensitive topic and some questions could be distressing to you. If you feel distressed by any question, you may skip questions or discontinue the study at any time. If you are feeling distressed or experience any other psychological symptom, please call the University Counseling Center (205) 348-3863 or Psychology Clinic (205) 348-5000. Due to the length of the study, you may also feel fatigued. If you need a break, you will be allowed to take one. Although there are no direct benefits to you, you may learn more about how jurors perceive crimes, and you will learn some general information about the research process. You may also feel good about knowing that this information could shape the legal system in the future. Individuals involved in the legal system may also benefit from the information learned in this study.

How will my privacy be protected? All of the surveys in this study will be completed on your own. The only people with access to these data will be the trained members of the research team. Because identifying information is not collected with your data (see below), there will be no way to match what you reported with your identifying information.

How will my confidentiality be protected? No identifying information will be paired with your data. You will provide your name at the end of the study for the purpose of awarding credit. This information will not be paired with your data in any way. Also, only trained individuals will have access to the data from this project.

What are the alternatives to being in this study? The alternative to being in this study is to participate in another assignment for course credit. Please contact your instructor for information about this option.

What are my rights as a participant in this study? Taking part in this study is voluntary. It is your free choice. You can refuse to be in it at all. If you start the study, you can stop at any time. There will be no effect on your relations with the University of Alabama.

The University of Alabama Institutional Review Board (“the IRB”) is the committee that protects the rights of people in research studies. The IRB may review study records from time to time to be sure that people in research studies are being treated fairly and that the study is being carried out as planned.

Who do I call if I have questions or problems?

If you have questions, concerns, or complaints about the study right now, please ask them. If you have questions or concerns about the study later on, please email Kathryn Applegate at kapplegate@crimson.ua.edu or Karen L. Salekin at ksalekin@ua.edu.

If you have questions about your rights as a person in a research study, call Ms. Tanta Myles, the Research Compliance Officer of the University, at 205-348-8461 or toll-free at 1-877-820-3066.

You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach website at http://osp.ua.edu/site/PRCO_Welcome.html or email the Research Compliance office at participantoutreach@bama.ua.edu.

After you participate, you are encouraged to complete the survey for research participants that is online at the outreach website or you may ask the investigator for a copy of it and mail it to the University Office for Research Compliance, Box 870127, 358 Rose Administration Building, Tuscaloosa, AL 35487-0127.

I have read this information sheet. I have had a chance to ask questions. I agree to take part in this study.

I will receive a copy of this participant information sheet to keep.

APPENDIX I
QUESTIONNAIRE OF COGNITIVE AND AFFECTIVE EMPATHY

Questionnaire #2

Participant ID: _____

People differ in the way they feel in different situations. Below you are presented with a number of characteristics that may or may not apply to you. Read each characteristic and indicate how much you agree or disagree with the item by ticking the appropriate box. Answer quickly and honestly.		Strongly agree	Slightly agree	Slightly disagree	Strongly disagree
1.	I sometimes find it difficult to see things from the 'other guy's' point of view.				
2.	I am usually objective when I watch a film or play, and I don't often get completely caught up in it.				
3.	I try to look at everybody's side of a disagreement before I make a decision.				
4.	I sometimes try to understand my friends better by imagining how things look from their perspective.				
5.	When I am upset at someone, I usually try to 'put myself in his shoes' for a while.				
6.	Before criticizing somebody, I try to imagine how I would feel if I was in their place.				
7.	I often get emotionally involved with my friends' problems.				
8.	I am inclined to get nervous when others around me seem to be nervous.				
9.	People I am with have a strong influence on my mood.				
10.	It affects me very much when one of my friends seems upset.				
11.	I often get deeply involved with the feelings of a character in a film, play or novel.				
12.	I get very upset when I see someone cry.				
13.	I am happy when I am with a cheerful group and sad when the others are glum.				
14.	It worries me when others are worrying and panicky.				
15.	I can easily tell if someone else wants to enter a conversation.				
16.	I can pick up quickly if someone says one thing but means another.				

17.	It is hard for me to see why some things upset people so much.				
18.	I find it easy to put myself in somebody else's shoes.				
19.	I am good at predicting how someone will feel.				
20.	I am quick to spot when someone in a group is feeling awkward or uncomfortable.				
21.	Other people tell me I am good at understanding how they are feeling and what they are thinking.				
22.	I can easily tell if someone else is interested or bored with what I am saying.				
23.	Friends talk to me about their problems as they say that I am very understanding.				
24.	I can sense if I am intruding, even if the other person does not tell me.				
25.	I can easily work out what another person might want to talk about.				
26.	I can tell if someone is masking their true emotion.				
27.	I am good at predicting what someone will do.				
28.	I can usually appreciate the other person's viewpoint, even if I do not agree with it.				
29.	I usually stay emotionally detached when watching a film.				
30.	I always try to consider the other fellow's feelings before I do something.				
31.	Before I do something I try to consider how my friends will react to it.				

APPENDIX J
PHASE 2 CRIME VIGNETTES AND SURVEY OF HEINOUSNESS

Questionnaire #3(A)

You be the Judge: How Heinous is this Crime?

Participant ID: _____

Directions: You will be presented with various vignettes briefly describing the details of a murder. Your task will be to read each vignette and determine how heinous you find the murder. Please rate each vignette on a scale of 0 (not at all) to 100 (extremely): 0 meaning “not at all heinous” and 100 meaning “extremely heinous.” Please write your numerical rating in the blank space provided after each vignette. Your rating can be any number between 0 and 100. You will also be asked to indicate what factor was most important in your decision regarding the crime’s level of heinousness.

Scale

0 (not at all heinous)

.....

100 (extremely heinous)

Vignette #1

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Travis tackled her to the ground and began to mutilate her body. He made incisions on her legs, arms, and torso. After mutilating her body, Travis hit her over the head with a blunt object until she no longer appeared conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #2

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. In their official offense report, the detectives noted that the scene was one of the most gruesome they had seen. There was blood everywhere throughout the home, including the walls, lights, bed, and carpet. They indicated it would take a couple of weeks to process the scene.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #3

Mary Wilson had an intellectual disability, but was otherwise healthy with no physical or psychological problems. On the night of September 15th, Travis Smith broke into her home. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, Travis hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #4

On the night of September 15th, Travis Smith broke into the home of Mary Wilson, an acquaintance of his. Ms. Wilson woke up to the noise and went into the living room to see what was going on. She saw her acquaintance, Travis. He then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #5

On the night of September 15th, Travis Smith broke into the home of his granddaughter, Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, she saw her grandfather, Travis, and was confused to see him in her home. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #6

On the night of September 15th, Travis Smith broke into the home of Mr. and Mrs. Johnson. Mr. Johnson woke up to the noise and went into the living room to see what was going on. He did not see anyone, but went to check on his 15-year-old daughter. His daughter was dead. Travis had hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Mr. and Mrs. Johnson's daughter died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #7

On the night of September 15th, Travis Smith broke into the home of 75-year-old Mary Wilson. Mary woke up to the noise and went into the living room to see what was going on. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #8

On the night of September 15th, Travis Smith broke into his friend, Mary Wilson's, home. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, she saw her friend Travis and was confused to see him in her home. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #9

On the night of September 15th, Travis Smith broke into the home of Mary Wilson, a woman he had never met. Ms. Wilson woke up to the noise and went into the living room to see what was going on. She saw a strange man whom she had never seen before. Travis then hit Ms. Wilson over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #10

On the night of September 15th, Travis Smith broke into the home of Mary Wilson, his girlfriend. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, she saw her boyfriend, Travis, and was confused to see him her home. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #11

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Before she could say or do anything, Travis hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #12

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. Please write down the number 10 and indicate that the factor most important to your decision was “lack of information.”

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #13

Mary Wilson was a physically health woman of average intelligence, but she suffered from mental illness her entire life. She had been recently released from a psychiatric hospital after a brief stay. On the night of September 15th, Travis Smith broke into her home. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, Travis hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #14

On the night of September 15th, Travis Smith broke into the home of his sister, Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, she saw her brother, Travis, and was confused to see him in her home. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #15

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Travis hit her over the head with a blunt object until she no longer appeared to be conscious. She died as a result of blunt force trauma to her head. He then set her body on fire.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #16

On the night of September 15th, Travis Smith broke into the home of Mr. and Mrs. Johnson. Mr. Johnson woke up to the noise and went into the living room to see what was going on. He did not see anyone, but went to check on his 6-month-old daughter. His daughter was dead. Travis had hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Mr. and Mrs. Johnson's daughter died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #17

On the night of September 15th, Travis Smith broke into the home of Mary Wilson, his ex-girlfriend. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, she saw her ex-boyfriend, Travis, and was confused to see him her home. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #18

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked into the living room, Travis tackled her to the ground, called Ms. Wilson countless names, and made crude and vulgar remarks. He continuously threatened to kill her. After being verbally abusive, Travis hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #19

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, Travis tackled her to the ground and began stomping on her. After he finished stomping on her, he then hit her over the head with a blunt force object. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #20

On the night of September 15th, Travis Smith broke into the home of 24-year-old Mary Wilson. Mary woke up to the noise and went into the living room to see what was going on. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #21

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. In their official offense report, the detectives noted that the scene suggested foul play, but indicated it was not particularly gruesome. They indicated they would be able to completely process the scene within the day.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #22

On the night of September 15th, Mary Wilson celebrated her friend's birthday at a bar with her friends. She consumed a lot of alcohol and decided to take a cab home due feeling too intoxicated to drive. Late that night, Travis Smith broke into her home. Still intoxicated, Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, Travis hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #23

On the night of September 15th, Travis Smith went into the living room of his home he shared with his wife, Ms. Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, she saw her husband, Travis, and was confused to see him in the living room instead of bed. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #24

On the night of September 15th, Travis Smith broke into the home of Mary Wilson, his ex-wife. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, she saw her ex-husband, Travis, and was confused to see him her home. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #25

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. Please write down the number 10 and indicate that the factor most important to your decision was “lack of information.”

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #26

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. In their official offense report, the detectives noted that the scene suggested foul play. The blood from the victim was concentrated in one area of the home, but they indicated it would take a couple days to completely process the scene due to it being somewhat gruesome.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #27

Mary Wilson was physically disabled. She lived on her own, but had limited mobility and needed assistance in handling her day-to-day tasks and maintaining her health. On the night of September 15th, Travis Smith broke into her home. Ms. Wilson woke up to the noise, but was unable to get up to see what was going on. Travis entered her bedroom and hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #28

On the night of September 15th, Travis Smith broke into the home of his cousin, Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, she saw her cousin, Travis, and was confused to see him in her home. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #29

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner determined it took approximately one hour or less for Ms. Wilson to die from her injuries.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #30

On the night of September 15th, Travis Smith broke into the home of Mr. and Mrs. Johnson. Mr. Johnson woke up to the noise and went into the living room to see what was going on. He did not see anyone, but went to check on his 8-year-old daughter. His daughter was dead. Travis had hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Mr. and Mrs. Johnson's daughter died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #31

On the night of September 15th, Travis Smith broke into the home of 40-year-old Mary Wilson. Mary woke up to the noise and went into the living room to see what was going on. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #32

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner determined it took approximately two and a half hours for Ms. Wilson to die from her injuries.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #33

Mary Wilson was 6-months pregnant when, on the night of September 15th, Travis Smith broke into her home. Ms. Wilson woke to the noise and went into the living room to see what was going on. As she walked in, Travis hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #34

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner determined it took over 24 hours for Ms. Wilson to die from her injuries.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #35

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Travis hit her over the head with a blunt object until she no longer appeared conscious. She died as a result of blunt force trauma to her head. Afterward, Travis mutilated her corpse. He made small incisions on her legs, arms, and torso, and dismembered parts of her body.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #36

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, Travis grabbed her and raped her. Travis then hit her over the head with a blunt object until she no longer appeared conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #37

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner determined Ms. Wilson died instantly as a result of the first hit to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #38

On the night of September 15th, Travis Smith broke into the home of his niece, Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, she saw her uncle, Travis, and was confused to see him in her home. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #39

Mary Wilson was of average intelligence and did not suffer from any significant medical or mental health problems. On the night of September 15th, Travis Smith broke into her home. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, Travis hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #40

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated there was no physical torture; her death simply resulted from blunt force trauma to the head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #41

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. Please write down the number 10 and indicate that the factor most important to your decision was “lack of information.”

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #42

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, Travis grabbed her and tied her to a chair; she was bound and gagged. While she was bound and gagged, Travis hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #43

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked into the living, she saw Travis with a threatening look on his face. She immediately started to scream and continuously pled for her life. Despite her pleas, Travis hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #44

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked into the living room, Travis tackled her to the ground and began hitting her over the head with a blunt object until she no longer appeared to be conscious. Due to the attack, Ms. Wilson was struggling to stay alive. Travis took a break from the attack to make a sandwich in the kitchen. After some time, he returned to the living room where Ms. Wilson lay dying. It was clear she would soon die from her injuries. Travis, enraged that she was not dead yet, resumed his attack on her. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #45

On the night of September 15th, Travis Smith broke into the home of his daughter, Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. As she walked in, she saw her father, Travis, and was confused to see him in her home. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner indicated Ms. Wilson died from blunt force trauma to her head.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

Vignette #46

On the night of September 15th, Travis Smith broke into the home of Mary Wilson. Ms. Wilson woke up to the noise and went into the living room to see what was going on. Travis then hit her over the head with a blunt object until she no longer appeared to be conscious. The medical examiner determined it took approximately ten hours for Ms. Wilson to die from her injuries.

On a scale of 0 (not at all) to 100 (extremely), how heinous is this crime? _____

What factor was most important in your decision?

APPENDIX K
PHASE 2 DEBRIEFING FORM

Debriefing Form

Dear Participant,

Thank you for your participation in this study. The purpose of this study was to investigate how jurors perceive various crime factors in capital murder trials. In particular, we are interested in understanding what factors are perceived as more or less heinous. The results of this study may influence how the legal system defines aggravating factors (e.g., “heinous, atrocious, or cruel”) in capital murder cases.

Please do not share with others about your participation in this study. It is important that our data is not influenced by bias in any way. Information shared among potential participants could potentially bias future responses from participants. If you have additional questions about this project or the purpose of the study, please contact the principal or secondary investigator directly. Their contact information is below.

Kathryn Applegate, M.S.
Graduate Student
Department of Psychology
The University of Alabama
Tuscaloosa, AL 35487
kapplegate@crimson.ua.edu

Karen Salekin, Ph.D.
Associate Professor
Department of Psychology
The University of Alabama
Tuscaloosa, AL 35487
ksalekin@ua.edu

Thank you,

Kathryn C. Applegate, M.S.
Principal Investigator

APPENDIX L
OUTLIERS REMOVED FROM PHASE 1

METHOD OF KILLING

VARIABLE	# REMOVED	ID NUMBER	SCORE	Z-SCORE
Gun	0	-	-	-
Stabbing	0	-	-	-
BFTO	1	-	10	-4.54699
BFTH	1	-	50	-3.30082
Poisoning	1	-	10	-3.37269
Explosives	1	-	20	-4.46566
Fire	0	-	-	-
Drowning	1	-	10	-4.30710
Strangulation	0	-	-	-
Asphyxiation	1	-	10	-3.29745
TOTAL REMOVED:	6	-	-	Range: -3.37269 to -4.5699

APPENDIX M
OUTLIERS REMOVED FROM PHASE 2

RELATIONSHIP TO THE VICTIM

VARIABLE	# REMOVED	ID NUMBER	SCORE	Z-SCORE
Stranger	0	-	-	-
Acquaintance	0	-	-	-
Friend	0	-	-	-
Father	3	250 147 79	30 30 35	-3.87691 -3.87691 -3.54079
Brother	2	366 79	10 27	-4.79031 -3.71044
Uncle	1	229	20	-3.53294
Cousin	2	339 250	11	-3.88925 -3.66492
Grandfather	2	339 79	12 27	-4.09588 -3.33428
Boyfriend	4	54 303 270 79	10 20 20 25	-4.45158 -3.83581 -3.83581 -3.52792
Husband	2	79 339	27 36	-3.88631 -3.28857
Ex-Boyfriend	1	147	15	-3.55793
Ex-Husband	0	-	-	-
TOTAL REMOVED:	17	-	-	Range: -3.28857 to -4.79031

AGE OF THE VICTIM

VARIABLE	# REMOVED	ID NUMBER	SCORE	Z-SCORE
A1_Baby	4	303 79 147 258	28 30 40 40	-5.27740 -5.11355 -4.29484 -4.29484
A2_Child	3	79 258 250	30 36 40	-4.50475 -4.05043 -3.74754
A3_Teenager	3	79 384 258	30 30 31	-3.65781 -3.65781 -3.59162
A4_Young Adult	0	-	-	-
A5_Middle Adult	0	-	-	-
A6_Older Adult	3	152 303 34	15 20 20	-3.56067 -3.28572 -3.28572
TOTAL REMOVED:	13	-	-	Range: -3.28572 to -5.27740

VULNERABILITY OF THE VICTIM

VARIABLE	# REMOVED	ID NUMBER	SCORE	Z-SCORE
V1_None	0	-	-	-
V2_SMI	0	-	-	-
V3_ID	0	-	-	-
V4_Pregnant	2	79 258	32 35	-3.80401 -3.59834
V5_Intoxicated	0	-	-	-
V6_Physically Disabled	4	39 339 384 152	2.0 12 20 30	-4.95452 -4.36595 -3.89510 -3.30653
TOTAL REMOVED:	6	-	-	Range: -3.30653 to -4.95452

INCREASED MENTAL SUFFERING

VARIABLE	# REMOVED	ID NUMBER	SCORE	Z-SCORE
M1_None	0	-	-	-
M2_Pled	2	339 79	20 25	-3.71397 -3.40905
MS3_BG	2	79 258	29 39	-4.44846 -3.68957
MS4_Verbal Abuse	0	-	-	-
MS5_Resumed Attack	3	258 79 317	37 52 55	-4.95475 -3.58047 -3.30561
TOTAL REMOVED:	7	-	-	Range: -3.30561 to -4.95475

INCREASED PHYSICAL SUFFERING

VARIABLE	# REMOVED	ID NUMBER	SCORE	Z-SCORE
PS1_None	0	-	-	-
PS2_Stomping	2	209 221	30 32	-3.60893 -3.47532
PS3_Sexual Perversion	3	79 258 241	35 41 60	-6.08170 -5.45415 -3.46693
PS4_PreMut	4	303 54 147 79	40 50 55 57	-5.05588 -4.100036 -3.62260 -3.43149
PS5_PostMut	4	185 12 79 158	10 10 45 48	-6.88905 -6.88905 -3.98496 -3.73604
PS6_Fire	3	137 365 343	10 30 30	-4.86538 -3.59604 -3.59604
TOTAL REMOVED:	16	-	-	Range: -3.43149 to -6.88905

GRUESOMENESS

VARIABLE	# REMOVED	ID NUMBER	SCORE	Z-SCORE
G1_Low	0	-	-	-
G2_Medium	2	342 366	10 10	-3.78289 -3.78289
G3_High	1	339	32	-3.29599
TOTAL REMOVED:	3	-	-	Range: -3.29599 to -3.78289

TIME ELAPSED BEFORE DEATH

VARIABLE	# REMOVED	ID NUMBER	SCORE	Z-SCORE
T1_Instantly	0	-	-	-
T2_1Hour	0	-	-	-
T3_Under3	1	148	10	-3.40195
T4_10Hours	2	250 187	15 20	-3.63072 -3.35635
T5_Over24	1	187	19	-3.56843
TOTAL REMOVED:	4	-	-	Range: -3.35635 to -3.63072

APPENDIX N
IRB APPROVAL DOCUMENTS

Office of Research
and Human Resources for the
Protection of Human Subjects



November 4, 2015

Kathryn Applegate
Department of Psychology
College of Arts & Sciences
Box 870348

Re: IRB Application #: 15-011
Application Title: "You Be the Judge: How Heinous is It's Crime?"

Dear Ms. Applegate:

The University of Alabama IRB has received the revisions requested by the full board on 10/16/15. The board has reviewed the revisions and your protocol is now approved for a one-year period. Please be advised that your protocol will expire one year from the date of approval, 10/16/15.

If your research will continue beyond this date, complete the IRB Renewal Application by the 15th of the month prior to project expiration. If you need to modify the study, please submit the Modification of An Approved Protocol Form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, please complete the Request for Study Closure Form.

Please use reproductions of the IRB approved stamped participant information sheet to obtain consent from your participants.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number.

Good luck with your research.

Sincerely,

A black rectangular box redacting the signature of the Director & Research Compliance Officer.

Carpenter T. Myles, MSM, ELM, CIP
Director & Research Compliance Officer



1000 University Building
Box 870117
Tusculum, Alabama 35487-0117
(205) 346-3051
fax (205) 346-1189
t. 1-800-877-6966

Office for Research
Institutional Review Board for the
Protection of Human Subjects



November 24, 2015

Kathryn C. Applegate, M.S.
Department of Psychology
College of Arts & Sciences
The University of Alabama
Box 870348

Re: IRB Protocol # 15-011
"You be the Judge: How Heinous is this Crime?"

Ms. Applegate:

The University of Alabama Non-Medical Institutional Review Board has reviewed the revision to your previously approved full board protocol. The board has approved the minor change in your protocol.

Please remember that your approval period expires one year from the date of your original approval, 10/16/15, not the date of this revision approval.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants.

Good luck with your research.

Sincerely,

A black rectangular redaction box covering the signature of the Director of Research Compliance.

Carpaneto T. Myles, MSW, CFM, CIP
Director of Research Compliance & Research Compliance Officer
Office of Research Compliance



225 Rose Administration Building
Box 870127
Tuscaloosa, Alabama 35487-1127
205/748-8461
401/233/748-7-89
cell: 1/1/ (877) 850-7066

Office to President
Hatchburn Brock State Office
Division of Human Subjects

February 1, 2016



Kathryn C. Applegate
Department of Psychology
College of Arts & Sciences
The University of Alabama
Box 870348

Re: IRB Protocol # 15 011 (Revision # 2)
"You be the Judge: How Heinous is this Crime"

Ms. Applegate:

The University of Alabama Non-Medical Institutional Review Board has reviewed the revision to your previously approved full board protocol. The board has approved the minor change in your protocol.

Please remember that your approval period expires one year from the date of your original approval, 10/16/15, not the date of this revision approval.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants.

Good luck with your research.

Sincerely,



Carpano T. Myles, MSM, CPM, CIP
Director of Research Compliance & Research Compliance Officer
Office of Research Compliance



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