

The Effect of Dehumanizing Language in the  
Courtroom on Judgments about Black and White Defendants

By

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## ABSTRACT

Prosecutors' use of dehumanizing language to describe defendants in their opening and closing statements can often go unchecked. This research aims to assess the effect of dehumanizing language on judgments about Black versus White defendants. Past research has demonstrated the effects of dehumanizing language on lay people's perceptions of out-groups, and how those perceptions can lead to consequential behaviors, prejudice, and even retributive violence and conflict. My first aim is to extend this research to the legal context, more specifically, to address a gap in prior research by randomly assigning participants to read the same closing statement in a murder case with (a) no dehumanizing language, (b) animalistic dehumanizing language, or (c) mechanistic dehumanizing language to describe either (a) White defendants (Studies 1-2) or (b) Black defendants (Study 2). There has been ample investigation into subtle dehumanization and how it interacts with racial groups, but research has yet to investigate how dehumanized descriptions (both animalistic and mechanistic) of a defendant may influence implicit and explicit perceptions of a defendant and legal outcomes with the inclusion of a race manipulation. I tested the impact of dehumanizing language on participants' impressions of the defendant, their levels of explicit dehumanization of the defendant specifically and implicit dehumanization of Black versus White targets generally, as well as their ultimate sentencing decisions. I predicted that closing statements including dehumanizing language would lead to greater dehumanization of the defendant and greater likelihood of choosing a death sentence—and that this effect would be greater for Black versus White defendants. I also conducted exploratory tests of the relative impact of animalistic versus mechanistic dehumanization. Investigation into the effects of

dehumanization of racial and ethnic groups can help identify underlying psychological causes of racial bias and help to facilitate potential preventative measures in the courtroom.

In this paper, I will report the results from a preliminary study testing the impact of dehumanizing language about a White defendant. I will then report the results from a follow-up study testing the impact of dehumanizing language about a White and a Black defendant.

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## INTRODUCTION

### **Historical Context of Dehumanization and the Legal System**

How attorneys present testimony and evidence is tightly controlled by evidentiary rules and statutes, yet closing arguments are policed much less—with instances of prosecutors referring to defendants with dehumanizing language such as a “rabid dog,” “monster,” or “cold-blooded killer” (Mills, 2019). These are instances of dehumanization, or “depriving someone of human qualities, personality, or dignity” (Merriam-Webster, n.d.)— a concept that has been prevalent in the United States since 1776 when the U.S. Constitution rendered African Slaves as three-fifths human (U.S. Const., art 1, § 2). It is widely known that the late 19<sup>th</sup> and early 20<sup>th</sup> centuries were riddled with racial segregation aimed most strongly at African Americans, with portrayals in society of barbaric tendencies, a lack of self-restraint, and impulsive behavior, narratives which contributed to the increased social exclusion and ostracism of African Americans during these times. Dehumanization, specifically animalistic dehumanization, is known to reinforce social exclusion, and increase social ostracism, two social constructs that are known to increase aggression in those excluded and ostracized, and aggression in those perpetrating the exclusion and ostracization (Andrighetto et al., 2016; Bastian & Haslam, 2010). Knowing that dehumanization is often related to the exclusion of others, and that dehumanization has played a role in national movements supporting the partitioning of African Americans from respected society, it is imperative to investigate how these phenomena have progressed over the years and present themselves in modern society. More specifically, we know that African Americans make up a disproportionately large percentage of prison populations in the United States (Beck & Blumstein, 2018), further

supporting the investigation into how dehumanization may be playing a role in sentencing decisions and our legal system generally.

Although dehumanization is present across various contexts, it may have particularly drastic consequences in legal settings. Implicit associations between animalistic dehumanization and African Americans persist (Goff et al., 2008), as well as associations between mechanistic dehumanization and cold-and-calculated crimes (Morera et al., 2017). In legal settings, dehumanizing language is often used to influence perceptions of a defendant with the aim to bring about punitive sentencing decisions in jurors. Its use in victim impact statements, in media coverage, and in crime descriptions has been found to elicit moral exclusion and increase moral outrage towards a defendant (Bastian et al., 2013; Goff et al., 2008; Myers et al., 2004).

Although prior research has assessed dehumanization and its intersection with concepts like intergroup bias in general, there is a lack of research assessing the extent to which dehumanizing language in legal settings, specifically closing statements, can influence jurors' judgments of defendants and sentencing decisions. Because dehumanization has been found to foster indifferent attitudes towards unfairness and unjust treatment of outgroup members it is important to investigate dehumanization in legal contexts. Specifically, I will test the impact of two types of dehumanizing language (animalistic, mechanistic) on the degree to which participants subtly and blatantly dehumanize the defendant being described and the downstream consequences for sentencing decisions.

### **Infrahumanization & Subtle Dehumanization**

The idea of what dehumanization is and how it affects society has changed drastically over time. The birth of dehumanization research started in 1973 at Harvard University with researcher Herbert Kelman. Although modern dehumanization research pertains most commonly to perceptions of people belonging to out-groups, this early research investigated the dehumanization of victims, revealing that victims who were dehumanized were stripped of attributes like identity and community (Kelman, 1973). This research went on to find that the perception of victims lacking in these attributes resulted in a lack of compassion and weakened restraint on violent behavior towards these targets (Kelman, 1973).

In 1990, dehumanization was defined as an act of exclusion resulting in indifferent attitudes towards the unfair treatment of others (Opatow, 1990). This is important to the development of dehumanization research within a legal context because it suggests that dehumanization has the potential to influence verdict judgments and perceptions of moral responsibility. For example, in trial settings where a defendant has been dehumanized, jurors may feel increased indifference rendering a punishment disproportionate to the crime, and this indifference may increase the likelihood of jurors giving a harsher punishment or even the death penalty. This definition of dehumanization led to the concept of *infrahumanization*, which refers to a more subtle form of dehumanization and focuses on the perception that outgroup members are less human than ingroup members (Leyens et al., 2000). This discovery spurred the creation of tools to measure the attribution of humanness to ingroups and outgroups. More specifically, researchers started measuring the denial of things that make us uniquely human, including the denial of emotions, agency, and experience to dehumanized groups

to capture subtle dehumanization.

The denial of emotionality has two distinct forms. The first being infrahumanization, or the denial of secondary emotions. Secondary emotions are viewed as essential to being human; they represent cognition, morality, and are often attributed to ingroup members but denied to outgroup members (Leyens et al., 2000; Haslam, 2006). Specifically, secondary emotions include compassion, shame, tenderness, and bitterness (Demoulin et al., 2004; Haslam, 2006), and these emotions differentiate us from animals. The second method of denying emotionality is being denied primary emotions. Primary emotions are most often cited as happiness, sadness, pain, and pleasure (Costello & Hodson, 2009; Demoulin et al., 2004; Haslam, 2006; Kteily et al., 2015). Primary emotions, although shared with animals, are what differentiate people from inanimate objects like robots and machines. Beyond emotionality, humanness can also be characterized by perceptions of mind, which include capacities like agency and experience. The capacity for agency includes the ability to exhibit self-control, to plan, to think, and communicate (Gray et al., 2011; Haslam & Loughnan., 2014; Morera et al., 2017). Therefore, denying someone agency is often related to animalistic dehumanization. The mind dimension of experience includes consciousness, personality, and the ability to feel physical pain. These capacities for experience are related to human nature and help to differentiate humans from objects. Therefore, denying someone the ability to experience is related to mechanistic dehumanization (Haslam & Loughnan, 2014; Haslam, 2006; Gray et al, 2011).

The two distinct forms of emotionality and mind capacities go hand in hand with the dual model of dehumanization, which breaks down humanness into two categories: human uniqueness, or the attribution of uniquely human characteristics that distinguish humans from animals (i.e., secondary emotions, agency), and human nature, or attributes that are essentially human and distinguish humans from inanimate objects like robots and machines (i.e., primary emotions, experience) (Haslam & Loughnan, 2014). The establishment of this dual model revealed that those who are denied uniquely human traits, including secondary emotions and agency, are typically animalistically dehumanized, which diminishes the boundary between humans and animals. Those who are denied attributes that correlate with human nature, including primary emotions and experience, are most often likened to inanimate objects, or mechanistically dehumanized (Haslam & Loughnan, 2014; Leyens et al., 2000; Demoulin et al., 2004).

The attribution of human-related and animal-related characteristics of emotionality and perceptions of mind are attributed differently to ingroups and outgroups. For example, people associate humanness more with their ingroup than the outgroup, resulting in ingroups being attributed both primary and secondary emotions more than outgroup members (Viki et al., 2006), and common outgroup populations like those perceived as ‘evil’ (terrorists), or the ‘lowest of the low’ (homeless, drug addicts) being attributed less agency and experience compared to common ingroup populations (professionals) (Morera et al., 2017).

Further, dehumanization has been found to decrease neural activity in the medial prefrontal cortex (mPFC) (Harris & Fiske, 2006), which is the part of the brain involved in a person's ability to understand oneself and others and is generally involved in decision making processes (Grossman, 2013). When presenting participants with images of people

belonging to extreme out-groups, such as drug addicts and the homeless, researchers found evidence of decreased oxygenated brain activity within the mPFC, meaning that because those groups are so highly dehumanized, they often are not even perceived as possessing any humanness at all (Harris & Fiske, 2006). These findings suggest that the dehumanization of defendants might have a drastic effect on legal judgments, such as punishment decisions. For example, criminals seen in a dehumanized manner were perceived to be unsuitable for rehabilitation and more deserving of severe punishment (Bastian et al., 2013). When a defendant is perceived as lacking humanness, or in extreme cases not possessing humanness at all, it places them outside the boundary of moral consideration which in turn can cause indifference regarding unfair treatment while simultaneously eliciting violence and aggression toward the defendant. As a result, dehumanization of a defendant might increase punitive judgments—even the ultimate judgment of sentencing someone to death. If dehumanization can result in such detrimental perceptions of an outgroup member generally, what will its impact be on jurors' decisions about an outgroup defendant who has allegedly committed a heinous crime when jurors have the option of sentencing them to death?

### **Blatant Dehumanization**

More recently, researchers have begun to refocus on blatant dehumanization, which is defined as a direct and overt denial of humanness (Haslam & Loughnan, 2014). Subtle dehumanization is subtle because it only assesses the attribution of characteristics associated with humanity, whereas blatant dehumanization directly assesses the attribution of humanity itself (Kteily & Bruneau, 2017). However, blatant dehumanization continues to be pervasive, and can't be lessened to 'mere' prejudice or subtle dehumanization

(Petsko et al., 2021). These findings have been revealed via a measurement tool called the 'Ascent of Man Scale', which assesses participants' blatant dehumanization by having them assign a score to ingroup and outgroup members below a 5-figure picture depicting the evolution from ape to human (Kteily et al., 2015). American participants reported varied amounts of dehumanization across groups, particularly heightened toward Mexican immigrants, Muslims, and Arab targets (Kteily & Bruneau, 2017). These findings were not specific to the United States: British and Hungarian populations similarly dehumanize Muslims, and participants recruited from the United Kingdom similarly dehumanize Black individuals (Kteily & Bruneau, 2017). Some might argue that, in modern day, subtle dehumanization is a more common phenomenon than blatant dehumanization and that blatant dehumanization is a relic of the past, but recent findings paint a different picture (Kteily & Bruneau, 2017). Most research demonstrating the blatant dehumanization of racial and ethnic groups around the world has been gathered within the last decade, further supporting the idea that blatant dehumanization continues to manifest in modern society.

In a deeper analysis of blatant dehumanization, Bruneau and colleagues raise the question of whether the "Ascent of Man Scale" is capturing a true belief that others lack humanity and are less evolved, or whether this scale is simply representative of extreme dislike of outgroup members. They investigated the difference in brain activity of targets that are disliked compared to targets that are dehumanized using functional MRI (fMRI) and found that different areas of the brain are activated when a participant dehumanizes a target compared to when they dislike them (Bruneau et al., 2018). Thus, there is strong evidence supporting the idea that dehumanization, particularly blatant dehumanization, is



still a phenomenon in modern day and can't be measured through investigations of prejudice or dislike. The "Ascent of Man Scale" has provided evidence that the explicit perception of racial and ethnic outgroups as less evolved still plagues society and fosters indifferent attitudes regarding unfair treatment, apathy towards those in need, and an increase in aggression and violence towards dehumanized populations (Kteily et al., 2015; Kteily & Bruneau, 2017; Bruneau et al., 2018). If dehumanization is still prevalent in modern day and has been demonstrated to extend past mere dislike, then research testing its implications in legal settings is critical.

### **Consequences of Dehumanization**

There is a wide variety of potential repercussions that stem from being dehumanized, but broadly dehumanization has been found to decrease prosocial behavior towards populations while simultaneously increasing antisocial behavior towards them (Haslam & Loughnan, 2014). There is evidence that dehumanization is a precursor to moral exclusion— a process that places stigmatized targets outside the boundary of moral value and considerations of fairness (Opatow, 1990) which can contribute to decreased anger regarding injustice towards stigmatized targets (Haslam & Stratemeyer, 2016), and decreased sympathy toward negative media portrayals of Black criminals (Goff et al., 2008). In more severe cases, dehumanization can elicit vengeance, support for counterterrorism tactics, and can result in an increase in a person's willingness to torture a member of an outgroup (Viki et al., 2013; Kteily et al., 2015).

Aligned with the false belief that dehumanization and racism are less prevalent in modern society is evidence that suggests people who reject blatant dehumanization still subliminally harbor dehumanized mental representation of target groups at the same level

of those who blatantly dehumanize (Petsko et al., 2021), meaning that even explicitly rejecting and believing that you do not endorse dehumanization does not necessarily equate to fair mental representations of outgroups. These findings suggest that dehumanization is correlated with unfair treatment, negative feelings and actions towards outgroup members, and is not something that people are self-aware of. These findings help paint a picture of the potential damage dehumanization might have when allowed in the courtroom.

### **Dehumanization in Legal Settings**

Although dehumanizing language has a long history in legal settings both to describe criminals and to describe various types of crime, there is limited experimental research exploring its impact. What has been done suggests that dehumanization of defendants might lead to harsher sentencing. There is evidence to suggest that different crimes elicit different levels of offender dehumanization. A 2013 study found that violent crimes increased offender dehumanization more so than white collar crimes. As offender dehumanization increased so did perceptions of blame, the length of jail sentencing increased, and perceptions of the offender's suitability for rehabilitation decreased (Bastian et al., 2013). Although this study did not include a dehumanization manipulation, the findings suggest there may be a relationship between dehumanizing an offender and punishment severity. Further, in cases specific to sex offenders, as offender dehumanization increased, support for exclusion from society increased and sentence recommendations increased (Viki et al., 2013). Like the previously mentioned study, this research did not manipulate dehumanizing language but investigated how sexual crimes elicit perception of dehumanization and how this relates to legal outcomes. A series of

studies found that U.S. citizens often correlate criminals with animals, endorse the connection between criminals and animals, and even have tendencies to describe criminals with animalistic words such as “savage”, “wild” and “barbaric” (Hetey & Eberhardt, 2013). Similarly, evidence suggests that animalistic descriptions of a crime lead to an increase in punitive judgments (Vasquez et al., 2014). Because there is a strong correlation between criminals and dehumanization, with evidence that dehumanizing language negatively influences legal decisions, and evidence of a strong connection between African Americans and animalistic dehumanization, expansion of the current research is imperative. Specifically, it is now important to test how dehumanizing descriptions of a defendant in legal settings might not only increase jurors’ subtle and/or blatant dehumanization of the defendant, but also harsher punishments. Additionally, I aim to extend the current research to test whether dehumanizing descriptions of a defendant might be even more influential for Black (versus White) defendants.

### **Dehumanizing Black Defendants.**

Animalistic descriptions are more commonly used to describe African American individuals compared to other racial and ethnic groups (Goff et al., 2008, Haslam & Loughnan, 2014). Real world examples of this kind of dehumanization include the publicized depictions of 5 young racial minority men in the 1990 Central Park 5 case, where headline narratives described the defendants as a “wolf pack”, along with the 2015 investigation into the Chicago Police Department, which revealed officers referring to individuals in predominantly black neighborhoods as animals and subhuman (Jardina & Piston, 2021). This is likely because dehumanization against Black individuals has a long

history in the United States (Roberts, 2009), and remains embedded in modern society (Jardina & Piston, 2021). What began as explicit discrimination through wide-spread racial segregation spanning the 20<sup>th</sup> century has now evolved into subtle dehumanization and racial disparities that disadvantage African Americans across social and legal contexts. Research on dehumanization has found evidence that White people dehumanize African Americans (as young as 10 years old) by implicitly associating them with apes—an association stemming from the historical stereotype linking African Americans and apes (Goff et al., 2014). Furthermore, compared to White and Latino children, African American children are perceived to be less innocent, and approximately 4.53 years older than their White and Latino counterparts of the same age (Goff et al., 2014). Priming people with young Black male faces increases detection of threatening objects like weapons and threat-related words compared to the faces of young White males (Todd et al., 2016). Similarly, young Black males are perceived as larger, heavier, and more capable of harm than young White males of the same size, and this in turn increases perceptions of dangerousness and the justification to use force against these targets (Wilson et al., 2017). These biased perceptions—being perceived as larger, more threatening, and more ape-like than White individuals likely plays a role not only in the disproportionate deadly use-of-force on African Americans by police, but also in the harsher punishment and overrepresentation of African Americans within the U.S. correctional system.

The animalistic dehumanization of African Americans, or perceptions linking African Americans with large and dangerous animals— even as young children— might help further our understanding of why African Americans are incarcerated at a rate five

times greater than Whites in the United States (Wagner & Kopf, 2018), disproportionately serve longer sentences (Burch, 2015), and are more likely to receive death sentences (DPIC, 2022). In fact, not only is there evidence that people hold an implicit association between African Americans and apes, but when participants were primed with ape-adjacent terminology they in turn viewed violence against a Black person as not only justified, but as more justified as compared to when the same crime was committed against a White person (Goff et al., 2008). Further, African American defendants have been found to be described by the media using significantly more ape-like words than White defendants and the frequency of these black-ape metaphors were related to Black (but not White) defendants being more likely to receive death sentences (Goff et al., 2008). My goal with this research is to test the differential impact of subtle and blatant dehumanization of Black versus White defendants on mock jurors' decisions about whether to sentence them to death.

### **Hypotheses**

I predict that dehumanizing language (animalistic, mechanistic) describing a defendant in a closing statement from a murder case will increase dehumanization and punitiveness toward the defendant. More specifically, dehumanizing language will (a) increase the attribution of dehumanizing traits to the defendant, (b) increase blatant dehumanization of the defendant, (c) increase subtle dehumanization (i.e., denial of primary emotions and experience in the case of mechanistic language, denial of secondary emotions and agency in the case of animalistic language), (d) decrease perceptions of amenability to psychological rehabilitation, and (e) ultimately increase confidence that the defendant should be sentenced to death, relative to those who read a closing statement with no dehumanizing language. I also predict a mediation model, such

that the presence of dehumanizing language in closing statements will increase the various measures of dehumanization (noted above), which in turn will be associated with increased confidence in a death sentence. Further, I predict that these effects will be stronger for Black (versus White) defendants.

I will also conduct exploratory tests of whether animalistic and mechanistic dehumanization language have a different impact. I will test whether my results will be more pronounced among jurors who are death qualified, meaning they are willing to choose the death penalty and would be allowed on a capital jury compared to those who are not willing to choose the death penalty and would therefore be excluded from a capital jury.

## **Study 1 Method**

### **Participants and Design**

For this study I recruited 486 jury-eligible adults using the online platform Prolific to complete an online mock juror study, assessing their impressions and decisions about a defendant in a capital murder case. I excluded data from 15 participants who failed attention checks (3.3%), which resulted in a final sample size of 471. The final sample was 61% female and 72% White ( $M_{age} = 25.01$ ,  $SD = 14.53$ ). Participants were randomly assigned to one of the three closing statement conditions which consisted of a control condition ( $N = 157$ ), an animalistic condition ( $N = 160$ ), and a mechanistic condition ( $N = 154$ ).

### **Materials**

To begin, participants were provided with background information about the case including a brief one paragraph explanation that they will be reading the prosecuting

attorney's closing statement from a capital murder trial, that the defendant had entered a guilty plea, and that their task was to decide whether he should get the death penalty or not. This summary was accompanied by one of several images of a White defendant. I obtained images of White men currently on death row from an online database of inmate mugshots (The Ledger, n.d.) and chose three images for stimulus sampling purposes. Next, participants read the prosecuting attorney's closing statement, spanning a page and a half in length, describing in detail the actions that the defendant took during the crime. The closing statement was taken from a real case in which a man brutally murdered a young mother by repeatedly stabbing her in the head. I manipulated the extent and type of dehumanizing language used in each of the closing statements. I began with the control script (see Appendix A), which described the crime in an ecologically valid way given that it came from a real case.

I revised this closing statement twice, each time embedding it with dehumanizing terms based on either animalistic adjectives (e.g., 'savage', 'uncontrollable', 'beast'; Appendix B), or based on mechanistic adjectives (e.g., 'emotionless', 'cold-hearted', and 'merciless'; Appendix C). To ensure that any differences I might find between the animalistic and mechanistic scripts were not due to one manipulation being stronger than the other, I was careful to include an equal number of dehumanizing descriptors in each statement and embedded these terms in the same locations throughout the script. Each script contained only 11 additional dehumanizing adjectives and the phrases and adjectives chosen for the scripts were based on prior research that used the same or similar words and phrases to dehumanize others and crimes (Myers et al., 2004; Viki et al., 2006; Haslam & Loughnan, 2014; Vasquez et al., 2014; Goff et al., 2008).

## Measures

All measures are included in Appendix D.

**Subtle Dehumanization.** To measure subtle dehumanization, participants responded to a *Primary Emotions Scale* ( $a = 0.87$ ) assessing how much they thought the defendant possessed primary emotions and a *Secondary Emotions Scale* ( $a = 0.75$ ) assessing how much they thought the defendant possessed secondary emotions. The emotions chosen for these scales were derived from a list of emotions rated as “uniquely human” by Americans in a prior study, and used in prior infrahumanization research (Demoulin et al., 2004; Kteily et al., 2015). Participants were asked to report their perceptions of how much the defendant possessed three positive primary emotions (happiness, pleasure, excitement) and three negative primary emotions (sadness, pain, rage), on 5-point Likert scales ranging from *Not at all* to *A great deal*. Participants were then asked to report their perceptions of how much the defendant possessed three positive secondary emotions (compassion, tenderness, hope) and three negative secondary emotions (bitterness, regret, shame) on the same 5-point Likert scale. Thus, the valence of both sets of primary and secondary emotions were balanced.

As an additional operationalization of subtle dehumanization, I assessed participants’ attributions of agency and experience to the defendant. Participants responded to an *Agency Scale* ( $a = 0.75$ ) assessing the degree to which the defendant was capable of exhibiting agency, and an *Experience Scale* ( $a = 0.84$ ) assessing the degree to which the defendant had the capacity to experience. For the agency scale participants reported how capable they thought the defendant was of agentic actions like “self-control”, “acting morally”, “planning”, and “anticipating the consequences of actions.” For the experience scale participants reported how capable they thought the defendant



of experiencing things like “pain”, “desire”, “pleasure”, and “emotions like guilt or shame”. For both of these scales I used 5-point Likert scales ranging from *Not at all* to *A great deal*. Prior research on mental capacities identified these items as belonging to either the agency mind dimension or experience mind dimension (Gray et al., 2007; Haslam & Loughnan, 2014; Morera et al., 2017).

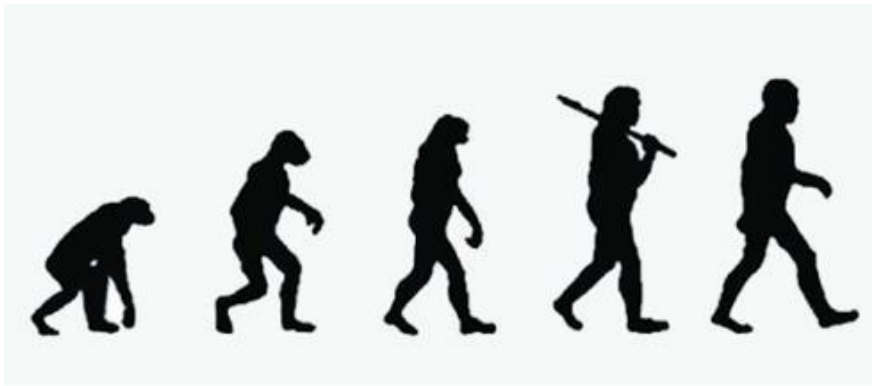
I created mean scores for the primary emotions scale, secondary emotions scale, agency scale, and experience scale for analysis purposes as measures of subtle dehumanization.

**Blatant Dehumanization.** To measure participants’ levels of blatant animalistic dehumanization I used the original “Ascent of Man Scale” measure (Figure 1), which depicts five silhouettes ranging from human ancestors that compare with modern apes, to a modern human figure (Kteily et al., 2015). Instructions on how to interpret the scale were taken from previous research using this scale: “People can vary in how human-like they seem. Some people seem highly evolved, whereas others seem no different than lower animals. Using the image below as a guide, indicate using the sliders how evolved you consider each person listed to be.” (Kteily, et al., 2015). For this study I designed a similar “Ascent of Man Scale” intended to depict levels of blatant mechanistic dehumanization (“Ascent of Man Scale” [mechanistic]). This scale similarly depicts five silhouettes ranging from an antiquated robotic figure to a modern human figure (Figure 2). Participants were asked to rate themselves, the average stranger, the victim, the defendant, and the prosecuting attorney (who delivered the closing statement they read). Responses were on a sliding scale below the 5-silhouette images ranging from 0 (*not evolved at all*) to 100 (*most evolved*). Following the previous study (Kteily et al., 2015), I

took a difference score from how they rated the defendant compared to an average of the other four targets.

**Figure 1**

*“Ascent of Man Scale” (animalistic)*



Note: This figure was designed by Kteily and colleagues (2015) in their study on blatant dehumanization.

**Figure 2**

*“Ascent of Man Scale” (mechanistic)*



Note: This figure was designed as an adaptation to the original “Ascent of Man Scale” and was created for this study to measure blatant mechanistic dehumanization

In addition to the Ascent of Man scales, I also measured blatant dehumanization by asking participants to attribute dehumanizing traits to the defendant on a

*Dehumanizing Traits Scale*, including five animalistic traits (i.e., primitive, impulsive, coarse, untamed, uncivilized) and five mechanistic traits (i.e., superficial, passive, submissive, dispassionate, apathetic) on 5-point Likert scales from *Not at all* to *A great deal*. These words were derived from prior studies pertaining to humanness and its distinction from animals and inanimate objects (Viki et al., 2006; Haslam & Bain, 2007; Martinez et al., 2012). I was careful to not choose any words for this scale that were used as dehumanizing adjectives in the closing statement. For analysis purposes I split the traits into independent scales, an *Animalistic Traits Scale* ( $\alpha = 0.76$ ), and a *Mechanistic Traits Scale* ( $\alpha = 0.49$ ). Unfortunately, the *Mechanistic Traits Scale* was not a reliable measure, which I discuss further in the limitations section.

**Case Outcomes.** To test how dehumanizing language impacts participants' punitiveness, participants rated how effective they thought psychological rehabilitation would be for the defendant on a 5-point Likert scale ranging from *Not at all effective* to *Extremely effective*. For the sentencing measure participants chose between two options (i.e., life in prison, the death penalty) for the defendant. Following this, participants reported their confidence in their sentencing decision on a sliding scale ranging from *0% Confident* to *100% Confident*. I combined the sentencing and confidence measures into one 22-point scale ranging from -11 (*100% confident in life sentence*) to +11 (*100% confident in death sentence*), wherein the two midpoints reflected 0% confident in a life and 0% confident in a death sentence.

**Death Qualification.** I asked participants an ecologically valid death qualification question with the following response options: "I would never vote to impose the death penalty" and "I would consider voting to impose the death penalty in some cases". In

capital cases where the defendant on trial could potentially receive a death sentence, the jury is often comprised of ‘death-qualified’ jurors— meaning each juror has expressed that they would be willing to impose the death penalty. The inclusion of a death qualification measure allows for investigation into how responses may differ between death qualified and non-death-qualified jurors.

**Demographics.** Finally, I collected demographic information from all participants including age, race/ethnicity, gender, and political orientation. The political orientation scale was a 7-point Likert scale (*Very Liberal, Liberal, Slightly Liberal, Neither Liberal nor Conservative, Slightly Conservative, Moderately Conservative, Very Conservative*)

**Attention Checks.** To ensure participants had thoroughly read each of the script conditions, I administered three attention check questions after they had read the script which included “How did the victim die?”, “What was the name of the victim’s boyfriend?”, and “What crime was the defendant found guilty of?”. Participants could not advance past the assigned script until the three questions were answered correctly. Participants later responded to an open-ended question asking them to explain what crime the defendant committed and I excluded those who got it wrong. After responding to the case outcome measures, participants were instructed to choose a specific number from a drop-down list of provided numbers to ensure they were paying attention. Any participant who failed to respond correctly to any of these attention checks was excluded from my analyses.

## **Procedure**

Participants first provided consent to participate in this study. Participants were then randomly assigned to read either the (a) control, (b) animalistic, or (c) mechanistic

version of the prosecuting attorney's closing statement. Following the closing statement, participants reported their initial impressions of the defendant using an open-ended question (not analyzed yet for this thesis). Participants then completed (in the following order): (a) blatant dehumanization measures (i.e., the 'Ascent of Man Scale' [animalistic] and the 'Ascent of Man Scale' [mechanistic] in a randomized order, the *Dehumanizing Traits Scale* with items in a randomized order), and (b) subtle dehumanization measures (i.e., the *Primary Emotions Scale* items and *Secondary Emotions Scale* with items in a randomized order, and then the *Agency Scale* and *Experience Scale* with items in a randomized order). Participants then completed case outcomes (i.e., psychological rehabilitation, sentencing, sentencing confidence). Finally, participants responded to the death qualification question and provided demographic information. In exchange for their participation, participants were compensated \$1.15, and the survey took approximately 10 minutes on average.

## **Results**

I conducted a series of between-subjects one-way ANOVAs to test the effect of script condition on all dependent measures (i.e., blatant and subtle dehumanization of the defendant, sentencing confidence, amenability to rehabilitation). For sentencing confidence, I conducted a follow-up two-way ANOVA testing whether the effect of script condition depended on whether the mock jurors were death qualified.

Next, I ran a linear regression that included measures of both blatant and subtle dehumanization predicting participants' sentencing confidence to identify which types of dehumanization might drive confidence in the death penalty.

Finally, I ran a set of mediation models testing whether there was an indirect effect of script condition on increased confidence in a death sentence through participants' dehumanization of the defendant.

Descriptive statistics and correlations of all dependent measures are presented in Table 1 and Table 2, respectively.

**Table 1***Study 1 Descriptive Statistics of Dependent Variables across Script Conditions*

	Control	Animalistic	Mechanistic	Total
	M (SD)	M (SD)	M (SD)	M (SD)
Animalistic Ascent Score (Mean)	83.94 (13.29)	81.72 (14.27)	83.79 (14.48)	83.14 (14.03)
Mechanistic Ascent Score (Mean)	83.06 (15.14)	81.67 (14.90)	82.06 (15.20)	82.26 (15.06)
Animalistic Ascent Score (Difference Score)	32.93 (26.06)	39.54 (26.95)	31.92 (27.34)	34.85 (26.95)
Mechanistic Ascent Score (Difference Score)	29.06 (26.38)	36.37 (26.74)	32.60 (27.11)	32.70 (26.85)
Primary Emotions	3.20 (0.81)	3.12 (0.82)	3.23 (0.90)	3.18 (0.84)
Secondary Emotions	2.25 (0.79)	2.16 (0.71)	2.26 (0.84)	2.22 (0.78)
Animalistic Traits	4.33 (0.60)	4.31 (0.66)	4.11 (0.85)	4.25 (0.71)
Mechanistic Traits	2.34 (0.73)	2.36 (0.71)	2.45 (0.76)	2.38 (0.73)
Agency	1.96 (0.86)	1.93 (0.82)	2.10 (0.80)	2.00 (0.83)
Experience	2.85 (0.96)	2.71 (0.93)	2.82 (0.96)	2.79 (0.95)
Sentencing	1.32 (0.47)	1.42 (0.50)	1.35 (0.48)	1.36 (0.48)
Sentencing Confidence	-28.77 (83.95)	-9.35 (90.10)	-23.89 (86.46)	-20.58 (87.11)
Psychological Rehabilitation	1.97 (1.06)	1.82 (1.04)	2.05 (1.14)	1.94 (1.08)

*Note:* Mean Ascent scores indicate the average of all targets, with higher scores indicating increased perceptions of humanness, and lower scores indicating increased blatant dehumanization. Difference Ascent scores indicate the difference between defendant scores and the average score of the other targets, with higher scores indicating increased blatant dehumanization of the defendant relative to other targets, and lower scores indicating decreased blatant dehumanization of the defendant relative to the other targets.

## **Blatant Dehumanization**

**Ascent of Man Scale.** I first tested whether participants' blatant animalistic dehumanization (as measured by the 'Ascent of Man Scale [animalistic]' difference score) differed across the three script conditions. I found a significant difference in blatant animalistic dehumanization difference scores across the three script conditions,  $F(2, 470) = 3.77, p = 0.02, \eta_p^2 = 0.02$ . Post-hoc (LSD) tests revealed that participants who read the control condition reported significantly lower blatant animalistic dehumanization difference scores than the animalistic script condition,  $p = .03$ , but not compared to the mechanistic script condition,  $p = .74$ . Further, participants who read the mechanistic script reported significantly lower blatant animalistic dehumanization difference scores than those who read the animalistic script,  $p = .01$ . Note that I found the same pattern of results when analyzing the 'Ascent of Man' [animalistic] single item scores about the defendant, rather than the difference score reported here.

I found a marginally significant effect of dehumanizing script condition on the 'Ascent of Man Scale' (mechanistic) scores,  $F(2, 470) = 2.96, p = 0.05, \eta_p^2 = 0.01$ . When analyzing the 'Ascent of Man' (mechanistic) single item scores about the defendant, rather than the difference score reported here, I found the effect of script condition of blatant mechanistic dehumanization to be non-significant.



**Table 2***Study 1 Correlation Matrix: Dependent Measures*

	1	2	3	4	5	6	7	8	9	10	11
Animalistic Ascent Difference (1)											
Mechanistic Ascent Difference (2)	.79**										
Animalistic Traits (3)	.45**	.39**									
Mechanistic Traits (4)	.26**	.26**	.27**								
Primary Emotions (5)	-0.38**	-0.34**	-0.10*	-0.11*							
24 Secondary Emotions (6)	-0.41**	-0.38**	-0.27**	-0.16**	.68**						
Agency (7)	-0.21**	-0.26**	-0.23**	-0.07	.36**	.52**					
Experience (8)	-0.39**	-0.34**	-0.16**	-0.14*	0.81**	0.69**	0.44**				
Sentencing (9)	0.21**	0.16**	0.10*	0.04	-0.12*	-0.14*	0.03	-0.16**			
Sentencing Confidence (10)	0.06	0.02	0.02	0.06	-0.05	-0.06	-0.002	-0.08	0.19**		
Psychological Rehabilitation (11)	-0.23**	-0.19**	-0.24**	-0.01	0.17**	0.31**	0.15**	0.27**	-0.42**	-0.02	
Death Qualification (12)	0.21**	0.15**	0.16**	0.10*	-0.12*	-0.13*	-0.03	-0.09*	0.49**	-0.16**	-0.29**

\*p &lt; .05 \*\* p &lt; .01

**Attribution of dehumanizing traits to the defendant.** Next, I tested whether script condition had an effect on participants' attribution of animalistic traits to the defendant. An ANOVA revealed that the attribution of animalistic traits to the defendant was significantly different across the three script conditions,  $F(2, 470) = 4.68, p = 0.01, \eta_p^2 = 0.02$ . Post-hoc (LSD) tests revealed that participants who read the control script attributed animalistic traits to the defendant significantly more than participants who read the mechanistic script,  $p = .01$ . Participants who read the animalistic script attributed animalistic traits to the defendant significantly more than participants who read the mechanistic script,  $p = .03$ . However, contrary to predictions, there was not a significant difference in the attribution of animalistic traits between those who read the control script and those who read the animalistic script,  $p = .80$ . I then tested whether script condition influenced participants' attribution of mechanistic traits to the defendant. Attribution of mechanistic traits to the defendant was not significantly different across the three script conditions,  $F(2, 470) = 0.98, p = 0.38, \eta_p^2 = 0.00$ .

### **Subtle Dehumanization**

**Attribution of primary and secondary emotions.** For subtle dehumanization, I used an ANOVA to assess whether script condition had an effect on the attribution of primary and secondary emotions to the defendant. There was no significant difference in the attribution of primary emotions to the defendant across script conditions,  $F(2, 470) = 0.65, p = 0.52, \eta_p^2 = 0.00$ . There was also no significant difference in the attribution of secondary emotions to the defendant across script conditions,  $F(2, 470) = 0.82, p = 0.44, \eta_p^2 = 0.00$ .

**Attributions of agency and experience.** Similarly, I used an ANOVA to assess whether script condition had an effect on beliefs that the defendant had the capacity to exhibit agency and the capacity to experience. There was no significant difference in beliefs that the defendant had the capacity to exhibit agency across script conditions,  $F(2, 470) = 1.75, p = 0.18, \eta_p^2 = 0.01$ , and no significant difference in beliefs that the defendant had the capacity to experience across script conditions,  $F(2, 470) = 1.06, p = 0.35, \eta_p^2 = 0.01$ .

### **Case Outcomes**

**Rehabilitation.** To analyze case outcomes, an ANOVA was used to assess whether participants believed that psychological rehabilitation would be effective for the defendant across the three script conditions. There was no significant difference in perceptions of defendant amenability to rehabilitation across the three script conditions,  $F(2, 470) = 1.82, p = 0.16, \eta_p^2 = 0.01$ .

**Confidence in a death sentence.** I used an ANOVA to analyze whether script condition influenced participants' death sentence confidence. The overall main effect of the manipulation on confidence in a death sentence was not significant,  $F(2, 470) = 2.15, p = 0.12, \eta_p^2 = 0.01$ . However, a planned comparison revealed that the animalistic script significantly increased confidence in a death sentence relative to the control script,  $F(1, 323) = 4.25, p = 0.04$ .

To test whether the manipulation had a different effect for death-qualified jurors compared to non-death-qualified jurors, I conducted a two-way ANOVA to investigate whether the effect of script condition depended on jurors' death-qualification status. The two-way ANOVA revealed no significant interaction effect between death qualification

and script condition,  $F(2, 470) = 0.79, p = 0.46, \eta_p^2 = 0.00, M = -20.58, SD = 87.12$ . It did, however, reveal a main effect of death qualification on death sentence confidence, such that death-qualified participants were significantly more confident in the death penalty compared to participants who would not impose the death penalty,  $F(1, 470) = 182.26, p < 0.001, \eta_p^2 < 0.001$ .

### **Dehumanization Measures Predicting Sentencing**

Because the manipulation affected blatant (but not subtle) dehumanization measures, I next conducted a linear regression to assess whether participants' blatant dehumanization scores (i.e., 'Ascent of Man Scale [animalistic] difference scores, 'Ascent of Man Scale' [mechanistic] difference scores, Animalistic Traits Scale, Mechanistic Traits Scale) were associated with participants' confidence in a death sentence. All predictors were entered into the model simultaneously. The overall regression was statistically significant,  $R^2 = 0.04, F(4, 470) = 5.34, p < 0.001$ . Participants' blatant dehumanization scores (i.e., the 'Ascent of Man Scale' [animalistic] difference score) significantly predicted sentencing confidence,  $B = 0.51, p = 0.01$ . The more participants blatantly animalistically dehumanized the defendant there was an associated increase in participants' sentencing confidence, even when controlling for the other predictors in the model. Participants' blatant mechanistic dehumanization (i.e., "Ascent of Man Scale' [mechanistic] difference score) did not significantly predict sentencing confidence,  $B = 0.02, p = 0.92$ . Additionally, the Animalistic Traits Scale was not a significant predictor of sentencing confidence,  $B = 3.05, p = 0.63$ , and the Mechanistic Traits Scale was also not a significant predictor of sentencing confidence,  $B = -3.46, p = 0.54$ .

## **Mediation: The Indirect Effect of Animalistic Closing Statements on Confidence in a Death Sentence via Blatant Dehumanization**

Because the animalistic script increased blatant dehumanization and blatant dehumanization was related to confidence in a death sentence, I investigated whether the effect of script condition on sentence confidence was mediated by participants' blatant dehumanization (as measured by the 'Ascent of Man Scale' [animalistic] difference score). I tested a model with only the animalistic and control script conditions entered as the predictor, sentencing confidence as the outcome and participants' blatant animalistic dehumanization as the mediator using the PROCESS (v4.0) macro (Hayes, 2022). The animalistic script significantly increased blatant animalistic dehumanization,  $B = 8.26$ ,  $SE = 3.76$ ,  $p = 0.03$ , and blatant animalistic dehumanization was significantly associated with increased confidence in a death sentence,  $B = 0.51$ ,  $SE = 0.12$ ,  $p < 0.001$ . As predicted, this indirect effect of animalistic (versus control) script on sentence confidence through blatant animalistic dehumanization was significant, which was confirmed by a confidence interval that did not include zero, ( $M_{indirecteffect} = 4.24$ ,  $SE = 2.26$ , 95%  $CI$  [0.46, 9.23]).

I did not find the same indirect effect of the mechanistic script (versus control) on sentencing confidence through blatant animalistic dehumanization ( $M_{indirecteffect} = -0.65$ ,  $SE = 2.0$ , 95%  $CI = [-4.65, 3.22]$ )—due to the fact that the effect of reading the mechanistic script on blatant animalistic dehumanization was not significant,  $B = -1.25$ ,  $SE = 3.80$ ,  $p = 0.74$ .

### **Study 1 Discussion**

The analyses from this study provide evidence that dehumanizing language has the potential to affect a person's perception of a murder defendant—particularly

animalistic language. Embedding closing statements in a capital murder case with animalistic language can make mock jurors perceive a defendant as less evolved and more animalistic, and this can lead to greater confidence in sentencing him to death. Animalistic descriptions of a defendant and their crimes (which have no “probative” or informational value in a guilt phase) significantly increased blatant animalistic dehumanization of the defendant. Because dehumanization—specifically animalistic dehumanization—can lead to aggression, an increase in punishment harshness (Bastian et al., 2013), and the justification of unjust treatment (Opatow, 1990), it is essential to assess whether the use of dehumanizing language can trigger this reaction within legal settings. Dehumanizing language is often associated with particularly heinous and severe crimes like murder and sexual assault (Vasquez et al., 2014; Viki et al., 2013), which makes these findings even more critical to fully investigate. If this language is being presented during trials in which sentencing can and often does include the death penalty, then its full effect on jurors’ perceptions of a defendant in these settings should be investigated.

Interestingly, I did not find any evidence that mechanistic dehumanization is consequential for perceptions of a defendant or sentencing decisions. There is evidence that mechanistic dehumanization can be linked to perceptions of emotionality (Haslam & Loughnan, 2014), as well as agency and experience (Gray, 2011) but this study found that the use of mechanistic dehumanizing language within closing statements did not influence mock juror perceptions’ of a defendant possessing mechanistic traits, agency, experience, or primary emotionality. I also found no effect of mechanistic dehumanizing

language on blatant dehumanization, or sentence confidence. Finally, the degree to which mock jurors' mechanistically dehumanized the defendant did not predict verdicts.

There has been recent investigation into how dehumanizing language has different effects for different racial and ethnic targets. Past studies have provided evidence that fair skinned ethnicities tend to be more common targets for mechanistic dehumanization (Haslam & Loughnan, 2014; Kteily et al., 2015), and African American populations tend to be the most common targets of animalistic dehumanization (Haslam & Loughnan, 2014; Costello & Hodson, 2014). Study 1 findings did not align with my hypothesis that mechanistic dehumanization would affect mock jurors' perceptions of a White defendant, but it was useful in identifying animalistic dehumanizing language as more effective and influential. Because there is a strong association between African Americans and dehumanizing language, in Study 2 I investigated the implications that dehumanizing language can have in legal settings for White versus Black defendants.

Study 1 results validate the idea that blatant dehumanization still occurs in modern day, reinforcing the idea that dehumanization is not an artifact of the past, but instead continues to be evident and detrimental. A recent article highlights how the belief that blatant dehumanization is no longer a part of modern society can have detrimental consequences, and that although more subtle versions of dehumanization may be more prevalent, blatant dehumanization still plagues society as we know it (Kteily & Bruneau, 2017). My findings provide support that blatant dehumanization is still relevant and can have detrimental effects in legal settings. By manipulating the defendants' race in the follow up study, I was able to investigate whether dehumanizing language has even stronger effects on subtle and blatant dehumanization, and case outcomes for Black

(versus White) defendants.

In addition to adding a defendant race manipulation, I identified several limitations of Study 1 addressed in Study 2. The first limitation of the study was the percentage of the mock juror population that expressed they would never be willing to endorse the death penalty ( $N = 143, 30.4\%$ ). This is a limitation when asking participants to play the role of a mock juror in a capital murder case because in death penalty cases these jurors would not have been allowed to serve on the jury. Although it may seem unethical and in violation of a defendant's rights to remove jurors who would not vote to impose the death penalty—ultimately overrepresenting more punitive and non-minority populations on juries (Yelderman et al., 2016)—the 1986 *Lockhart v. McCree* Supreme Court ruling upholds that it is constitutional to exclude jury members on the basis that they express opposition to the death penalty as long as the jury is representative of a cross-section of the community (Chao et al., 2010). Based on this court ruling I attempted to screen Survey 2 to ensure the entire sample of mock-jurors was death-qualified.

Second, I had problematic reliability in measuring mechanistic traits. The Mechanistic Traits Scale was found to be an unreliable measure of the attribution of mechanistic traits ( $\alpha = 0.49$ ). I ran descriptive statistics to see if the deletion of any items on the scale would help to increase its reliability but observed that this would not solve the issue. In addition to the low Cronbach's alpha score for that scale, in general I found the mechanistic measures and the mechanistic language manipulation did not lead to any significant effects on mock jurors' perceptions of the defendant and case outcomes. One might hypothesize that these findings may in part be due to the nature of the crime that I



chose for this study. The crime was brutal and graphic in nature rather than reflective of cold and calculated—a narrative that aligns more with mechanistic adjectives and mechanistic nature. Due to the lack of significant findings across the mechanistic manipulation and measures, I decided to focus on animalistic dehumanization with the race manipulations and drop mechanistic measures and manipulations in Study 2. Given that mechanistic dehumanization (in either measured or manipulated form) did not have an effect for White defendants (who are more likely than Black targets to be mechanistically dehumanized; Haslam & Loughnan, 2014; Kteily et al., 2015), I did not anticipate mechanistic dehumanizing language to have an effect for Black defendants.

## **Study 2**

In Study 1 I briefly introduced the historical stereotype between African Americans and animalistic dehumanization. Reinforcements of this prejudicial association have beset society since the establishment of the United States (likely even prior to this) through the enslavement of African Americans, the segregation of schools and housing, disenfranchisement, and media portrayals depicting African Americans as animals. Although many progressive changes have been made as a result of movements as society has modernized (i.e. desegregation, Black Lives Matter movement), there remains evidence that the racist association between African Americans and apes continues to have detrimental effects for minority populations— through both subtle dehumanization and blatant dehumanization.

Racism— a construct that is highly correlated with dehumanization— affects minority populations all throughout their life, from childhood well into adulthood. Research has found that African American children are not perceived as innocent

compared to children belonging to other racial groups (Goff et al., 2014), and Black juveniles are perceived as more culpable and therefore have an increased likelihood of being sentenced to life without parole (Rattan et al., 2012). The prominence of dehumanization aimed at African Americans progresses into adulthood where Black men are stereotyped as bigger and stronger than their White male counterparts (Johnson et al., 2019), and Black targets are more likely to be shot at— a reaction that is exacerbated when the target has been dehumanized (Mekawi et al., 2016). Taking into account the findings from Study 1 in conjunction with the robust evidence linking African Americans and animalistic dehumanization, I felt it imperative to expand the findings from Study 1 to see if the effect of dehumanizing language has an even stronger impact for Black (versus White) defendants.

Additionally, in Study 1, subtle dehumanization was not found to be affected by exposure to dehumanizing language— both animalistic and mechanistic dehumanizing language. Although the findings from both the primary and secondary emotions scales yielded null results in Study 1, prior research has emphasized the relevance of perceived primary and secondary emotionality when measuring dehumanization (Haslam, 2006; Costello & Hodson, 2009). Conversely, although research has investigated dimensions of mind perceptions— through measures of agency and experience— as operationalizations of subtle dehumanization, this link is not as strong. Therefore, Study 2 still included a measure of both primary and secondary emotions as operationalizations of subtle dehumanization, but not measures of agency and experience for the purposes of time.

## Hypotheses

All of the following hypotheses were preregistered ([osf.io/wz3xt](https://osf.io/wz3xt)). I predicted that I would replicate Study 1 findings, but that the strength of these effects would depend on defendant race. There has been robust evidence that dehumanization is more often directed at racial and ethnic minorities (Haslam & Loughnan, 2014) and has been found to increase the likelihood of a Black criminal receiving the death penalty (Goff et al., 2008). Therefore, I hypothesized that the predicted effects will be stronger for Black defendants compared to White defendants. More specifically, I hypothesized that animalistic dehumanizing language would (a) increase the attribution of animalistic dehumanizing traits to the defendant, (b) increase blatant dehumanization of the defendant, (c) increase subtle dehumanization (i.e., denial of primary and secondary emotions) and (d) ultimately increase confidence that the defendant should be sentenced to death, relative to those who read a closing statement with no dehumanizing language—and that these effects would be stronger when the defendant is Black compared to White. I also predicted that I would replicate the significant mediation model in Study 1, such that the presence of animalistic dehumanizing language in closing statements would increase the various measures of dehumanization (noted above), which in turn would increase confidence in a death sentence. However, I also predicted a moderated mediation, such that this indirect effect would be significant for both Black and White defendants—but stronger for Black defendants.

Additionally, to rule out a potential alternative explanation, I conducted exploratory tests of whether reading a closing statement that contains animalistic descriptions (versus the control script) might increase participants' negative emotional

reactions and that increased emotional response to the language might explain the increased confidence in a death sentence rather than (or in addition to) dehumanization as the mechanism.

## Methods

### Participants and Design

This study was a 2 (Dehumanizing language: animalistic, none) x 2 (Defendant race: White, Black) between-subjects design. An a priori power analysis using the effect size from Study 1 ( $\eta^2 = .016$ ) was used to determine the necessary sample size for Study 2. This analysis indicated that the sufficient sample size to detect a small effect for Study 2 in a four-cell design was 1,300 participants. Although I preregistered a decision to collect data from only non-Black participants given that White (versus Black) people are likely to show more racial bias and contemporary juries tend to be disproportionately White or “Whitewashed” (Semel et al., 2020), the PROLIFIC screening for non-Black participants still resulted in a small percentage of Black participants in the sample ( $n = 31, 2.6\%$ ). Results did not change if I excluded versus included these Black participants, so I opted to leave them in for a more powerful sample.

I preregistered all of the following exclusion criteria with the Open Science Framework ([osf.io/wz3xt](https://osf.io/wz3xt)). For this study I started with a sample size of 1465 participants. I screened out 204 (13.9%) participants who did not meet jury-eligibility criteria (i.e., 18+ years old, U.S. Citizen, able to speak/read English fluently, willing to impose the death penalty), which left 1261 participants. I excluded data from participants who failed the first attention check ( $N = 1, 0.08\%$ ) and participants who failed the second attention check ( $N = 29, 2.3\%$ ). After these exclusions I was left with

1231 participants. I then screened out those who failed the defendant race manipulation check ( $N = 12$ , 0.97%), and excluded one participant due to missing data ( $N = 1$ , 0.08%). The final data set included 1207 participants who passed all eligibility and attention checks. The final sample was 42.2% female and 87.3% White ( $M_{age} = 41.66$ ,  $SD = 14.01$ ). Participants were randomly assigned to one of four potential conditions: the control closing statement with a White defendant ( $N = 304$ ), the control closing statement with a Black defendant ( $N = 302$ ), the animalistic closing statement with a White defendant ( $N = 299$ ), or the animalistic closing statement with a Black defendant ( $N = 302$ ).

## **Materials**

The materials and methods for Study 2 are largely the same as the materials and methods used in Study 1 with some small changes to the measures and manipulations. For Study 2, participants were provided with the same background information about the case as was used in Study 1. This included the same brief one paragraph explanation that they would be reading the prosecuting attorney's closing statement from a capital murder trial, but I slightly altered the information that the defendant had plead guilty (Study 1), and instead emphasized that the defendant had the victim's DNA on him and he had no alibi for the time of the crime, therefore, he had been found guilty. These alterations were made in an effort to make the case more ecologically valid. Participants were informed that their task was to decide whether he should get the death penalty or not. To manipulate the defendant's race, the paragraph summary was accompanied by one of several images of either a White or Black defendant. I obtained images of White and Black men currently on death row from an online database of inmate mugshots (AZ Central, 2023) and chose three White mugshots and three Black mugshot images for

stimulus sampling purposes (see Appendix E).

Next, participants read the prosecuting attorney's closing statement (see Appendix A & Appendix B), which were the same control and animalistic closing statements that were used in Study 1.

## **Measures**

All measures are included in Appendix E.

**Open-Ended Responses.** I was interested in investigating how presenting participants with a closing statement embedded with animalistic dehumanizing language would affect participants' open-ended descriptions of their impressions of the defendant (the same open-ended measure as was used in Study 1) and the emotions they felt while reading about the crime (a new measure for Study 2), in their own words. After reading the assigned closing statement, I asked participants to "Please write at least a few sentences describing your first impressions of the defendant" and "Please write at least a few sentences describing how you felt while reading the prosecuting attorney's closing statement". I plan to conduct automatic text analysis to test whether reading a dehumanizing closing statement increases the dehumanizing language participants use to describe the defendant and to analyze these responses for the use of words that are negatively emotionally valenced. This analysis is beyond the scope of this thesis.

**Subtle Dehumanization.** To measure subtle dehumanization, participants responded to the same *Primary Emotions Scale* ( $\alpha = 0.83$ ) as was used in Study 1 assessing how much they thought the defendant possess primary emotions (i.e., happiness, sadness, pleasure, pain, excitement, rage) and the same *Secondary Emotions Scale* ( $\alpha = 0.89$ ) assessing how much they thought the defendant possessed secondary

emotions (i.e., compassion, bitterness, tenderness, regret, shame). I created mean scores for the primary emotions scale and secondary emotions scale for analysis purposes as measures of subtle dehumanization.

**Blatant Dehumanization.** To measure participants' levels of blatant animalistic dehumanization I used the original "Ascent of Man Scale" measure (Figure 1) as was used in Study 1, which depicts five silhouettes ranging from human ancestors that compare with modern apes, to a modern human figure (Kteily et al., 2015). Instructions remained the same as Study 1 which were taken from previous research using this scale (Kteily, et al., 2015). Participants were asked to rate the same targets as were presented in Study 1 including themselves, the average stranger, the victim, the defendant, and the prosecuting attorney (who delivered the closing statement they read). Responses were on a sliding scale below the 5-silhouette images ranging from 0 (*Not evolved at all*) to 100 (*Most evolved*). Following the previous study (Kteily et al., 2015), I calculated a difference score by subtracting how they rated the defendant from an average of participants ratings of the other four lay-targets.

In addition to the Ascent of Man scales, I also measured blatant dehumanization by asking participants to attribute animalistic dehumanizing traits to the defendant on an *Animalistic Traits Scale* ( $\alpha = 0.88$ ), including the same five animalistic traits that were used in Study 1 (i.e., primitive, impulsive, coarse, untamed, uncivilized) on 5-point Likert scales ranging from *Not at all* to *A great deal*. I was careful not to choose any words for this scale that were used as animalistic dehumanizing adjectives in the animalistic closing statement or used as animalistic terminology in the adapted race-dehumanization IAT.

**Self-Report Emotions.** I included a self-report emotions measure to further investigate the underlying mechanisms that may be driving the effect of dehumanizing language, which asked participants to “Think back to when you were reading the Prosecuting Attorney’s closing statement. Please indicate how much you felt the following emotions while reading the closing statement” (i.e., anger, disgust, contempt, anxiety, fear, stress) on 5-point Likert scales ranging from *Not at all* to *A great deal*. This scale was not used in Study 1.

**Case Outcomes.** To test how animalistic dehumanizing language impacts participants' punitiveness, participants responded to the same scale from Study 1 measuring how effective they thought psychological rehabilitation would be for the defendant on a 5-point Likert scale ranging from *Not at all effective* to *Extremely effective*. For the sentencing measure, participants chose between two options (i.e., life in prison, the death penalty) for the defendant. Following this, participants reported their confidence in their sentencing decision on a sliding scale ranging from *0% confident* to *100% confident*. As was done in Study 1, I combined the sentencing and confidence measure into one 22-point scale ranging from -11 (*100% confident in life sentence*) to +11 (*100% confident in death sentence*), wherein the two midpoints reflected 0% confident in a life sentence and 0% confident in a death sentence.

**Implicit Association.** I included a race-dehumanization Implicit Association Test (IAT) to further investigate whether people hold an implicit association between either an (a) White image or (b) Black image with (a) animal terms or (b) human terms, a measure that was not included in Study 1. This adapted IAT test measured participants’ implicit association between White and Black images with human and animal terms (modified



from the IAT developed by Greenwald et al., 1998). Inspired by prior dehumanization research using the IAT, human terms included person, people, citizen, humanity, man, individual, civilian, resident and animal terms included wild, primate, creature, breed, feral, mongrel, ape, and pet (Viki et al., 2006; Goff et al., 2008). I have not yet analyzed these data for this thesis.

The IAT has been used in the past to examine participants' attitudes towards specific targets, whether that is people, professions, animals, or objects, and results have provided evidence that quicker response times between targets and categories allude to a person holding an implicit association between them (Karpinski & Hilton, 2001). I was careful to select words for the adapted version of the IAT that did not overlap with any animalistic terminology in the animalistic closing statement or the animalistic traits scale.

**Demographics.** Lastly, I collected demographic information from all participants including age, race/ethnicity, gender, and political orientation. The political orientation scale was a 7-point Likert scale (*Very Liberal, Liberal, Slightly Liberal, Neither Liberal nor Conservative, Slightly Conservative, Moderately Conservative, Very Conservative*).

**Attention Checks.** To ensure participants had thoroughly read each of the script conditions, I administered three attention check questions after they had read their assigned script which included “How did the victim die?”, “What was the name of the victim’s boyfriend?”, and “What crime was the defendant found guilty of?”. Participants could not advance past the assigned script until the three questions were answered correctly. Participants later responded to a multiple choice attention check asking them to choose what crime the defendant committed. After responding to the case outcome measures, participants were presented with the following attention check: “Jurors should consider the crime at hand when they are rendering a verdict. Which of the following

options rhymes with ever? This is a test to make sure you are working carefully.” Options included ‘never’, ‘always’, ‘sometimes’, and ‘frequently’. Any participant who failed to respond correctly to any of these attention checks were excluded from my analyses.

**Manipulation Check.** To ensure participants were aware of the defendant’s race, I included an open-ended question prior to participants completing the IAT which asked “This is an attention/memory check. Please describe what you remember about the defendant and his appearance.” Participants who described the defendant as the wrong race were excluded from data analyses.

### **Procedure**

Participants first provided consent to participate in the study and were asked to respond to jury-eligibility screening questions. Participants who did not meet the jury-eligibility criteria (18+ years old, U.S. citizen, ability to speak/read English fluently, willing to give the death penalty) were directed to the end of the survey and thanked for their time. Participants who passed the jury-eligibility questions were presented with background information and randomly assigned to see either a (a) White defendant mugshot or (b) Black defendant mugshot. After background information and seeing the mugshot, participants were randomly assigned to read either the (a) control or (b) animalistic version of the prosecuting attorney’s closing statement. Participants then reported their initial impressions of the defendant and how the closing statement made them feel using open-ended questions. Following this, participants completed (in the following order): blatant dehumanization measures (i.e., the ‘Ascent of Man Scale’ [animalistic], the Animalistic Traits Scale with items in a randomized order), subtle dehumanization measures (i.e., the Primary Emotions Scale and Secondary Emotions

Scale with items in a randomized order, and the Self-Report Emotions Scale with items in a randomized order). Participants then completed case outcomes (i.e., psychological rehabilitation, sentencing, sentencing confidence). Finally, participants completed the race-dehumanization IAT test and lastly provided demographic information. In exchange for their participation, participants were compensated \$2.62, and the survey took approximately 19 minutes on average.

## **Results**

I conducted a preregistered series of between-subject two-way ANOVAs to test the effect of defendant race and script condition on all dependent measures (i.e., blatant and subtle dehumanization of the defendant, self-report emotions, sentencing confidence, amenability to rehabilitation).

Similar to Study 1, following the ANOVAs, I preregistered a plan to run a linear regression with any of the dehumanization measures (i.e., blatant animalistic dehumanization, animalistic traits, subtle dehumanization) that are affected by the dehumanization script manipulation as predictors of the continuous sentencing confidence measure.

Finally, I ran a preregistered moderated mediation model testing whether script condition increased confidence in a death sentence through blatant dehumanization (measured using the animalistic ‘Ascent of Man Scale’), along with any other measure of dehumanization significantly affected by the script manipulation in Study 2, and whether this indirect effect differed depending on the race of the defendant.

Descriptive statistics and correlations among all dependent measures are presented in Table 3 and Table 4, respectively.

**Table 3***Study 2: Descriptive Statistics of Dependent Variables across Script Conditions*

	Control	Control	Animalistic	Animalistic
	Script White	Script Black	Script White	Script Black
	Defendant	Defendant	Defendant	Defendant
	M (SD)	M (SD)	M (SD)	M (SD)
Animalistic Ascent Score (Mean)	84.59 (15.56)	85.83 (15.20)	85.89 (12.56)	87.16 (12.35)
Animalistic Ascent Score (Difference Score)	39.06 (33.40)	32.41 (33.97)	39.13 (34.37)	36.61 (33.51)
Primary Emotions	3.59 (0.85)	3.63 (0.94)	3.48 (0.88)	3.54 (0.86)
Secondary Emotions	2.52 (0.96)	2.67 (1.06)	2.45 (0.97)	2.48 (1.00)
Animalistic Traits	4.25 (0.83)	4.01 (1.01)	4.21 (0.86)	4.13 (0.94)
Negative Emotions	3.17 (0.93)	3.13 (0.96)	3.18 (1.02)	3.14 (0.96)
Sentencing	1.58 (0.46)	1.49 (0.50)	1.58 (0.50)	1.47 (0.50)
Sentencing Confidence	16.68 (84.62)	1.40 (85.47)	15.97 (84.03)	-3.50 (84.56)
Psychological Rehabilitation	1.94 (1.10)	1.95 (1.03)	1.86 (1.07)	1.90 (1.04)

Note: Mean Ascent scores indicate the average of all targets, with higher scores indicating increased perceptions of humanness, and lower scores indicating increased blatant dehumanization (on average). Difference Ascent scores indicate the difference between the defendant score and the average score of the other targets, with higher scores indicating increased blatant dehumanization of the defendant relative to other targets, and lower scores indicating decreased blatant dehumanization of the defendant relative to the other targets.

## **Blatant Dehumanization**

**Ascent of Man Scale.** I first tested whether my manipulations had an effect on blatant animalistic dehumanization (as measured by the ‘Ascent of Man Scale [animalistic]’ difference score). I found no significant difference in blatant animalistic dehumanization difference scores across script conditions,  $F(1, 1203) = 1.21, p = 0.27, n_p^2 = 0.001$ . There was, however, a significant difference in blatant animalistic dehumanization difference scores across defendant race,  $F(1, 1203) = 5.55, p = 0.02, n_p^2 = .01$ , such that (contrary to expectations) participants blatantly dehumanized White defendants ( $M = 39.09, SE = 1.38$ ) more than Black defendants ( $M = 34.51, SE = 1.38$ ). The interaction was not significant,  $F(1, 1203) = 1.26, p = 0.29, n_p^2 = 0.001$ .

**Attribution of animalistic traits to the defendant.** Next, I tested whether my manipulations had an effect on participants’ attribution of animalistic traits to the defendant. I found no significant difference in the attribution of animalistic traits to the defendant across script conditions,  $F(1, 1203) = 0.63, p = 0.43, n_p^2 = 0.001$ . There was, however, a significant difference in the attribution of animalistic traits to the defendant across defendant race,  $F(1, 1203) = 9.76, p = 0.002, n_p^2 = 0.008$ , such that White defendants were ascribed animalistic traits more so ( $M = 4.23, SE = 0.04$ ) than Black defendants ( $M = 4.07, SE = 0.04$ ). The interaction was not significant,  $F(1, 1203) = 2.38, p = 0.12, n_p^2 = 0.002$ .

## **Subtle Dehumanization**

**Attribution of primary and secondary emotions.** I tested whether my manipulations had an effect on the attribution of primary and secondary emotions to the defendant. I found no significant difference in the attribution of primary emotions to the

defendant across script conditions,  $F(1, 1203) = 3.49, p = 0.06, \eta_p^2 = 0.003$ , and no significant difference in the attribution of primary emotions to the defendant across defendant race,  $F(1, 1203) = 1.02, p = 0.31, \eta_p^2 = 0.001$ . The interaction was also not significant,  $F(1, 1203) = 0.01, p = 0.92, \eta_p^2 = 0.000$ .

I did, however, find a significant difference in the attribution of secondary emotions to the defendant across script conditions,  $F(1, 1203) = 5.20, p = 0.02, \eta_p^2 = 0.004$ , such that participants in the animalistic condition ascribed secondary emotions to the defendant significantly less ( $M = 2.47, SE = 0.04$ ) than participants in the control condition ( $M = 2.60, SE = 0.04$ ). In other words, consistent with hypotheses, those who read the animalistic dehumanization script denied the defendant secondary emotions (i.e., dehumanized them more) than those who read the control script. I did not find a significant difference in the attribution of secondary emotions across defendant race,  $F(1, 1203) = 2.47, p = 0.12, \eta_p^2 = 0.002$ . The interaction was also not significant,  $F(1, 1203) = 1.33, p = 0.25, \eta_p^2 = 0.001$ .

### **Self-Report Emotions**

I tested whether the manipulations had an effect on participants' self-reported emotions while reading the prosecuting attorney's closing statement. I found no significant difference in participants' self-reported emotions across script conditions,  $F(1, 1192)^1 = 0.06, p = 0.80, \eta_p^2 = 0.00$ , and no significant difference in participants' self-reported emotions across defendant race conditions,  $F(1, 1192) = 0.48, p = 0.49, \eta_p^2 = 0.00$ . The interaction was also not significant,  $F(1, 1192) = 0.002, p = 0.96, \eta_p^2 < 0.0001$ .

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<sup>1</sup> For an unclear reason, I was missing data on self-reported emotions from 10 participants.

## Case Outcomes

**Rehabilitation.** I tested whether the manipulations had an effect on perceived effectiveness of psychological rehabilitation for the defendant. There was no significant difference in perceptions of defendant amenability to rehabilitation across script conditions,  $F(1, 1203) = 1.27, p = 0.26, \eta^2 = 0.001$ , and no significant difference in perceptions of defendant amenability to rehabilitation across race conditions,  $F(1, 1203) = 0.17, p = 0.68, \eta^2 = 0.000$ . The interaction was also not significant,  $F(1, 1203) = 0.04, p = 0.84, \eta^2 = 0.000$ .

**Confidence in a death sentence.** Finally, I tested whether the manipulations had an effect on participants' confidence in a death sentence. I found no significant difference in confidence in a death sentence across script conditions,  $F(1, 1203) = 0.33, p = 0.57, \eta^2 = 0.00$ . I did, however, find a significant difference in confidence in a death sentence between defendant race conditions,  $F(1, 1203) = 12.70, p < 0.001, \eta^2 = 0.01$ , such that (contrary to expectations) participants were significantly more confident in a death sentence when the defendant was White ( $M = 16.32, SE = 3.45$ ) than when the defendant was Black ( $M = -1.05, SE = 3.45$ ). The interaction was not significant,  $F(1, 1203) = 0.19, p = 0.67, \eta^2 = 0.00$ .

**Table 4***Study 2: Correlation Matrix: Dependent Measures*

	1	2	3	4	5	6	7	8	9
Animalistic Ascent Mean (1)									
Animalistic Ascent Difference (2)	-0.50**								
Primary Emotions (3)	0.29**	-0.38**							
47 Secondary Emotions (4)	0.24**	-0.44**	0.67**						
Animalistic Traits (5)	-0.29**	0.59**	-0.31**	-0.51**					
Negative Emotions (6)	-0.16**	0.31**	-0.19**	-0.28**	0.41**				
Sentencing (7)	-0.23**	0.33**	-0.20**	-0.28**	0.30**	0.18**			
Sentencing Confidence (8)	-0.22**	0.33**	-0.21**	-0.29**	0.30**	0.19**	0.97**		
Psychological Rehabilitation (9)	0.11**	-0.32**	0.20*	0.39**	-0.34**	-0.17**	-0.42**	-0.45**	

\*p &lt; .05 \*\* p &lt; .01



### **Dehumanization Measures Predicting Sentencing.**

I preregistered to test whether I replicated the relationship between blatant dehumanization ‘Ascent of Man’ scale scores and sentencing confidence found in Study 1, as well as testing any other dehumanization measures that were affected by the script manipulation in Study 2 as predictors of sentencing confidence. As a result, I conducted a linear regression to assess whether participants’ blatant dehumanization (i.e., ‘Ascent of Man’ scale) and attribution of secondary emotions of the defendant was associated with participants’ sentencing confidence. I reverse coded scores on the secondary emotions scale so that higher scores were reflective of increased dehumanization to aid interpretation. The overall regression was statistically significant,  $R^2 = 0.14$ ,  $F(2, 1205) = 94.60$ ,  $p < 0.001$ . Participants’ subtle dehumanization (i.e., greater denial of secondary emotions) significantly predicted increased confidence in a death sentence,  $B = 15.08$ ,  $p < 0.01$ , indicating that the less participants attributed the defendant secondary emotions the greater their confidence in a death sentence was. Further, I replicated the finding that participants’ blatant dehumanization (i.e., greater ascent of man difference scores) significantly predicted increased confidence in a death sentence,  $B = .64$ ,  $p < .001$ . These results suggest that in Study 2, subtle dehumanization explained more unique variance in confidence in a death sentence than did blatant dehumanization.

### **Moderated Mediation: Indirect Effect of Animalistic Closing Statements on Increased Confidence in a Death Sentence via Subtle Dehumanization but not Blatant Dehumanization**

I then tested my pre-registered hypothesized moderated mediation model using Hayes PROCESS macro (v4.1). I tested a model with script condition entered as the

focal independent variable predicting confidence in a death sentence through two mediators: the ‘Ascent of Man Scale’ difference score and the attribution of secondary emotions, moderated by defendant race. I found that defendant race did not significantly moderate the indirect effect through the ‘Ascent of Man scale’ difference score (Index of moderated mediation = 2.59,  $SE = 2.58$ , 95%  $CI [-2.35, 7.71]$ ), nor did defendant race significantly moderate the indirect effect through the attribution of secondary emotions (Index of moderated mediation = 2.03,  $SE = 1.80$ , 95%  $CI [-1.37, 5.70]$ ).

Due to defendant race not being a significant moderator, I ran a simplified model that tested the indirect effect of script condition on confidence in a death sentence through both mediators (‘Ascent of Man Scale’ difference score, attribution of secondary emotions), but I omitted defendant race as a moderator. The indirect effect through the blatant dehumanization ‘Ascent of Man Scale’ difference scores was not significant,  $M_{indirecteffect} = 1.39$ ,  $SE = 1.26$ , 95%  $CI [-1.02, 3.92]$ . However, the indirect effect of script condition on confidence in a death sentence through the subtle dehumanization attribution of secondary emotions was significant,  $M_{indirecteffect} = 2.06$ ,  $SE = 0.94$ , 95%  $CI [0.37, 4.07]$ . More specifically, reading the animalistic closing statement (versus the control closing statement) significantly increased subtle dehumanization (through greater denial of secondary emotions to the defendant),  $B = 0.13$ ,  $SE = 0.06$ ,  $t = 2.34$ ,  $p = 0.02$ , and in turn, increased subtle dehumanization was associated with greater confidence in a death sentence,  $B = 15.29$ ,  $SE = 2.52$ ,  $t = 6.06$ ,  $p < 0.001$ .

## Study 2 Discussion

The analyses from Study 2 provide evidence that dehumanizing language has the potential to affect a person’s perception of a murder defendant. I found that describing a

defendant animalistically can increase mock jurors subtle dehumanization of the defendant, specifically through the denial of secondary emotions. I also found that both blatant and subtle dehumanization are associated with an increase in confidence in the death sentence, but subtle dehumanization explained more of the variance in participants confidence in a death sentence than blatant dehumanization. Similar to the findings from Study 1 which found the more participants blatantly dehumanized the defendant, the greater their confidence in the death sentence was, Study 2 provided evidence that the more participants subtly dehumanized the defendant there greater their confidence in the death sentence was. Finally, I found evidence that animalistic dehumanizing language increases subtle dehumanization of the defendant (through ascribing the defendant fewer secondary emotions) and subtle dehumanization of the defendant was in turn associated with an increase in confidence in sentencing defendant to death.

### **General Discussion**

Dehumanizing a person, or perceiving them as lacking inherent humanness, can have drastic effects- both generally, and within the legal system. My research suggests that the use of dehumanizing language to describe a defendant in court can influence mock jurors' perceptions of defendant humanness (both blatantly and subtly), which in turn can be associated with increased confidence in sentencing the defendant to death. In Study 1, participants exposed to animalistic dehumanizing language about the defendant were more likely to blatantly dehumanize the defendant, and this in turn was associated with increased confidence in sentencing the defendant to death. This effect was limited to animalistic dehumanization; describing the defendant in mechanistic terms did not influence mock jurors' dehumanization of the defendant or their subsequent

punishment decisions. I found similar, but slightly different patterns in Study 2: mock jurors exposed to animalistic dehumanizing language were more likely to *subtly* (rather than blatantly) dehumanize the defendant, and this in turn was associated with increased confidence in sentencing the defendant to death. Interestingly, Study 2 did not support my hypothesis that the effect of animalistic dehumanizing language would be stronger when the defendant was Black compared to when the defendant was White. In fact, I found that mock jurors dehumanized and were more punitive toward White defendants compared to Black defendants, overall.

### **Relation to Prior Research**

**Animalistic dehumanization.** The Study 1 findings were consistent with previous research on dehumanization. More specifically, I found that dehumanization of the defendant is related to more severe punishment. Research investigating the role of dehumanization within legal settings has found that perceiving a criminal as dehumanized is positively related to sentence harshness (Bastian et al., 2013), can contribute to increased support for social ostracism (Viki et al., 2012), and increased perceptions of risk for future recidivism which in turn is associated with increased sentence length (Vasquez et al., 2014). Similarly, Goff and colleagues (2008) explored how the use of dehumanizing language in media portrayals impacts trial outcomes and found that defendants who were subsequently sentenced to death were more likely to have been described by the media using ape-relevant words (Goff et al., 2008). Therefore, my findings provide further support for the relationship between animalistic dehumanization and harsher punishment, and expanded it by demonstrating not only that dehumanization can be easily triggered by attorney's, merely by describing a defendant

in an animalistic way, but also that it can lead to confidence in sentencing a defendant to death—literally a life-and-death consequence.

Some of the null findings from Study 1 were also consistent with prior research. More specifically, in Study 1 I found that animalistic dehumanization had an indirect effect on death penalty sentencing through blatant, but not subtle dehumanization. This is consistent with a prior investigation of both blatant and subtle dehumanization, which also found that measuring dehumanized attitudes after exposure to a heinous crime significantly increased blatant dehumanization, but not subtle dehumanization (Kteily et al., 2015). These researchers speculated that their findings may be a result of participants' strong gut reactions to heinous crimes, which subtle measures may not be as equipped to capture (Kteily et al., 2015). Due to the graphic nature of the crime chosen for this study and the immediacy in which I measured participants' judgments after reading about the crime, it is possible that my similar pattern of results wherein blatant dehumanization was affected but not subtle dehumanization may be a result of a similar gut reaction in participants, trumping more subtle measures of dehumanization.

There is another potential explanation for the null results across all subtle dehumanization measures in Study 1: Ingroup bias. Research supports the notion that ingroup members are attributed more secondary emotions compared to outgroup members (Leyens et al., 2000; Haslam, 2006), and more dimensions of mind perception (through agency and experience) compared to outgroup members (Morera et al., 2017; Gray et al., 2011)—that is, ingroup members are not subtly dehumanized as much as outgroup members. The defendant presented to participants in Study 1 was White and 72% of the participant sample identified as White. Therefore, maybe even a crime as

heinous as this one is not enough for participants to deny the defendant emotionality and mind perceptions when he is in their own racial ingroup. I tested this possibility by manipulating defendant race in Study 2. If this explanation were correct, I would have anticipated that the predominantly White sample would not subtly dehumanize the White defendant, but would subtly dehumanize the Black defendant more. However, the results did not support this explanation. Instead, I found that people denied the defendant secondary emotions when the defendant was described in an animalistic way compared to no dehumanized descriptions overall—and this tendency did not depend on race.

In Study 2 I again found support for dehumanization being associated with increased confidence in a death sentence, but this indirect effect operated through subtle dehumanization in Study 2, rather than blatant dehumanization as it did in Study 1. These findings are also consistent with (a different) prior literature: animalistic dehumanization typically includes the denial of secondary emotions, for example, refinement, self-control, and rationality (Haslam & Loughnan, 2014). Therefore, this pattern of results showing that the animalistic script decreased the attribution of secondary emotions to the defendant compared to the control script make sense. Moreover, it is important to note that the secondary emotions scale included both positively valenced and negatively valenced secondary emotions. This supports the notion that the impact of dehumanizing language cannot be attributed to mere general dislike of the target.

This leads to the question: What might explain the mediating role of subtle dehumanization in Study 2, but the mediating role of blatant dehumanization in Study 1? One major difference in the study design between Study 1 and Study 2 was the inclusion of a defendant race manipulation. Both studies yielded mock-juror sample that were

predominantly White (Study 1, 72%, Study 2, 87%). In Study 2, half the participants were judging a racial outgroup member (a Black defendant) and therefore might have had an easier time denying secondary emotions for the Black defendants compared to participants in Study 1 which only included a White defendant. This would be consistent with research demonstrating that outgroup members are not ascribed secondary emotions at the same level as ingroup members (Leyens et al., 2000), a finding that is especially salient when the target belongs to a racial or ethnic outgroup (Costello & Hodson, 2014).

The race manipulation in Study 2 might also explain the mediating role of only blatant dehumanization in Study 1 (which was not significant in Study 2). It is possible that White mock jurors were not as comfortable blatantly dehumanizing Black defendants in Study 2 (i.e., comparing Black inmates to animals) as they were for only White defendants in Study 1. In other words, it might be driven by social desirability concerns about appearing racist, meaning that in an effort to appear non-racist, participants judging a Black defendant might have overcorrected, resulting in them being less punitive towards Black defendants than White defendants. Recent research on racial bias in legal settings has found these counterintuitive reverse-racism effects at increasing rates (Smalarz et al., 2023) and are driven, in part, by being aware that the study is designed to detect racial bias (Salerno et al., 2023). After mock jurors establish what is known as moral credentials—or being given an opportunity to demonstrate that they are not racist—this led to more convictions of Black defendants in mock juror experiments (Salerno et al., 2023). Contrary to my hypotheses and real-world data demonstrating persistent racial disparities disadvantaging Black people at every stage of the criminal process (Mitchell & Caudy, 2015; Spohn, 2015; DPIC, 2020), Black defendants

described with animalistic language were the most *unlikely* to be sentenced to death, and mock jurors had significantly greater confidence in sentencing Black defendants to life in prison compared to White targets.

If, however, the addition of defendant race in Study 2 was the explanation for why I found different mediators in Study 1 and Study 2, I would have expected the interaction between dehumanizing language and defendant race to be significant in Study

2. That is, I would have expected blatant dehumanization to explain the effect of the closing statement script on sentencing for White defendants and subtle dehumanization to be the explanation for Black defendants—but that was not the case. Despite powering the study in line with the field's power analysis tools, the field is becoming increasingly aware that interactions might take a lot more power than popular contemporary power analysis tools (such as G\*Power) suggest (Giner-Sorolla, 2018), so it is possible I was not well powered enough to detect the overall interaction.

**Mechanistic dehumanization.** I found null results across the mechanistic manipulation and measures in Study 1. The case chosen for these studies was already graphic and brutal in nature prior to any dehumanizing language alterations. Researchers might find evidence of mechanistic dehumanization when the crime aligns more with the nature of mechanistic dehumanization, which is cold and calculated versus seemingly spontaneous and savage (Morera et al., 2017). Overall, these findings may be suggesting that mechanistic language is not as influential as I originally anticipated. One might also speculate that dehumanizing language may be more impactful in general if it was used to describe a defendant charged with a less heinous crime where there would be more variance in dehumanizing of the defendant and sentencing.



## **Social Desirability Concerns about Dehumanizing and Sentencing a Black**

### **Defendant to Death**

I plan to run additional analyses to further explore potential explanations for the Study 2 findings. Although not yet coded and analyzed for this thesis, I included an open-ended suspicion probe used in previous research (Salerno et al., 2023) to prompt participants to explain in detail what they believed the study to be about, which I am coding for awareness that the study was about race or racial bias. I will test whether my pattern of results differs for participants who recognized the study was about race compared to those who did not have this realization.

Prior to publication, I also plan to analyze additional *implicit* measures of dehumanization that might be less vulnerable to social desirability. I also created and included a race-dehumanization Implicit Association Test in Study 2. The IAT helps to identify attitudes that are held on an unconscious level and are automatically activated (Greenwald et al., 1989). This measure will allow me to test whether hearing a dehumanizing closing statement would increase mock jurors implicit associations between Black faces and animal words—particularly when the animalistic script is paired with a Black defendant.

### **Legal Implications**

This research provides evidence that the use of dehumanizing language during a trial can have prejudicial effects on legal outcomes. More specifically, the studies presented expand the current literature by providing evidence that an attorney's use of dehumanizing adjectives to describe a defendant (which has weak or little “probative” or relevant information value) can increase the dehumanization of a defendant, and in turn this is

associated with mock jurors' increased confidence in choosing to sentence him to death.

Giving these findings, it is important for legal actors to pay attention to the specific language being used during a trial. Fair practice may be to limit or exclude the use of animalistic dehumanizing terminology in explanations and descriptions that may be prejudicial and not informative for jurors. Defense attorneys should be attuned to, and challenge, the use of dehumanizing language by prosecutors. This provides an opportunity for judges to regulate these practices in an effort to decrease bias in the courtroom. Furthermore, judges could advise legal counsel to not use overly descriptive adjectives when describing the nature of a crime, or instruct jurors to ignore any unreasonably descriptive language that may be presented by attorneys. Although it is clear from the data that allowing attorneys to use animalistic dehumanizing language about a defendant can lead to mock jurors dehumanizing him as well (though it is not clear the degree to which that dehumanizing is blatant or subtle), I cannot draw causal conclusions about the association between dehumanizing the defendant and confidence in a death sentence. Further investigation into the impact of dehumanizing language during a trial would be ideal before any concrete policies are enacted against its use in court.

### **Limitations and Future Directions**

As with all research, there are some limitations to the study that limit the conclusions that generalizability. Across both Study 1 and Study 2 the crime remained constant: the brutal murder of a woman who was stabbed in the head. I cannot say for sure if the use of animalistic dehumanizing language would have the same impact when used to describe other types of crime. Additionally, for these studies I did not pilot test the defendant images that were presented to participants. Future research should pilot test any defendant images

that have been chosen to ensure that any findings are not a result of unique characteristics of the defendant (i.e., one defendant being more or less attractive than the other). Another major limitation to this research is the limited amount of trial evidence that was presented to the sample of mock-jurors. Real trials can last weeks, sometimes even months, with evidence being presented from both the prosecution and the defense. Therefore, I cannot say for sure if the findings would replicate to a real-world trial. Future efforts could expand this line of research by presenting mock jurors with more evidence, for example a closing statement from both the prosecution and defense to make the overall structure of the study more ecologically valid.

In addition, I believe that further exploration into mechanistic dehumanizing language is also warranted. Presenting mechanistic dehumanizing language in a case that aligns more with the nature of mechanistic dehumanization (cold, calculated, mechanical, robotic), may yield more impactful results.

Lastly, if I find that increased social desirability concerns about looking racist impacted my results regarding defendant race, identifying more innovative ways to study racial bias experimentally that is not as vulnerable to participants' social desirability concerns is very important. Advancing research in ways that is adaptable to a quickly changing social climate can overall bolster the quality and applicability of research findings across contexts.

### **Conclusion**

In conclusion, both Study 1 and Study 2 provide evidence that dehumanizing language plays an impactful role in the perceptions of others and adds to the abundance of research findings that highlight the harmful outcomes that happen as a result of dehumanization. Further, this research extends the current literature to legal contexts and

the role that dehumanizing language can play in association with mock jurors' death sentencing decisions. Evidence that the use of dehumanizing language in court can elicit both subtle and blatant dehumanization of defendants in ways that could make them more likely to be put to death is alarming and demonstrates the importance of policing attorneys' opening and closing statements that are not under the purview of evidence law.

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APPENDIX A

CONTROL CLOSING STATEMENT (Study 1 & 2)

Tiffany Lindsay was a young college graduate with her entire life ahead of her. She was a mother of a beautiful one-year-old. The defendant took her future away from her. He beat and stabbed her, leaving her for dead, while her one-year-old child crawled on his dead mother's body.

And why? Because Tiffany refused to leave her boyfriend for him. The defendant was furious that she chose her boyfriend over him and he killed her because of it. He took a knife and he stabbed her repeatedly in the face. He fractured her skull and he caused bruising on her brain. He stabbed her in the neck. He severed her carotid artery and broke the knife off in her neck. He slammed the handle of a knife into her face, breaking her nose and mouth.

Then he left Tiffany with her arms raised to try and protect herself, covered in her own blood.

He left, abandoning Tiffany's son with her dead body. He went home. He took his time coming up with an explanation for the horrific crime he had committed. He didn't get help and he didn't tell anyone what had happened. He knew she was beyond help. He knew she was already dead.

The defense claims that Tiffany's boyfriend Jared Walker killed her. But this simply is not plausible. There is no evidence to show that Jared was anywhere near the scene that night except for the defendant's story—a desperate man trying to throw us off his trail. If Jared had showed up and attacked Tiffany and the defendant, how did the defendant escape? Why did he leave Tiffany to Jared's wrath? Why didn't he get help? Ladies and Gentlemen, the defendant didn't get help because he knew nobody could help Tiffany. Because the defendant knew he, not Jared, killed her.

Finally, the defendant's DNA was found under Tiffany's fingernails and her blood was found on him. He is the only person who can be connected to the crime scene that night during or after her murder. The defendant had scratches on his face and stomach, which shows that the victim was trying to defend herself against him. One thing is perfectly clear. The defendant, Steven Dixon, bashed in Tiffany Lindsay's head. He stabbed her repeatedly until she was dead. Find the defendant guilty of first degree murder. Ladies and Gentlemen, it's the only verdict the facts support, that the law requires, and that justice demands.

Steven Dixon is a murderer. This man took the life of a young woman with her whole life ahead of her and an infant child to care for. In a passion filled, anger driven unthinkable act, Steven Dixon selfishly killed Tiffany and has shown no guilt or shame from taking her life. Steven Dixon is a risk to society, he is a coward who let his anger control him, and he should be put away for life.

APPENDIX B

ANIMALISTIC CLOSING STATEMENT (Study 1 & 2)

Tiffany Lindsay was a young college graduate with her entire life ahead of her. She was a mother of a beautiful one-year-old. The defendant took her future away from her. He **barbarically** beat and stabbed her, leaving her for dead, while her one-year-old child crawled on his dead mother's body.

And why? Because Tiffany refused to leave her boyfriend for him. The defendant was furious that she chose her boyfriend over him and he killed her because of it. He took a knife and he **savagely** stabbed her repeatedly in the face. He **crushed** her skull and he caused bruising on her brain. He stabbed her in the neck. He **tore apart** her carotid artery and broke the knife off in her neck. He slammed the handle of a knife into her face, breaking her nose and mouth.

Then he discarded Tiffany with her arms raised to try and protect herself, covered in her own blood.

He left, abandoning Tiffany's son with her dead body. He went home. He **prowled** around while coming up with an explanation for the horrific crime he had committed. He didn't get help and he didn't tell anyone what had happened. He knew she was beyond help. He knew she was already dead.

The defense claims that Tiffany's boyfriend Jared Walker killed her. But this simply is not plausible. There is no evidence to show that Jared was anywhere near the scene that night except for the defendant's story—a desperate man trying to throw us off his scent. If Jared had showed up and attacked Tiffany and the defendant, how did the defendant escape? Why did he leave Tiffany to Jared's wrath? Why didn't he get help? Ladies and Gentlemen, this **monster** didn't get help because he knew nobody could help Tiffany. Because the defendant knew he, not Jared, **brutally** killed her.

Finally, the defendant's DNA was found under Tiffany's fingernails and her blood was found on him. He is the only person who can be connected to the crime scene that night during or after her murder. The defendant had scratches on his face and stomach, which shows that the victim knew he was **an uncontrollable beast** and was trying to defend herself against him. One thing is perfectly clear. The defendant, Steven Dixon, **brutally** bashed in Tiffany Lindsay's head. He stabbed her repeatedly until she was dead. Find the defendant guilty of first degree murder. Ladies and Gentlemen, it's the only verdict the facts support, that the law requires, and that justice demands.

**Steven Dixon is a monster. He slaughtered Tiffany in front of her infant child like an animal with no remorse and discarded her like a piece of trash. This isn't someone capable of loving, this is a wild predator with no capacity for human emotion. Steven Dixon is backward, he doesn't have the capacity for morals, and he should be locked up like an animal for the rest of his life.**

Note: Alterations from the control closing statement have been highlighted to emphasize where animalistic language is being used.

APPENDIX C  
MECHANISTIC CLOSING STATEMENT (Study 1)

Tiffany Lindsay was a young college graduate with her entire life ahead of her. She was a mother of a beautiful one-year-old. The defendant took her future away from her. He **inhumanely** beat and stabbed her, leaving her for dead, while her one-year-old child crawled on his dead mother's body.

And why? Because Tiffany refused to leave her boyfriend for him. The defendant was furious that she chose her boyfriend over him and he killed her because of it. He took a knife and he **coldly** stabbed her repeatedly in the face. He **mercilessly** beat her skull and he caused bruising on her brain. He stabbed her in the neck. He **methodically** severed her carotid artery and broke the knife off in her neck. He slammed the handle of a knife into her face, breaking her nose and mouth.

Then he **callously** left Tiffany with her arms raised to try and protect herself, covered in her own blood.

He left, abandoning Tiffany's son with her dead body. He went home. As if **on autopilot**, Steven Dixon came up with an explanation for the horrific crime he had committed. He didn't get help and he didn't tell anyone what had happened. He knew she was beyond help. He knew she was already dead.

The defense claims that Tiffany's boyfriend Jared Walker killed her. But this simply is not plausible. There is no evidence to show that Jared was anywhere near the scene that night except for the defendant's story—a desperate man trying to throw us off his trail. If Jared had showed up and attacked Tiffany and the defendant, how did the defendant escape? Why did he leave Tiffany to Jared's wrath? Why didn't he get help? Ladies and Gentlemen, this **unemotional, detached** killer didn't get help because he knew nobody could help Tiffany. Because the defendant knew he, not Jared, **heartlessly** killed her.

Finally, the defendant's DNA was found under Tiffany's fingernails and her blood was found on him. He is the only person who can be connected to the crime scene that night during or after her murder. The defendant had scratches on his face and stomach, which shows that the victim knew he was **cold and unfeeling**, and was trying to defend herself against him. One thing is perfectly clear. The defendant, Steven Dixon, **bashed in Tiffany Lindsay's head**. He stabbed her repeatedly until she was dead. He was **impersonal and technical** with his execution. Find the defendant guilty of first degree murder. Ladies and Gentlemen, it's the only verdict the facts support, that the law requires, and that justice demands.

Steven Dixon is a cold hearted killing machine whose blood runs cold as ice. This **emotionless killer** beat a beautiful young woman to death in front of her infant child. No one capable of human emotion should be able to perform such harsh, **merciless attacks**. This man is cold, detached, and lacks human morals. A menace to society, whose **automatic response is cold blooded murder**. He needs to be put away forever.

Note: Alterations from the control closing statement have been highlighted to emphasize where mechanistic language is being used.



APPENDIX D

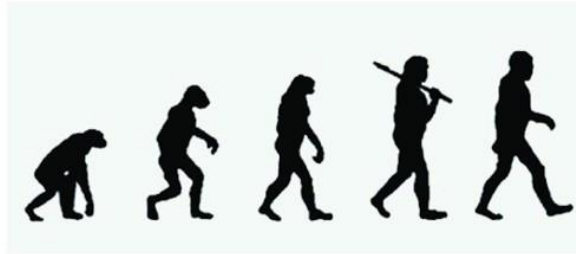
STUDY 1 MEASURES

## Open-Ended Response Measure

Please write at least a few sentences describing your first impressions of the defendant Steven Dixon.

### Blatant Dehumanization (animalistic)

People can vary in how human-like they seem. Some people seem highly evolved, whereas others seem no different than lower animals. Using the image below as a guide, indicate using the sliders how evolved you consider each person listed to be. All the way to the left would be the least evolved and all the way to the right would be most evolved:



Defendant:  
Michael Harrison

### Blatant Dehumanization (mechanistic)

People can vary in how human-like they seem. Some people seem highly evolved, whereas others seem no different than objects or machines. Using the image below as a guide, indicate using the sliders how evolved you consider each person listed to be:



Defendant: Steven  
Dixon

### Dehumanizing Traits Scale

We understand that the case information provided is rather limited, but to the best of your ability please rate how much you perceive the defendant Steven Dixon to possess the following traits:

	None at all	A little	A moderate amount	A lot	A great deal
Primitive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impulsive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coarse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Untamed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uncivilized	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Superficial	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Passive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Submissive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dispassionate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apathetic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Primary Emotions Measure

To what degree do you believe the defendant Steven Dixon to be capable of feeling the following emotions:

	Not at all capable	A little capable	Moderately capable	Very capable	Extremely capable
Happiness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sadness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pleasure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Excitement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regret	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Note: A discrepancy with this scale was identified post data-collection, where Rage should be included on the Primary Emotions Scale and Regret should be included on the Secondary Emotions Scale. For the calculations of each scale, I included Rage with Primary Emotions and Regret with Secondary Emotions.

## Secondary Emotions Measure

To what degree do you believe the defendant Steven Dixon to be capable of feeling the following emotions:

	Not at all capable	A little capable	Moderately capable	Very capable	Extremely capable
Compassion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bitterness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tenderness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hope	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shame	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Note:* A discrepancy with this scale was identified post data-collection, where Rage should be included on the *Primary Emotions Scale* and Regret should be included on the *Secondary Emotions Scale*. For the calculations of each scale, I included Rage with Primary Emotions and Regret with Secondary Emotions.

## Agency Measure

Compared to the average person, how much is Steven Dixon capable of

	Not at all capable	A little capable	Moderately capable	Very capable	Extremely capable
Self control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anticipating the consequences of his actions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acting morally	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To ensure you're paying attention please choose the 'Very Capable' option listed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Experience Measure

Compared to the average person, how much is Steven Dixon capable of experiencing

	Not at all capable	A little capable	Moderately capable	Very capable	Extremely capable
Pleasure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotions like fear or joy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Desire	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Refined emotions like guilt or shame	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Sentencing Measure

Imagine you're a juror for this case and you've been asked to decide on a verdict. Knowing that the defendant was found guilty, please choose from the following options:

- Life in prison
- The death penalty

### Sentencing Confidence Measure

How confident are you that the sentence you chose for the defendant is the correct sentence?



### Psychological Rehabilitation Measure

To what degree do you think the following would be effective in helping the defendant Steven Dixon:

	Not effective at all	Slightly effective	Moderately effective	Very effective	Extremely effective
Psychological Rehabilitation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Death Qualification Measure

Imagine that you are called to serve as a juror in a real case in which the prosecutor has asked for the death penalty.

Which statement below expresses your position on the death penalty?

- I would never vote to impose the death penalty
- I would consider voting to impose the death penalty in some cases.

APPENDIX E

STUDY 2 MEASURES

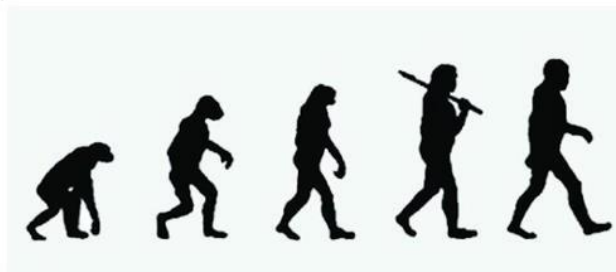
### Open Ended Responses

Please write at least a few sentences describing your first impressions of the defendant Michael Harrison.

Please write at least a few sentences describing how you felt while reading the prosecuting attorney's closing statement.

### Blatant Dehumanization

People can vary in how human-like they seem. Some people seem highly evolved, whereas others seem no different than lower animals. Using the image below as a guide, indicate using the sliders how evolved you consider each person listed to be. All the way to the left would be the least evolved and all the way to the right would be most evolved:



Defendant: Michael Harrison	<input type="range"/>
Prosecuting Attorney	<input type="range"/>

### Animalistic Traits Measure

We understand that the case information provided is rather limited, but to the best of your ability please rate how much you perceive the defendant Michael Harrison to possess the following traits:

	Not at all	A little bit	A moderate amount	A lot	A great deal
Primitive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impulsive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Untamed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uncivilized	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Aggressive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Primary Emotions Measure

To what degree do you believe the defendant Michael Harrison to be capable of feeling the following emotions:

	Not at all capable	A little capable	Moderately capable	Very capable	Extremely capable
Happiness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sadness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pleasure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Excitement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Secondary Emotions Measure

To what degree do you believe the defendant Michael Harrison to be capable of feeling the following emotions:

	Not at all capable	A little capable	Moderately capable	Very capable	Extremely capable
Compassion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bitterness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tenderness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regret	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hope	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shame	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



### Sentencing Measure

#### Sentencing

Imagine you're a juror for this case and you've been asked to decide on a sentence. Knowing that the defendant was found guilty, please choose from the following options:

- Life in prison
- The death penalty

### Sentencing Confidence Measure

How confident are you that the sentence you chose for the defendant is the correct sentence (ranging from 0% confident in your decision to 100% confident in your decision)?



### Psychological Rehabilitation Measure

To what degree do you think the following would be effective in helping the defendant Michael Harrison?

	Not effective at all	Slightly effective	Moderately effective	Very effective	Extremely effective
Psychological Rehabilitation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

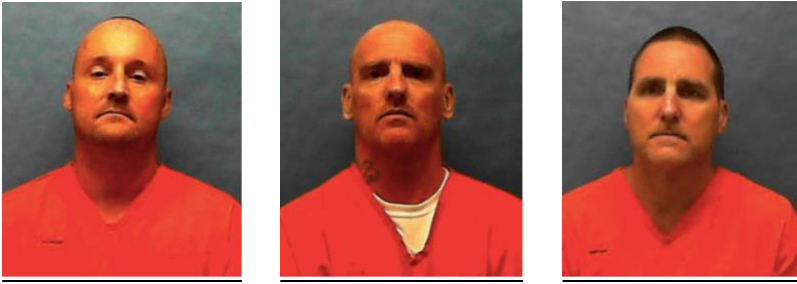
### Self Report Emotions Measure

Think back to when you were reading the Prosecuting Attorney's closing statement. Please indicate below how much you felt the following emotions while reading the closing statement:

	Not at all	A little	A moderate amount	A lot	A great deal
Anger	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disgust	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contempt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anxiety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX F  
DEFENDANT MUGSHOTS

STUDY 1 (The Ledger, n.d.)



STUDY 2 (AZ Central, 2023)

