ABSTRACT

This study examined whether dehumanization-type stereotypes acted as a mediator in the relationship between essentialist thinking and punishment given to Blacks and Asians. White participants were selected for inclusion in the study primarily to understand interracial perceptions. Participants completed a three-part survey including measures assessing essentialist thinking, endorsement of stereotypes according to racial groups, and assigning punishment to racial group members. It was predicted that animalistic dehumanization would impact Blacks while mechanistic dehumanization would impact Asians in the administration of punishment. While the latter claim was supported, Blacks were impacted by neutral dehumanization. These findings were discussed using essentialism and dehumanization frameworks. Implications for the findings were discussed within the context of the criminal justice system and educational settings.

Dehumanization-type Stereotypes as a Mediator between Generalized Racial Essentialism and

Punishment

by

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A Thesis

Presented to the Faculty of Mount Holyoke College

in partial fulfillment of the requirements

for the degree of Bachelor of Arts

with Honors

Department of Psychology and Education

Mount Holyoke College

South Hadley, Massachusetts

ACKNOWLEDGEMENTS

I would like to thank my thesis advisor, John Tawa, for guiding me through this project and being available to assist me whenever I encountered difficulties. Thank you kindly for your patience and willingness to work with me. Thank you to Jen Matos and Lucas Wilson for being part of my thesis committee.

I want to also thank Cheryl Lavigne and Janelle Gagnon for providing great instruction on the thesis process as well as for keeping me focused and motivated.

Lastly, thank you to Mr. and Mrs. Harap for graciously providing the financial support I needed to complete my research.

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INTRODUCTION

To be a part of society, particularly in the United States, one is in the position of subscribing to certain social categories such as race and political affiliation. These categories serve to group individuals based on their seemingly shared characteristics. Once in those categories, members of the dominant group and those grouped into the same category may find these unions to be natural, in other words that the grouping was supposed to occur. If the grouping is believed to be natural, then one can assume there exists an essence, or underlying factor, that binds all its members to the group.

This underlying factor is psychological essentialism, the lay belief that every being possesses innate qualities that define its existence, thus giving each being its meaning (Chao & Kung, 2015; Chen & Ratliff, 2018; Rothbart & Taylor, 1992). Those underlying qualities are its essence, which may be initially difficult to describe (e.g., what makes a cat, a cat?). However, in place of a description, the lay public assumes there is something that holds beings within a group together, which is the essence placeholder (Medin & Ortony, 1989). Using cats as an example, one may not be able to articulate what a cat's essence is, but one believes that cats possess an essence that makes them a cat. Lay beliefs are useful as the public can act as scientists to generate theories to better understand their world and gain meaning (Chao, Hong, & Chiu, 2013). Psychological essentialism is an extension of this sense making by perceiving or observing qualities in people and deriving significance from them. As the lay public engage with psychological essentialism, there are some assumptions that accompany essentialist thinking: that groups or categories, as well as their attributes are real and these categories have distinct boundaries meaning that someone is either in one category entirely or another, but not both (Gelman, 2013).

Two conceptual pillars of psychological essentialism, put forth by Roets and Van Hiel (2011), are essentialist entitativity (EE) and essentialist naturalness/natural kindness (EN). EE represents a school of thought in which people believe social groups have core characteristics that make group members alike, possessing "inductive potential" (Rothbart & Taylor, 1992), or the ability to make inferences about those individuals. Rooted in EE is the concept of entitativity, the degree of perception that members of a group are a cohesive unit (Spencer-Rodgers, Hamilton, & Sherman, 2007). The degree that group members are believed to be highly entitative is influenced by group size, the frequency of contact between members, and the perception of common goals among group members (Hamilton, Sherman, Crump, & Spencer-Rodgers, 2009). On the other hand, EN is a set of beliefs that social groups are naturally occurring with discrete and clear boundaries that are unchangeable across time. EN stems from the concept of natural kinds which are "categories or taxonomic classifications into which particular objects may be grouped on the basis of shared characteristics"; some examples of kinds include the animal tiger and the fruit lemon (Koslicki, 2008, p. 789). For example, a tiger can be described as a four-legged animal with a tail and stripes on its body. However, a robot tiger can have the same appearance, but most people will not refer to the robot as a true tiger because the robot lacks an inner quality, an essence, that augments its outer appearance.

From an essentialist perspective, natural kind members share an essence, which can serve as a shared characteristic, that allows members to be placed in the same kind (Jylkkä, Railo, & Haukioja, 2009).

Psychological essentialist thinking is often applied to a variety of categories such as age, geographical region, and politics, but categories like race, gender, and ethnicity are more

salient (Haslam, Rothschild, & Ernst, 2000). For the purpose of this study, the category of interest is race.

Racial Essentialism

One subtype of essentialism is racial essentialism, which Chao, Hong, and Chiu (2013) refer to as the belief that racial groups are natural occurrences and each racial group is divided by biological and distinct qualities (Chao, Chen, Roisman, & Hong, 2007). In relation to race, EN rather than EE may be particularly applicable. One possible reason may be due to how race is applied to individuals and groups. As opposed to the category of political party for example, individuals are assigned to a specific (or multiple) race by social forces (generally Whites in positions of power; Smedley & Smedley, 2005) which is generally out of their control. As the decision is not their own, their membership is thought to be permanent and unalterable (Demoulin, Leyens, & Yzerbyt, 2006) which aligns with EN. Belonging to a political party, on the other hand, is based on criteria set forth by individuals who choose to join based on these criteria; therefore, those individuals and their groups are believed to share goals and interests and may thus be better explained by EE. This is not to say that EE is not also an important or well-used line of thinking in relation to race. In a study of college students' beliefs about race, Tawa (2018) found that among a sample of 575 participants, there was a 33% prevalence rate for beliefs in 'behavioral essentialism' (p. 152). Behavioral essentialism was described as the belief in race as "real entities that possess behavioral attributes and minimal appreciation of variability… within the racial group" (p. 150), which echoes the sentiments of EE. It is important to note that Essentialist Entitativity and Essentialist Naturalness, though presented as separate concepts, are not mutually exclusive. The current study centers in part on Generalized Racial Essentialism, which is the shared nature that is proposed to exist between EE and EN as

it relates to lay beliefs about racial groups. This term stems from Hodson and Skorska (2015) who first introduced Generalized Essentialism, or the covariance between EE and EN. Furthermore, the following sections will explore the far-reaching implications of Generalized Racial Essentialism which include dehumanization, stereotypes, and punishment, the remaining focal points of the study.

Consequences of racial essentialism

Studies examining the effects of racial essentialism on intergroup behavior have found essentialism to be directly related to stereotyping (Bastian & Haslam, 2006), prejudice (Hodson & Skorska, 2015; Roets & Van Hiel, 2011), and greater acceptance of racial disparities (Williams & Eberhardt, 2008). For example, in their study, Bastian and Haslam (2006) sought to determine if there was an association between possessing essentialist beliefs and stereotype endorsement. Participants completed newly-developed scales concerning beliefs around immutability (the ability for someone to change their characteristics); biological basis (human attributes are based on biology); discreteness (people are categorized into distinct groups); and informativeness (inferences are made about a person once knowledgeable of their basic qualities; p. 230). For each scale, participants rated their agreement on statements such as "Everyone is either a certain type of person or they are not" (p. 230). Participants were then asked to rate their awareness and endorsement of certain group stereotypes of social categories including females, Japanese people, and lawyers. They found that there existed positive correlations between the scales and stereotype endorsement of positive and negative stereotypes. Specifically, the Immutability, Biological Basis, and Informativeness scales were strong predictors of stereotype endorsement, independent of the others; the Discreteness scale was a marginal predictor. The concept of immutability, possessing a biological basis, and having

discreteness fall under the theoretical framework of EN, while informativeness falls under the theoretical framework of EE.

Focusing exclusively on entitativity, Effron and Knowles (2015) studied the impact of ingroup entitativity (i.e. perceiving one's group as possessing common traits and goals) and perceiving another group as entitative on outgroup bias (e.g. expressing prejudiced attitudes toward a group one is not part of). In their first study, participants were asked to rate the level of entitativity of several racial/ethnic groups: Whites, Blacks, Asians, and Hispanics. Participants then completed a measure to assess how socially acceptable they found acts of prejudice and discrimination committed by the racial groups against another (e.g., "How socially acceptable is it for a [Black/White/Hispanic/Asian] American to avoid shopping at stores owned by [Asian/Hispanic/White/Black] Americans?"; p. 237). The researchers found that when participants perceived a group to be high in entitativity (more-entitative), they judged prejudice and discrimination to be more socially acceptable. A more-entitative group was classified as a group with frequent interactions among its members; group members had the ability to influence each other; and possessed common goals. The researchers then conducted a series of studies investigating the impact of participants' perceptions of ingroup entitativity on expressions of prejudice, particularly against Blacks. Among non-Black participants who perceived their racial group to be more-entitative, more anti-Black prejudice was expressed. Among White participants specifically, those that perceived their group as more-entitative expressed more explicit anti-Black prejudice. An interesting finding was that Whites who perceived Blacks to be high in entitativity reported expressing less explicit prejudice.

Examining the combined impact of EN and EE on prejudice and racism, Hodson and Skorska (2015) were interested in the predictive power of the shared properties between EE and

EN on outgroup prejudices. In their first study, which involved reanalyzing data from Roets and Van Hiel (2011), the researchers found that EE and EN were significant predictors of prejudice as independent factors with R^2 values between .29 and .36. However, the shared variance was even stronger, predicting more than double the amount of variance (R^2 values between .64 and .85), which suggested an interaction effect between EE and EN in explaining prejudice. In their second study, outgroup prejudices were measured using the Modern Racism scale, a measure of the beliefs that Blacks are not victims of discrimination or other forces of oppression (McConahay, Hardee, & Batts, 1981). Similar results ensued: while EE and EN were strong independent predictors of modern racism towards Blacks, their shared variance explained more than twice the variance. Essentialism, both separated into its distinctive groups of thinking and its conjoined concept, serve an important role in stereotype endorsement and racism. However, more needs to be known about the potential increased predictive power of Generalized (Racial) Essentialism, as many studies investigate the concepts as unique approaches.

A couple of studies have specifically differentiated essentialist findings based on participant and target race. Looking particularly at Whites' perceptions of Blacks, the perception of high ingroup (White) entitativity was associated with high implicit prejudice leading to greater expressed prejudice toward Blacks; Whites who did not report high levels of ingroup entitativity tended to express less prejudice (Effron & Knowles, 2015). On the other hand, Williams and Eberhardt (2008) were interested in the influence of naturalness beliefs on interracial interactions among Whites, Blacks, Asians, and Hispanics. Possessing higher levels of a belief in race as a natural occurrence, or EN, was correlated with a greater acceptance of racial disparities (Williams & Eberhardt, 2008). Higher levels of naturalness beliefs were also correlated with lower motivation to seek out interracial friendships. These studies may serve to

provide some explanation for previous results reported regarding the racial attitudes of White and Asian college students. A commonality among participants was their preference for intraracial (i.e., within the same race), over interracial, interactions (Smith, Bowman, & Hsu, 2007). Furthermore, within the study done by Smith, Bowman, and Hsu (2007), Asian students felt less comfortable interacting with Blacks than Whites, though Whites felt less comfortable interacting with Asians.

The results from Smith et al. (2007) were paralleled beyond college student populations. One such study examined correlations between Whites' genetic conceptions of race and their attitudes toward Blacks (Jayaratne et al., 2006). Through telephone interviews, 600 participants were asked to rate their belief that racial differences such as intelligence and violent behavior are explained by genetics. Four ratings were used: 0 = *None*, 1 = *Very little*, 2 = *Some*, 3 = *A lot*, and 4 = *Just about all*. Researchers found that approximately half of the participants believed that genetics explained "very little" to "a lot" of racial differences on the traits. To assess their attributes, participants completed two measures: one assessing traditional racism (i.e., one's level of comfort with their child dating/marrying a Black person) and the other, modern racism (i.e., believing that Blacks are responsible for their lower social status). The construction of traditional racism for this study was based on genetics; in other words, Blacks as a racial category are naturally inferior to Whites and a White person marrying a Black person would serve as some violation of natural order. Scores for traditional racism ranged from 1 = *Not bothered at all* to 7 = *Very bothered,* with higher ratings indicating greater discomfort with their child being involved with a Black person. Participants with a higher level of belief in genetic explanations for racial differences were more likely to be bothered if their child were involved with a Black person. The construction of modern racism was based on the belief that Blacks

lack a proper work ethic and their lower social status is due to their own lack of trying rather than discrimination or racism (e.g., "If Blacks don't do well in life, they have only themselves to blame", p. 83). Scores ranged from 1 = *Strongly disagree* to 5 = *Strongly agree* with higher scores indicating greater levels of prejudice. Higher scores in genetic explanations were correlated with being more likely to agree with sentiments that Blacks are responsible for their social status.

This study, like Effron and Knowles (2015), demonstrated some of the ways that beliefs in EE and EN, as they relate to race, can translate into real-world behavior. Increased comfort in expressing prejudice and being dismayed by interracial relationships appear to represent one side of the problem. However, there exists another side whose real-world consequences extend outside of higher education and everyday homes and neighborhoods. One consequence is to deny the humanity of members of different racial groups, such as Asians and Blacks, who are the primary racial groups being investigated.

Dehumanization

Dehumanization is the process of denying individuals or groups of people aspects of humanness (Haslam & Loughnan, 2014). The process of dehumanization leads to human beings being described like animals or machines. To describe humans like animals is animalistic dehumanization, while describing humans like machines is mechanistic dehumanization. Additionally, dehumanization can take the form of infra-humanization, the process of stripping from humans their secondary emotions, the emotions only humans can feel and express such as jealousy (Leyens et al., 2000). Building on previous research on dehumanization, the current study assessed two specific types of dehumanization based on work from Haslam (2006),

animalistic and mechanistic, as a consequence of Generalized Racial Essentialism. As part of the conceptual framework, Demoulin et al.'s (2004) work on infra-humanization was included, though to a lesser degree.

The theoretical underpinnings that form animalistic and mechanistic dehumanization, as well as infra-humanization, will be discussed. These underpinnings include uniquely human traits, human nature attributes, and primary and secondary emotions. These concepts will be explained to understand how animalistic and mechanistic dehumanization, as well as infra-humanization, are conceptualized but were not directly measured constructs in the current study.

The denial of some aspects of humanness can include denying someone uniquely human attributes and characteristics that make up human nature (Haslam, 2006). Animalistic dehumanization is based on the concept of denying humans their uniquely human traits, and mechanistic dehumanization is based on the concept of denying humans their human nature characteristics. Uniquely human (UH) attributes are the aspects of human beings that separate us from animals. UH characteristics include possessing high levels of cognition, maturity, rationality, and self-control. On the other hand, human nature (HN) attributes focus on the characteristics that define human beings as essentially human. This can include attributes such as possessing depth, warmth, and individuality. In a review of dehumanization literature, Haslam (2006) made the distinction that UH characteristics had less of an essentialist nature compared to HN characteristics, and more to do with learning and culture. For example, someone who does not possess the UH characteristic of civility (e.g., being polite, having manners) is conceptualized as not having been taught how to be civil versus lacking the quality from birth. HN attributes have universal properties, found within all human beings, thus making HN essential. Denial of HN or UH characteristics thus represents two forms of dehumanization. As

UH characteristics reflect possessing culture and a higher level of rational thinking, denying these attributes to someone (or a group) is akin to their perception as being driven by primal instincts with little regard for morality, like animals; in the current study, this was referred to as animalistic dehumanization. HN attributes reflect possessing depth, the ability to be personable, and being an irreplaceable individual; denying these attributes formed the basis of mechanistic dehumanization in the current study. Infra-humanization is "the denial to an individual or group of some of the characteristics that make us human" and one key human characteristic is the ability to feel secondary emotions (Castano & Giner-Sorolla, 2006, p. 805). Primary emotions such as anger and fear are attributed to animals and humans alike, which makes these emotions universal, easy to identify, and do not require high levels of cognition in order to display (Demoulin et al., 2004). Secondary emotions such as shame and hope are reserved for humans; these emotions are not universally expressed, not easily observed, and require high levels of cognition to display. To deny secondary emotions to humans is to view them as below human or infra-human. Infra-humanization functions differently from animalistic and mechanistic dehumanization because the denial of emotions such as guilt or hope does not require viewing an individual or group as animals or automata. In the section that follows, previous research focusing on the potential effects of dehumanization, particularly the animalistic and mechanistic forms, will be discussed.

Outcomes of Dehumanization

Previous research suggests that groups such as Asians (e.g., Japanese and Chinese) are perceived as mechanistic, while Haitian, Mexican, Muslim, and Black populations are viewed as animalistic (Andrighetto, Baldissarri, Lattanzio, Loughnan, & Volpato, 2014; Bain, Park, Kwok, & Haslam, 2009; Goff, Eberhardt, Williams, & Jackson, 2008; Kteily & Bruneau, 2017). Though

Asians and Blacks are the focus of the current study, with Whites as a control group, it is important to recognize the variety of racial and ethnic groups that are impacted by animalistic and mechanistic dehumanization, respectively.

Animalistic dehumanization will be discussed first. Kteily and Bruneau (2017) investigated the impact of animalistic dehumanization within the context of the 2016 presidential election using Muslims and Mexican immigrants as the target groups. As part of the study, participants were asked to complete a series of measures. One measure assessed beliefs around blatant dehumanization (derived from animalistic dehumanization) which asked participants to rate how well words such as "savage" and "backward" applied to Mexican immigrants and Muslims. Additional measures assessed anti-immigrant attitudes (e.g., "All these illegals need to be deported", p. 89) and anti-Muslim policy support ("We should ban the opening of any new Mosques in this country", p. 89), modeled after policy proposals and opinions stated by some Republican candidates. Participants possessing blatant dehumanization beliefs toward Mexican immigrants were more likely to advocate measures to keep immigrants out of the United States such as restricting visas. Additionally, participants possessing blatant dehumanization beliefs toward Muslims were more likely to support measures designed to monitor Muslim communities (i.e. establish a database of Muslim communities) and restrict their faith. Black people have also been associated with animalistic dehumanization. Specifically, Blacks have been associated with being perceived as apes. This Black/ape association can increase justification for police use of violence against Blacks (Goff, et al., 2008), as well as predict increased police use of force against Black children (Goff, Jackson, Di Leone, Culotta, & DiTomasso, 2014).

Mechanistic dehumanization has been associated with Asian populations, particularly among Chinese (Bain, Park, Kwok, & Haslam, 2009) and Japanese people (Andrighetto et al.,

2014). Using an Anglo-Australian and Chinese sample, Bain, Park, Kwok, and Haslam (2009) investigated how the two groups attributed uniquely human (UH) and human nature (HN) traits to each other. As a remainder, the denial of UH traits is linked to animalistic dehumanization and the denial of HN traits is linked to mechanistic dehumanization. The researchers conducted three studies with the first two studies using college students as participants. In the first study, participants were asked to rate how typical certain traits such as being relaxed and insecure (using the distinctions between UH and HN; Haslam, Bain, Douge, Lee, Bastian, 2005) were for Chinese and Australian students at their university. Participants also completed a humanness measure to assess whether endorsement of traits were closely related to UH or HN. Anglo-Australian participants attributed more HN traits to Australian rather than Chinese students, while Chinese participants attributed relatively similar levels of HN traits to Australian and Chinese students. The second study mirrored the first except the target groups were Australians and Chinese people in the general population. Anglo-Australian participants had a slightly stronger attribution of HN traits to Australians versus Chinese people. The final study used an implicit measure to determine if participants associated Australians or Asians with either type of humanness (UH or HN) or an animal or robot. Chinese participants held a greater association of Asians with UH traits than Australians but did not also associate Australians with animals. Anglo-Australian participants held a closer association of HN traits with Australians and closely associated Asians with robots.

Andrighetto et al. (2014) investigated both animalistic and mechanistic dehumanization among an Italian undergraduate sample. Researchers were interested in responses to giving aid to people from Haiti and Japan, two groups impacted by earthquakes. Participants completed animalistic and mechanistic dehumanization scales assessing their perceptions of Japanese and

Haitian people (e.g., "Haitians [Japanese] are cold"; p. 577). They also completed an empathy

measure after reading a text discussing the plight of Haitian and Japanese people following the

earthquake, as well as a measure assessing their willingness to provide help such as raising

awareness through petitions. They found that animalistic dehumanization was higher among

perceptions of Haitians, which predicted less empathy or willingness to help (through empathy).

Mechanistic dehumanization was significant among perceptions of Japanese people, which

predicted less empathy or willingness to help (through empathy). For both groups, empathy

increased a willingness to help.

      With these examples, it begs the question: How are racial essentialism and

dehumanization related? The literature suggests that racial essentialism and dehumanization are

linked concepts. As previously mentioned, denying someone uniquely human characteristics is

linked to animalistic dehumanization. Because UH characteristics are conceptualized as not

having an essentialist quality, what separates an animalistically dehumanized group from the

group targeting them is the fact that there exists the perception of a group difference. Human

Nature characteristics can be essentialized. However, drawing from the critiques of Smith

(2014), within animalistic dehumanization, to liken an individual or group to beings other than

humans is to deny their human essence; instead, their essence is likened to that of animals such

as apes or worms. Thus, giving someone an ape essence, for example, is to "essentially" perceive

them as an ape. The same can be applied to HN attributes and mechanistic dehumanization, as

well as infra-humanization. To deny a human essence and liken someone to machines or an

infra-human is to deny their humanness, vis-à-vis to dehumanize them. Rejecting someone's

humanity is to view their core characteristics as being nonhuman; their natural kindness leads

away from that of humans, and their group boundaries are distinct and unchangeable so that they cannot be considered humans.

Furthermore, for dehumanized groups, the stereotypes levied against them will reflect their lack of humanity. For social groups, stereotypes are a set of traits assigned to its members, often by people who belong to a different group, because they have been determined to be a unified entity (Fiske, 1998; Hamilton, Sherman, Crump, & Spencer-Rodgers, 2009). Unity can mean not only shared traits but that those traits are central to the group, and the individual members comprise an unchangeable and distinct group. In this manner, social groups, including groups classified by race, take on an essentialist nature capable of having inferences (e.g., stereotypes) made about them. Previous research by Bastian and Haslam (2006) supports this claim, as they investigated the connection between essentialist beliefs and stereotype endorsement. The researchers found that participants who possessed (generalized) essentialist beliefs (e.g., a combination of Immutability and Informativeness beliefs) were more likely to endorse negative and positive stereotypes from a variety of groups (e.g., Jewish people, females, doctors). For racial groups, their nature is often likened to animals or machines, so their stereotypes often reflect their lack of humanity; this will be referred to as dehumanization-type stereotypes, a term created for this study. As previously stated, dehumanization can translate into a group being denied assistance in times of crisis (Andrighetto et al., 2014); being subjected to social exclusion (Kteily & Bruneau, 2017); and when violence is inflicted upon them, that group can be denied their full humanity and emotions (Castano & Giner-Sorolla, 2006). From Generalized Racial Essentialism to dehumanization and some of its outcomes, the current study proposed that dehumanization-type stereotypes act as a mediator. Specifically, stereotypes that reflect animalistic and mechanistic dehumanization, respectively, serve as a mediator in the

relationship between Generalized Racial Essentialism and one potential outcome of dehumanization, punishment.

Dehumanization and Punishment

There have been a few studies that have investigated the impact of dehumanization beliefs on the administration of punishment. In a review of 153 death penalty-eligible cases in Philadelphia, Pennsylvania, Goff, Eberhardt, Williams, and Jackson (2008) found that cases with Black defendants were presented in the media using more apelike words (e.g., beast, hunt, slaughter) than those with White defendants. In a more direct assessment, Vasquez, Loughnan, Gootjes, and Weger (2014) conducted an experiment to understand how animalistic dehumanization influences sentencing recommendations. Participants were required to read a description of a violent crime that either contained animalistic (i.e., roared, savage) or non-animalistic (i.e., confronted, shouted) words to portray the perpetrator. Then, participants, acting as a juror, provided their recommendations for sentencing, ranging from 0 to 10 years of incarceration. Those who read the animalistic description recommended longer sentences by one to two years, compared to those who read the non-animalistic description. Participants also believed that the perpetrator in the animalistic description would be more likely to reoffend, and this served as a mediator between the description type and sentencing recommendation.

Though it may not be presented as punishment, refusing to assist Haitians and Japanese people who are perceived to be animalistic and mechanistic, respectively, can be conceptualized as a consequence of their perceived lack of humanness (Andrighetto et al., 2014). The same can be applied to Mexican immigrants and Muslims, who were animalistically dehumanized, with study participants supporting punishment-like measures such as building a border wall,

detention, and community surveillance (Kteily & Bruneau, 2017). It is important to understand how punishment is applied in settings that do not involve politics or the court system, such as within universities.

The current study sought to accomplish multiple goals. The first goal was to provide further support for the utility of Generalized Essentialism, as opposed to Essentialist Entitativity and Essentialist Naturalness separately. This goal folded into providing evidence for the usefulness of Generalized Essentialism in explaining conceptions of racial groups along essentialist lines. Most importantly, the current study sought to establish whether dehumanization-type stereotypes, stereotypes rooted in either animalistic or mechanistic dehumanization, played a role in the relationship between Generalized Racial Essentialism and the administration of punishment, the primary outcome. Asians and Blacks were the primary target groups for this study; Whites served as the control group. Based on previous research, it was theorized that Asians would be impacted by mechanistic dehumanization, while Blacks would be impacted by animalistic dehumanization.

Hypotheses

1. High levels of Essentialist Entitativity will be positively related to participants selecting traits consistent with animalistic dehumanization for Blacks.

2. High levels of Essentialist Naturalness will be positively related to participants selecting traits consistent with mechanistic dehumanization for Asians.

3. Animalistic/Mechanistic dehumanization stereotypes will act as a mediator in the relationship between Essentialist Entitativity/ Essentialist Naturalness, respectively, and the administration of punishment.

4. High levels of Generalized Racial Essentialism will be more positively related to, compared to Essentialist Entitativity, selecting animalistic dehumanization stereotypes for Blacks.

5. High levels of Generalized Racial Essentialism will be more positively related to, compared to Essentialist Naturalness, selecting mechanistic dehumanization stereotypes for Asians.

6. Animalistic/Mechanistic dehumanization stereotypes will act as a mediator in the relationship between Generalized Racial Essentialism and the administration of punishment.

METHOD

Participants

Participants were sampled from Amazon's Mechanical Turk, an online platform where people, referred to as Workers, are paid to complete tasks such as completing surveys which were used in the current study (Buhrmester, Kwang, & Gosling, 2011). IRB approval was granted prior to data collection. Potential participants were required to be located in the United States and racially identify as White. Participants were not informed of the latter criterion, however only responses from mono racially identified Whites were included in the sample. Of the 978 potential participants, approximately 636 were eligible for the study. Of the eligible participants, 455 took the survey but only 283 completed the survey. The current sample only included responses from completed surveys.

The current sample (100% White) includes participants between the ages of 19 and 72 ($M = 39.15$, $SD = 11.93$). The vast majority (85.5%) of participants were not undergraduate or graduate students, with 104 (36.7%) having completed their bachelor's degree. Almost half (48.1%) of the participants reported their socioeconomic status as middle class. Participants who reported their socioeconomic status as working class constituted 18.7% of the sample, 21.2% were lower middle class, and 12% were upper middle class. One participant reported being upper class, so this participant was placed into the upper middle-class group. Three participants reported having some high school education, so they were recoded into the participants with high school diplomas group. Seven participants reported having a professional or doctoral degree, so they were recoded into the group of participants possessing a master's degree.

Measures

Generalized Racial Essentialism was assessed using modified versions of the Essentialist Entitativity (EE) and Essentialist Naturalness (EN) scales used in Roets and Van Hiel (2011) (see Appendices A and B) . The EE scale assessed participants' beliefs of whether racial groups have core characteristics that make racial group members alike to one another. An example item from the EE scale is, "Members of social groups are usually very similar." The scale consists of 12 items with three subscales: uniformity, informativeness, and inherence. As reported by the original researchers, the uniformity, informativeness, and inherence subscales yielded loadings ranging from 0.37 to 0.75 on the EE structure. The EN scale assessed participants' beliefs that racial groups are naturally occurring with discrete and unchangeable boundaries. An example from the EN scale is, "You belong to a particular social group or you don't, there is no in-between." The scale consists of 24 items with six subscales: immutability, naturalness, discreteness, necessity, stability, and exclusivity. All the subscales, excluding the exclusivity subscale, yielded loadings ranging from 0.25 to 0.61, which were reported by Roets and Van Hiel (2011). Both scales were modified from a seven-point scale to a six-point scale to prevent participants from selecting a middle/neutral option. The original scales used the phrase "racial groups;" this was replaced with the race-neutral phrase "social groups" in the current study. In addition, slight changes were made to the sentence structure for clarity. Items were rated from 1 = *Completely disagree* to 6 = *Completely agree*.

Dehumanization-type stereotypes were assessed using the diagnostic ratio (DR) approach (McCauley & Stitt, 1978). The DR approach is a likelihood ratio that measures the odds that a group (e.g., a social group) is more likely to be perceived as possessing various traits compared to another (Martell & Desmet, 2001; McCauley & Stitt, 1978). If the odds for a group

outweigh those of another, then the trait is classified as a stereotype. This measure is used, as

opposed to Likert-type scales, because the DR approach better reflects the nature of stereotypes:

that simply being aware of individual's membership in a group (or groups) allows for

assumptions to be made about what stereotypical behavior will be presented (Martell & Desmet,

2001). The DR approach is also useful for assessing perceptions of positive and negative

stereotypes. An example of a DR can be found in Figure 1. A likelihood ratio was created using

the trait 'cold', comparing the probability of Blacks or the general population possessing this

trait. For each trait, participants were instructed to "Determine what percentage, from 0 to 100%,

of the following group possesses these traits."

$$\frac{p(cold|Blacks)}{p(cold|General\ population)}$$

Figure 1. Diagnostic Ratio example using the trait 'cold'.

A total of 18 traits were used: 6 represented animalistic dehumanization, 6 represented

mechanistic dehumanization, and 6 were designated as neutral dehumanization (see Appendix

C). The traits were adapted from the model of dehumanization presented in Haslam (2006)

which delineates between uniquely human (UH), linked to animalistic dehumanization, and

human nature (HN), linked to mechanistic dehumanization characteristics. For example, the trait

'ignorant' was categorized as an animalistic dehumanization item. Ratings for each trait ranged

from 0 to 100% in ten-percent increments. Four groups were assessed: Whites, Blacks, Asians,

and the General U.S. population. Participants provided odds ratios for all four groups and 18

traits.

Punishment was assessed by requesting participants to assign punishments after reading a scenario. Depending on the scenario, participants were asked to role-play the part of a prison warden or college dean. Each scenario contained an "actor" with an attached name and five punishments (see Appendix D). The actors are high-definition headshots of women which originated from the Chicago Face Database (Ma, Correll, & Wittenbrink, 2015). In the creation of this database, each headshot was rated on multiple factors but the two of interest to the current study were expressive neutrality (i.e., displaying little to no facial expression) and racial prototypicality, the degree to which an individual's physical features are believed to "fit" their racial group (e.g. wide lips and nose for Blacks; Blair, Judd, Sadler, & Jenkins, 2002). Headshots rated highest in neutrality and racial prototypicality were selected for inclusion in the study. Twelve headshots were selected with each racial group (Asians, Blacks, Whites) containing four pictures. The prison warden scenario was set in a medium-security prison where a prisoner was involved in a physical altercation, theft, and other infractions. The college dean scenario took place in a medium-sized college where a student was involved in cheating, bullying, and other college violations. For each punishment presented to the actor, participants were asked to rate the likelihood that they would administer the option (e.g., "How likely are you to confiscate her leisure items [example: books, magazines]?"). Ratings ranged from 1= *Not likely at all* to 6 = *Very likely*. The severity of punishments ranged from 1 = *Least Severe* to 5 = *Most Severe;* participants were not made aware of the severity of punishments. Two scenarios per racial group were presented to each participant. A total of 12 scenarios were created. Participants were randomly placed in either Version A or B of the survey which varied in which scenarios were presented. Each participant responded to six scenarios. The scenarios in either version differed based on the picture, name, and description presented. For Version A of the survey, the order of

scenarios was Asian target/ College Dean role, White target/ Prison Warden role, Black target/ College Dean role, Black target/ Prison Warden role, White target/ College Dean role, and Asian target/ Prison Warden role. Version B of the survey presented the scenarios in the following order: Asian target/ College Dean role, White target/ Prison Warden role, Black target/ College Dean role, Asian target/ Prison Warden role, White target/ College Dean role, and Black target/ Prison Warden role. Each prison warden and college dean scenario were different from each other within and between both versions of the survey.

Procedure

All participants were selected from Amazon's Mechanical Turk. An online ad was posted asking Workers to complete a questionnaire to determine their eligibility for a survey on social group formation. The questionnaire was open to all Workers within the United States. The questionnaire included questions regarding age, race, and level of education. Eligible participants were those who only selected White (i.e., Non-Hispanic White, European, or European American) as their race; other questions were inconsequential to eligibility.

After screening responses, eligible participants were assigned a Qualification Type, a value from 1 through 4 which gave participants access to one of the two versions of the survey. The only difference between the survey versions was the content of the scenarios which was used to assess the punishment variable. To access the survey, participants opened a link that directed them to Psychdata.com, the host website for the surveys. The first page was the Informed Consent page (see Appendix E), which participants had to consent to participate in if they chose to continue. The first section, referred to as Task 1, was the EE and EN scales. For each statement, participants were asked to rate their agreement from 1 = *Completely disagree* to

6 = *Completely agree*. As the phrase "racial groups" was replaced with "social groups," a definition was provided. The second section, Task 2, was the diagnostic ratio measure. Participants rated each group (Asians, Blacks, Whites, General U.S. population) on a separate page. The third and final section involved the scenarios. Each scenario stated the role (college dean or prison warden), a picture of the actor, and a short text. After completing each scenario, particularly were directed to the debriefing page and thanked for their participation.

Data Analysis Plan

Prior to conducting the preliminary and primary analyses, participant responses were examined for any anomalies using the Mahalanobis distance (MD) and long strings (LS) index. The LS index was used to find any participants who provided the same response (e.g., selecting 1 = *Not likely at all*) 10 or more times in a row. One participant was determined to have responded to more than 10 questions with the same response; this participant was removed from the dataset. The MD is a multivariate distance metric that measures the distance between two points. Calculating the MD is useful for determining the presence of outliers. The current study utilized the MD to find any participants who were responding to the survey questions in an unusual manner, such as interchanging between selecting the highest and lowest ratings. A distance score of 71, equal to being in the 95th percentile, was generated and any participant who scored higher was subject to manual inspection and exclusion from data analysis. Participants who were in the 95th percentile or higher were manually examined. One participant had an MD score of 108 and upon further inspection found that this person completed the survey in 397 seconds (6.62 minutes). This participant was removed from the dataset.

Cronbach's alpha reliability estimates were calculated for the Essentialist Entitativity and Essentialist Naturalness scales separately, as well as the Generalized Essentialism scale which is the combination of the EE and EN scales. Cronbach's alpha estimates were calculated for the diagnostic ratio scores and raw scores for each trait and according to dehumanization type (i.e., animalistic, mechanistic, neutral) and race (i.e., Blacks, Asians, Whites). These reliability estimates were calculated to justify the potential factor model.

For the stereotype measure, the current study was based on a theoretical framework that classified 18 traits as either animalistic, mechanistic, and neutral in nature (see Appendix C). Exploratory factor analysis (EFA) was used in SPSS version 25 to determine whether the classification of traits followed a pattern and were related to the three dehumanization groups. Confirmatory factor analysis was used in R to support the theoretical framework. Six latent variables were correlated with each other: "selfish" with "impulsive" (animalistic traits); "strict" with "identical" (mechanistic traits); and "open-minded" with "easy-going" (neutral traits).

For each racial group, trait ratings were recoded into probabilities from 0 to 1 which were divided by the probabilities given to the General U.S. population and given a +1, to avoid scores of 0. Multivariate analyses of variance (MANOVA) were used to determine how essentialism scores and dehumanization-type stereotype ratings differed based on socioeconomic status, education level, and college student status. Correlations were used to determine how essentialism scores and dehumanization-type stereotype ratings differed based on participant age. Correlations were also used to determine the relationship between essentialism scores and dehumanization-type ratings among Blacks and Asians. For theoretical reasons explained in greater detail in the discussion section, the Essentialist Entitativity scale was modeled with animalistic dehumanization and the Essentialist Naturalness scale was modeled with mechanistic

dehumanization. Simple linear regression models were used to determine whether Generalized Essentialism was a stronger predictor than Essentialist Entitativity and Essentialist Naturalness, respectively, in predicting dehumanization-type stereotypes. The standardized coefficients were reported. The three-factor model was used to explore to what extent that the relationship between essentialist beliefs and punishments administered to Blacks and Asians were mediated by dehumanization-type stereotype ratings.

RESULTS

EFA

Using three randomly selected traits, "irritable", "dull", and "reckless", the diagnostic ratio scores across the racial groups were used to test for normality. Using the Shapiro-Wilk test, scores on these traits were determined to have non-normal distributions. Principal Axis Factoring (PAF) was used because of the data's non-normal distribution. PAF was used to determine the number of factors created from the traits.

Using the diagnostic ratio scores obtained from the stereotype questions referencing the general U.S. population group, PAF used all 18 traits. Oblique rotation (direct oblimin) was used as a rotation method due to the expectation that the factors would correlate based on the current study's theoretical model (Costello & Osborne, 2005). PAF suggested a three-factor model with eigenvalues over 1, which matched the theoretical model of the current study which included animalistic dehumanization, mechanistic dehumanization, and neutral dehumanization. A three-factor model yielded eigenvalues greater than 1, accounting for 7.12% of the variance. Examination of a scree plot showed that using more than three factors would account for less total variance.

The factor loadings of all 18 traits, using the diagnostic ratio scores in reference to the general U.S. population group, were examined using PAF with a three-factor model specified. The ratio scores were loaded at .30 and higher (see Table 1). Using the factor loadings and theoretical framework, four traits were dropped: "passive" (mechanistic), "sensitive" (neutral), "irritable" (neutral), and "shallow" (mechanistic). The four traits were dropped due to either low factor loadings or the trait loaded onto another structure that does not match the theoretical model. All traits designated as animalistic were retained. The factor loadings for the mechanistic structure, containing four traits, ranged from .45 to .79. The neutral structure, containing four traits, yielded loadings ranging from .67 to .75. All six traits comprising the animalistic structure yielded factor loadings ranging from .57 to .82.

Table 1

Factor loadings for traits from the general U.S. population group

	Animalistic	Neutral	Mechanistic
Ignorant	**.57**	-	.39
Passive	-	-	.40
Sensitive	-	.39	-
Crude	**.60**	-	.37
Cold	.38	-	**.49**
Open-minded	-	**.75**	-
Selfish	**.79**	-	-
Strict	-	.42	**.45**
Easy-going	-	**.72**	-
Impulsive	**.82**	-	-
Identical	-	-	**.62**
Outgoing	-	**.72**	-
Shallow	.82	-	-
Empathetic	-	**.67**	-
Reckless	**.70**	-	-
Dull	-	-	**.79**
Irritable	.46	-	.38
Immature	**.76**	-	-

Note. Retained traits are in bold.

Confirmatory factor analysis was employed using the three-factor model and the retained traits. The test statistics, the Comparative Factor Index (CFI), Tucker Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR) were examined. CFI and TLI scores range from 0 to 1 and should be higher than .90 for good model fit (Browne & Cudeck, 1993; Jackson, Gillaspy, & Purc-Stephenson, 2009). Modification indices were included in the model to improve model fit which involved correlating error variances (i.e., traits) within the same factor. Three indices were constructed: "selfish" with "impulsive" (animalistic traits); "strict" with "identical" (mechanistic traits); and "open-minded"

with "easy-going" (neutral traits). The modified three-factor model yielded a CFI of .91 and a TLI of .89, which were adequate. The RMSEA is an absolute fit index with values ranging from 0 to 1. RMSEA values that are ≤ 0.05 indicate good model fit and values between 0.05 and 0.08 indicate reasonable fit (Browne & Cudeck, 1993). SRMR is another fit index from 0 to 1 with values of 0.08 and below considered acceptable model fit (Hu & Bentler, 1999). The modified model yielded an RMSEA of .095 and an SRMR of .091. Though these values are high, the model was still considered acceptable for the current study.

Internal Reliability

Cronbach's alphas were calculated for the Essentialist Entitativity, Essentialist Naturalness, and Generalized Essentialism scales. The EE scale held together strongly (α = .87), and to a lesser extent the EN scale yielded good reliability (α = .84). The Cronbach's alpha for the Generalized Essentialism scale yielded the strongest reliability (α = .89).

Reliability estimates were also calculated for the diagnostic ratio and raw scores for the racial groups (including the General U.S. population group) using the retained 14 traits. The diagnostic ratio scores were computed by dividing the probability (from 0 to 1) of members of a racial group (e.g., Whites) possessing a trait (e.g., "selfish") by the probability of members of the general U.S. population possessing the same trait. The raw scores were calculated similarly to the method used for the diagnostic ratios without dividing by the probability from the general population. Estimates for the ratio scores, categorized by race and dehumanization type, were consistently lower than the raw scores (see Table 2). Cronbach's alphas for ratio scores ranged from .31 to .82, while the raw scores ranged from .67 to .91. As a result, analyses were conducted using the raw scores. The raw scores can be interpreted as how much participants

endorsed the traits for each racial group and the probabilities may be compared to those of the other racial groups, like the diagnostic ratios. For example, if a participant believed that the probability of Blacks possessing the trait "cold" is 0.40 (40%) and believes that Asians have a probability of 0.70 (70%), then it is assumed that the participants endorses Asians as being colder than Blacks.

Table 2

Cronbach's alpha reliability estimates for diagnostic ratio and raw scores

	Mechanistic-Raw	Mechanistic-Ratio
PEW	.75	-
BLK	.67	.48
WHT	.76	.43
ASN	.75	.63
	Animalistic-Raw	Animalistic-Ratio
PEW	.91	-
BLK	.92	.82
WHT	.89	.68
ASN	.87	.81
	Neutral-Raw	Neutral-Ratio
PEW	.81	-
BLK	.71	.70
WHT	.82	.31
ASN	.79	.71

Note. PEW = General U.S. population; BLK = Blacks; WHT = Whites; ASN = Asians.

Preliminary Analysis

Before conducting the primary analysis, differences in Essentialism scores, punishment scores, and dehumanization scores according to race by participants' socioeconomic status,

educational level, college status, and age were examined. Multivariate analysis of variance (MANOVA) was conducted to examine demographic differences for all variables except age which used correlations.

Socioeconomic. Socioeconomic status on the three essentialism scales was significant ($F(6, 556) = 4.05$, $p = .001$; Wilks' $\lambda = 0.92$, $\eta_p^2 = .042$). Lower middle class participants reported lower EE scores ($M = 3.11$, $SD = .097$) than participants who were middle class ($M = 3.47$, $SD = .064$), working class ($M = 3.52$, $SD = .10$), and upper middle class ($M = 3.80$, $SD = .13$), and this difference was significant ($F(3, 279) = 6.78$, $p < .001$; $\eta_p^2 = .068$). Lower middle class participants reported lower EN scores ($M = 2.83$, $SD = .073$) than participants who were middle class ($M = 3.12$, $SD = .048$) and upper middle class ($M = 3.15$, $SD = .097$); this difference was significant ($F(3, 279) = 3.95$, $p = .009$; $\eta_p^2 = .041$). Lower middle class participants reported lower scores for the Generalized Essentialism scale ($M = 2.92$, $SD = .070$) than participants who were working class ($M = 3.22$, $SD = .074$), middle class ($M = 3.23$, $SD = .046$), and upper middle class ($M = 3.37$, $SD = .093$), and this difference was significant ($F(3, 279) = 6.38$, $p < .001$; $\eta_p^2 = .064$). Socioeconomic status on punishment scores given to Blacks, Whites, and Asians was not significant ($F(9, 672) = 1.06$, $p = .391$; Wilks' $\lambda = 0.966$, $\eta_p^2 = .011$). Socioeconomic status on dehumanization scores given to Blacks, Whites, and Asians was not significant ($F(27, 792) = 1.20$, $p = .220$; Wilks' $\lambda = 0.89$, $\eta_p^2 = .038$). As punishment scores according to racial groups were the dependent variable of the current study -- and socioeconomic status did not simultaneously affect the independent variable (i.e., Generalized Racial Essentialism) and the dependent variable -- the decision was made to not control for socioeconomic status in further analyses.

Education. Educational level on the three essentialism scales was not significant ($F(8$,

554) = .760, p = .639; Wilks' λ = 0.98, η_p^2 = .011). Educational level on punishment scores was

significant ($F(12, 728)$ = 3.33, $p < .001$; Wilks' λ = 0.87, η_p^2 = .046). Participants with a

master's degree or another professional degree reported giving less punishment to Blacks (M =

3.05, SD = .14) compared to those with a bachelor's degree (M = 3.64, SD = .097) and

participants with some high school education or a high school diploma (M = 3.95, SD = .20); this

difference was significant ($F(4, 277)$ = 4.98, $p < .001$; η_p^2 = .067). There was no significant

difference in punishment given to Asians ($F(4, 277)$ = 1.87, p = .115; η_p^2 = .026). Participants

with a master's degree or another professional degree (M = 3.31, SD = .12) and those with some

college education (M = 3.33, SD = .108) reported giving less punishment to Whites than

participants with an associate's degree (M = 3.90, SD = .16); this difference was significant ($F(4$,

277) = 2.96, p = .020; η_p^2 = .041). Educational level on dehumanization scores was not

significant ($F(36, 1014)$ = .908, p = .626; Wilks' λ = 0.89, η_p^2 = .029). Though educational level

had an impact on punishment towards Blacks, education did not affect the essentialism scales or

dehumanization scores, so the decision was made to not control for educational level.

College. College status on the three essentialism scales was not significant ($F(2, 280)$ =

.061, p = .941; Wilks' λ = 1.00, η_p^2 = .000). College status on punishment scores was not

significant ($F(3, 278)$ = 1.43, p = .236; Wilks' λ = 0.99, η_p^2 = .015). College status on

dehumanization scores was not significant ($F(9, 273)$ = 1.05, p = .399; Wilks' λ = 0.97, η_p^2 =

.034). College status did not have an effect on the essentialism scales, punishment scores, or the

dehumanization scores, so the decision was made not to control for college status.

Age. There was no significant correlation between age and the three essentialism scales.

Age and the EE scale were not significantly correlated, ($r(283)$ = -.041, p = .50). Age and the EN

scale had a moderate negative correlation, (r(283) = -.11, p = .058). Age and the Generalized Essentialism scale were not significantly correlated, (r(283) = -.097, p = .10). There was no significant correlation between age and punishment scores given to Blacks (r(283) = .036, p = .54), Whites (r(282) = .091, p = .13), or Asians (r(282) = .020, p = .74). There was a significant correlation between age and dehumanization scores. Age was negatively correlated with animalistic traits assigned to Blacks (r(283) = -.26, p < .01), and mechanistic traits assigned to Blacks (r(283) = -.32, p < .01). Age was negatively correlated with animalistic traits assigned to Whites (r(283) = -.30, p < .01), and mechanistic traits assigned to Whites (r(283) = -.34, p < .01). Lastly, age was negatively correlated with animalistic traits assigned to Asians (r(283) = -.31, p < .01), and mechanistic traits assigned to Asians (r(283) = -.34, p < .01). The decision was made to not control for age in the primary analysis because age was not correlated with the essentialism scales or punishment scores.

Primary Analysis

One of the objectives of the current study was to determine the utility of Generalized Racial Essentialism. First, using linear regression models, the predictive power of EE, EN, and Generalized Essentialism in explaining dehumanization scores for Blacks and Asians was examined. Next, in order to determine the extent to which dehumanization-type stereotypes acts as a mediator between EE, EN, and Generalized Essentialism, mediator analyses were conducted using PROCESS version 3 (Hayes, 2018). Five thousand bootstrap samples of the dataset set at the 95% confidence interval were used.

Punishment to Blacks

EE and Generalized Essentialism. Essentialist Entitativity significantly predicted animalistic dehumanization for Blacks, β = .22, $t(281)$ = 3.70, p < .01; EE also explained a significant proportion of variance in dehumanization scores with an R^2 of .046, ($F(1, 281)$ = 13.66, p < .01). In a separate model, Generalized Essentialism was a significant predictor of animalistic dehumanization for Blacks, β = .31, $t(281)$ = 5.49, p < .01. Generalized Essentialism explained a significant proportion of variance in dehumanization scores with an R^2 of .097, ($F(1, 281)$ = 30.19, p < .01). Additionally, Generalized Essentialism was positively related to selecting traits consistent with animalistic dehumanization for Blacks ($r(283)$ = .31, p < .01). Generalized Essentialism was a stronger predictor of selecting animalistic dehumanization-type stereotypes and held a stronger correlation. Thus, Generalized Essentialism was used for the mediation model examining the role of animalistic dehumanization on the relationship between essentialism and punishment to Blacks.

Mediation analysis. Animalistic dehumanization was examined as a mediator in the relationship between Generalized Essentialism and punishment to Blacks, and this indirect path was not significant (indirect effect = .037, CI [-.085, .16]). The direct path from Generalized Essentialism was significant (direct effect = .24, CI [.012, .46]). Animalistic dehumanization-type stereotypes did not mediate the relationship between Generalized Essentialism and the administration of punishment to Blacks. The other mediator paths were not significant (see Table 3).

Table 3

Direct and indirect effects of Generalized Racial Essentialism on Punishment to Blacks

	Direct Effect	Coeff.	Indirect Effect	BootSE	LLCI (95%)	ULCI (95%)
BLK-PUN	.24*	.24	-	.11	.012	.46
BLK-ANA		.30	.037	.062	-.085	.16
BLK-NEU		-.068	.031	.022	-.0047	.080
BLK-MEC		.065	.051	.047	-.034	.15

p < .05

Note. BLK-PUN = Punishment to Blacks; BLK-ANA = Animalistic dehumanization-type stereotypes assigned to Blacks; BLK-NEU = Neutral dehumanization-type stereotypes assigned to Blacks; BLK-MEC = Mechanistic dehumanization-type stereotypes assigned to Blacks. Bootstrap estimates reported.

Punishment to Asians

EN and Generalized Essentialism. Essentialist Naturalness significantly predicted mechanistic dehumanization for Asians, $\beta = .27$, $t(281) = 4.68$, $p < .01$; EN also explained a significant proportion of variance in dehumanization scores with an R^2 of .072, ($F(1, 281) = 21.87$, $p < .01$). In a separate model, Generalized Essentialism was a significant predictor of mechanistic dehumanization for Asians, $\beta = .26$, $t(281) = 4.53$, $p < .01$. Generalized Essentialism explained a significant proportion of variance in dehumanization scores with an R^2 of .068, ($F(1, 281) = 20.51$, $p < .01$). Additionally, Generalized Essentialism was positively related to selecting traits consistent with mechanistic dehumanization for Asians ($r(283) = .26$, $p < .01$). Essentialist Naturalness was a slightly greater predictor of selecting mechanistic dehumanization-type stereotypes, explained more variance, and held a marginally stronger correlation. Thus,

Essentialist Naturalness was used for the mediation model examining the role of mechanistic

dehumanization on the relationship between essentialism and punishment to Asians.

     Mediation analysis. Mechanistic dehumanization was examined as a mediator in the

relationship between EN and punishment to Asians, and this indirect path was significant

(indirect effect = .084, CI [.023, .16]). The direct path from Essentialist Naturalness to

punishment of Asians was not significant (direct effect = .14, CI [-.057, .34]). Mechanistic

dehumanization-type stereotypes mediated the relationship between Essentialist Naturalness and

the administration of punishment to Asians. The other mediator paths were not significant (see

Table 4).

Table 4

Direct and indirect effects of Essentialist Naturalness on Punishment to Asians

	Direct Effect	Coeff.	Indirect Effect	SE	LLCI (95%)	ULCI (95%)
ASN-PUN	.14	.14	-	.10	-.057	.34
ASN-ANA		-.027	-.013	.023	-.067	.026
ASN-NEU		-.014	.0067	.018	-.025	.047
ASN-MEC		.084	.084*	.036	.023	.16

*p < .01

Note. ASN-PUN = Punishment to Asians; ASN-ANA = Animalistic dehumanization-type
stereotypes assigned to Asians; ASN-NEU = Neutral dehumanization-type stereotypes assigned
to Asians; ASN-MEC = Mechanistic dehumanization-type stereotypes assigned to Asians.
Bootstrap estimates reported.

DISCUSSION

The current study offers some support for the dehumanization model proposed by Haslam (2006), which distinguished traits according to animalistic and mechanistic dehumanization. In addition, while Haslam (2006) drew the distinction of not essentializing uniquely human traits, which is linked to animalistic dehumanization, the current study provided evidence that UH traits can be essentialized, namely through the construct of Essentialist Entitativity. Limited support was also provided for the utility of Generalized Essentialism, at least for the conceptualization of Blacks as a racial group. In the current study, the main findings were that: Generalized Racial Essentialism provided slightly greater predictive power than Essentialist Entitativity but not Essentialist Naturalness; Mechanistic dehumanization-type stereotypes acted as a mediator between essentialist thinking and punishing Asians; and while Animalistic dehumanization-type stereotypes did not act as a mediator for Blacks, neutral-stereotypes approached marginal significance as a mediator.

In this discussion, possible explanations for the factor model will be discussed. The dehumanization model put forth by Haslam (2006) will be used in part to understand the results. The introduction of neutral dehumanization will be examined. The results from the demographic variables will be discussed. Lastly, the current study's limitations and future directions will be outlined.

Dehumanization Framework

The three-factor model consisted of three forms of dehumanization: animalistic, mechanistic, and neutral. The traits/stereotypes included under animalistic dehumanization were "ignorant", "crude", "selfish", "impulsive", "reckless", and "immature". Mechanistic

dehumanization included "cold", "strict", "identical", and "dull". Finally, neutral

dehumanization consisted of the traits "open-minded", "easy-going", "outgoing", and

"empathetic". Besides neutral dehumanization, the model of the current study was supported by

and lends support to categorizing dehumanization types.

The connection made between Essentialist Entitativity and animalistic dehumanization

(for Blacks), as well as Essentialist Naturalness and mechanistic dehumanization (for Asians)

was formed using past research and the current author deriving theoretical connections between

the concepts. To form the connection between EE and animalistic dehumanization, first the

connection was made to UH characteristics. Endorsing EE signified perceiving groups as being

cohesive and possessing core characteristics and common goals. As a cohesive collective, the

group share a lack of civility, self-restraint, and higher-level cognition. For Blacks, part of their

essence is conceptualized as lacking these qualities, similar to how animals lack these qualities.

Blacks, theoretically, possess an animal essence and are thought of as a highly entitative group.

To form the connection between EN and mechanistic dehumanization, the connection was first

established to HN traits. EN is based on believing groups have distinct and unchangeable

boundaries that persist across time. What defined humanness, for example, was the ability to

have depth, possess emotional warmth, open-mindedness, and some sense of individuality

(Haslam, 2006). Human nature is theoretically based on the ability to have those traits innately.

For Asians, their racial group has been defined by their supposed coldness, rigidity, and identical

nature such that all group members are indistinguishable from another. From this standpoint,

Asians possess the essence of automata. However, these distinctions can be reductive and fail to

recognize the impact of EN on Blacks and EE on Asians, which made Generalized Racial

Essentialism the stronger theoretical concept to use.

Essentialism and Dehumanization

Consistent with the first and second hypotheses, Essentialist Entitativity was positively correlated with choosing traits consistent with animalistic dehumanization for Blacks, and Essentialist Naturalness was positively correlated with selecting traits consistent with mechanistic dehumanization for Asians. Animalistic dehumanization was derived from denying groups uniquely human characteristics (e.g., civility, logic; Haslam, 2006) which were categorized as being non-essential (Haslam, Bain, Douge, Lee, & Bastian, 2005; Haslam, Bastian, & Bissett, 2004). However, the current study found that UH characteristics were capable of being thought of in essentialist terms while preserving their dehumanization connection. In their seminal paper, Rothbart and Taylor (1992) divided essentialist thinking according to alterability (i.e., group members having permanent membership) and inductive potential, the ability to make inferences about group members. Alterability can also be referred to as Immutability, one component of Essentialist Naturalness, while inductive potential is similar to the Informativeness component of Essentialist Entitativity. Haslam, Rothschild, and Ernst (2000) supported this two-factor model in their own study. Participants were tasked with rating social categories (e.g., race, occupation) along multiple elements of essentialism which included Informativeness, Exclusivity, and Uniformity. They found that the essentialism elements loaded onto two factors, one factor encompassing naturalness and the other encompassing entitativity.

Human nature traits were already theorized to be essentialized (Haslam et al., 2004; Haslam et al., 2005; Rothbart & Taylor, 1992). Thus, it was expected that denying those traits would lead to mechanistic dehumanization. These findings support part of the current study's proposed additions to the pre-existing dehumanization model. Previous research has found that social groups like races tend to be essentialized and conceptualized along natural kind terms

(Haslam et al. 2000; Rothbart & Taylor, 1992), which may explain why the EN concept was a significant predictor. Additionally, the current study added to the literature that linked conceptions of Asians to mechanistic dehumanization (Andrighetto et al., 2014; Bain et al., 2009).

However useful viewing EE and EN separately may be, Generalized Essentialism demonstrated greater predictive power over EE alone in selecting animalistic dehumanization-type stereotypes for Blacks. Hodson and Skorska (2015) were also interested in the comparison in predictive power of EE, EN, and Generalized Essentialism for racism using a measure designed to assess anti-Black sentiment. They found that EE and EN explained 29% of the variance in racism scores while Generalized Essentialism explained 69% of the variance. In the current study, EE explained 4.6% of the variance in animalistic dehumanization scores while Generalized Essentialism explained 9.7%, more than double the variance. Generalized Essentialism is composed of EE and EN. EN is derived from the concept of natural kinds which is often attributed to races at a disproportionate amount because racial group membership is an involuntary act which aids in its perception of being immutable and stable. Though entitativity has been found to be essentialized, EE may not be as represented in the lay public's understanding of race to stand alone. This suggests that Generalized Essentialism is the stronger predictor because the construct contains EN and is supported by the presence of EE. This suggestion may also explain why the fifth hypothesis was not supported. Though Generalized Essentialism was a strong predictor, EN had more predictive power on its own. EN explained more variance in selecting mechanistic dehumanization-stereotypes for Asians at 7.2%, compared to Generalized Essentialism which accounted for 6.8% of the variance. While EE may

need EN, the reverse may not be true. The inclusion of EE in Generalized Essentialism may not increase the predictive power enough to compare with EN.

Essentialism, Dehumanization, and Punishment

In the third and sixth hypotheses, it was conjectured that animalistic and mechanistic dehumanization-type stereotypes would mediate the relationship between Generalized Essentialism, EE, and EN, respectively, and punishment. First, the path leading to punishing Blacks will be discussed.

Though not explicitly stated, it was assumed that the separate and conjoined concepts would have a positive effect on punishment. This claim was supported for Generalized Essentialism: greater endorsement of these beliefs led to administering harsher punishment to Blacks. Punishment according to Skinner (1953) involved either removing positive reinforcement or introducing negative reinforcement in order to decrease the likelihood of a particular response being acted out. Within the context of the current study, removing positive reinforcement could be confiscating books, and negative reinforcement could be a semester-long suspension. The behavior that led to the removal or introduction of reinforcement was either a college academic violation (e.g., plagiarism) or a prison infraction (e.g., disrespecting a guard). These behaviors can be conceptualized similarly to moral wrongs which means that whoever acted them out has disrupted the "moral order" (Goffman, 1966) and must be punished. This bridges into moral theory and the idea of retribution where the offender must be subject to a punishment that fits their offense to re-establish order (Christopher, 2001). For the target groups in the study, they were accused of committing a moral wrong which brought about a disruption within the community, either a prison or college campus, and study participants were tasked with

determining how to correct the imbalance. In a study regarding social class, Kraus and Keltner (2013) investigated whether endorsing essentialist thinking about social class would impact support for restorative or retributive justice. As part of one study, participants were placed in either an essentialist or social constructivist condition and read mock journal articles about the origins of social class. Those in the essentialist condition read articles about social class being determined by genetics, while those in the social constructivist condition read that social class and genetics were unrelated. Then, participants completed measures to determine what policies, either restorative or retributive in nature, they endorsed for dealing with college students who cheated. Participants in the essentialist condition were more likely to reject restorative justice when dealing with students. This association was explained through participants' belief in social class being an essentialist category. Social class as an essentialist category included endorsing the category as having discrete groups, being biological in basis, and knowing someone's class allowed for inferences to be made. As social class was believed to be a natural occurrence and informative of one's character, this implied that the category and the participants that use it considered the world to be fair and just. Thus, anyone who committed an infraction was disrupting a balanced system. Replacing social class with race, this suggested that participants believed race to be a naturally occurring and informative category that exists within a fair world. For Blacks, study participants may have believed that they understood the character of the Blacks targets based on their group membership and chose to administer harsher punishments.

It was the assumption of the author that animalistic dehumanization-type stereotypes would act as a mediator for Blacks, but that was not supported. Mechanistic and neutral dehumanization-type stereotypes were not significant mediators, but neutral-type stereotypes approached marginal significance. To potentially understand this result, attention was turned

toward the relationship between Generalized Racial Essentialism and the three mediators. Participants who endorsed general essentialist thinking attributed animalistic and mechanistic stereotypes to Blacks, and attributed fewer neutral stereotypes. To the knowledge of the author, dehumanization research has established Blacks as the recipients of animalistic dehumanization (Andrighetto et al., 2011; Goff et al., 2008; Goff et al., 2014). Results from the current study may imply that when participants used essentialist thinking to conceptualize Blacks as a racial group, participants may have attributed elements of an animal and machine essence to Blacks. As current research may not have fully explored the connection between Blacks and mechanistic dehumanization, the reason given for this result was speculative. Blacks may be dehumanized in a manner that essentializes them as both animals and machines. Furthermore, the dehumanization of Blacks may include attributing to them an infra-human essence.

As previously mentioned, neutral dehumanization-type stereotypes approached marginal significance as a mediator between Generalized Racial Essentialism and punishment towards Blacks. As this result was not significant, theories presented to understand the role of neutral-type stereotypes were speculation. Participants in the current study, when employing generalized essentialist thinking, attributed fewer neutral traits to Black targets. These traits included the words "easy-going" and "outgoing" which may be synonymous with the word "friendliness", which has been used as an example of a secondary emotion. Delgado Rodríguez, Rodríguez-Pérez, Vaes, Betancor Rodríguez, and Leyens (2012) investigated infra-humanization using White participants and Blacks targets. Across three studies conducted, participants infra-humanized the targets, meaning Blacks were denied secondary emotions like "friendliness" and "optimism." This study partially mirrored the current findings as only White participants were used and Blacks were one of the target groups. Moreover, the current findings suggest that

Blacks were denied secondary emotions and given a subhuman essence. This suggestion may be plausible as essentialist thinking is needed for infra-humanization (Leyens et al., 2001). Participants may have conceptualized Blacks as subhuman and if the participants also believed in a fair and just society, then the punishments given to Blacks were an attempt to relegate them to their subhuman status. However, it is important to be reminded that none of the dehumanization-type stereotypes acted as a mediator between essentialist thinking and punishment to Blacks. These theories were presented to hypothesize about the connection between Generalized Racial Essentialism and dehumanization-type stereotypes, which was significant. Though participants used essentialist thinking, there was not significant evidence to support the claim that harsher punishment to Blacks could be explained by attributing to them an animal, machine, or infra-human essence.

To understand why specifically animalistic-type stereotypes were not significant, attention could be turned to the stereotypes themselves. Some of the animalistic stereotypes were "ignorant," "crude," and "reckless." These traits may have been too subtle as other studies have used words such as "backward," "aggressive," and "barbaric" which represent blatant animalistic dehumanization (Kteily & Bruneau, 2017; Leidner, Castano, Zaizer, & Giner-Sorolla, 2010). The choice to use subtle words was in the hopes that participants would not become suspicious of the true nature of the study and respond to the measures in a manner that did not represent their actual beliefs. The same reason was used for replacing the phrase "racial groups" with "social groups" for the essentialism scales. The Cronbach's alpha estimate for the animalistic dehumanization-type stereotypes for Blacks was stronger ($\alpha = .92$) than those found from similar studies which yielded alphas such as .82 and .87, respectively (Kteily & Bruneau, 2017; Leidner et al., 2010). However, because those studies produced significant results, it may be worthwhile

to replace some stereotypes considered to be subtle with stereotypes that the literature has deemed blatantly animalistic in their dehumanization type. Another method that may have ensured that participants understood the stereotypes to be animalistic would be to replace the format. While the diagnostic ratio approach has been employed to assess stereotypes attributed to racial and ethnic groups (Block, Aumann, & Chelin, 2012; Gardner, Lalonde, Nero, & Young, 1988), a search of the literature, though not exhaustive, did not produce studies that assessed dehumanization. The diagnostic ratio approach was used in the present study under the assumption that the measure would be useful for assessing dehumanization-type stereotypes, but this was not supported, at least for animalistic-type stereotypes. To evaluate the utility of stereotypes according to race, diagnostic ratios may be employed. However, if the stereotypes in question are tied to dehumanization, it may be useful to have participants rate how well a stereotype describes a particular race using Likert scales. An example modeled after Kteily & Bruneau (2017) would be, "Please rate how well the following terms describe Blacks" and present a list of stereotypes for participants to rate.

For Asians, the results supported the sixth hypothesis but not the third. Increasing endorsement of Essentialist Naturalness did not lead to harsher punishment. However, as participants endorsed EN, the more they attributed mechanistic dehumanization-type stereotypes to Asian which in turn led to harsher punishment. It was unclear why EN did not directly influence punishment. This may suggest that the endorsement of race as a discrete and stable category was not enough to warrant punishment, at least for Asians. But those essentialist beliefs influenced how Asians were essentialized and dehumanized. Similar to what was found for punishment to Blacks, participants who endorsed Essentialist Naturalness beliefs attributed animalistic and mechanistic stereotypes to Asians, and fewer neutral stereotypes. But, because

mechanistic dehumanization-type stereotypes were the only significant mediator, this was the only relationship that was explored. Mechanistic dehumanization differs from its animalistic counterpart in that to perceive a group as machines is accompanied by feelings of indifference rather than disgust (Haslam, 2006). The mechanistically dehumanized group, theoretically speaking, is considered a socially distant group that one cannot form social relationships with or share any relatedness to (Fiske, 1991; Haslam, 2006). This may imply that there lacks an emotional connection to this dehumanized group as they are distinctly not human. Any actions committed by this group do not have prosocial intentions, but their coldness does not imply malicious intent or much intentionality at all. Much like computers and robots, those perceived through mechanistic dehumanization have their behaviors explained as a result of their superficial and inflexible nature. In the current study, the infractions committed by the Asians targets may have been perceived as a demonstration of their distance from humans. As they may not have been perceived as human beings, they were not afforded the protection given to humans and deserved punishment (Bastian, Laham, Wilson, Haslam, & Koval, 2011). In their study, Bastain, Laham, Wilson, Haslam, and Koval (2011) found that when individuals perceived as possessing HN traits committed an immoral act (i.e., "pushing someone out of the way so [they could] be first", p. 473), participants believed that rehabilitation rather than retribution was suitable punishment. Applied to the current study, Asian targets were mechanistically dehumanized, meaning they were denied HN traits. Instead of selecting punishments that have been considered rehabilitation (e.g., attending a weekend-long course), participants chose harsher punishments, similar to retribution, for the Asian targets' behavior (e.g., expulsion).

Future Directions and Limitations

Though the results of the current study may have contributed to the literature regarding essentialism and dehumanization, there were limitations. Pre-existing dehumanization (Haslam, 2006) and essentialism (Roets & Van Hiel, 2011) frameworks were combined for the current study. These models were not created jointly so to use them together, theoretical assumptions and justifications were used. For example, the connection between Essentialist Entitativity and animalistic dehumanization was made by the current author. This model construction might explain the lower variance accounted for regarding dehumanization scores compared to past research. Additionally, in an effort to avoid the possibility of multicollinearity, the EE, EN, and Generalized Essentialism scales were tested separately multiple times for the racial groups, which may have increased the family-wise error rate. Finally, the punishment scores were not separated according to where the scenario took place, which was either a prison or college campus. It is uncertain whether composite scores were primarily driven by scores from the prison warden or college dean scenarios.

Moving forward, future research can replicate this study with changes to the participant and target groups. Hispanic and Native American populations can be used as target groups. While dehumanization literature has focused on Blacks and to a lesser extent Asians, more research needs to be done regarding lesser represented racial and ethnic minority groups to understand if they are impacted by a particular form of dehumanization and how severe group members are punished when accused of an offense. As the neutral dehumanization-type stereotypes approached marginal significance, future studies can focus on the potential mediating role of infra-humanization as it relates to essentialism. Because Generalized Racial Essentialism was found to have significant predictive power, subsequent research can focus on just this

concept instead of its two components. If researchers choose to include animalistic and mechanistic dehumanization in their studies as well, it may be beneficial to make the animalistic-type stereotypes blatant rather than subtle. Only self-reported White participants were used in the study for the purposes of understanding outgroup perceptions. Future studies can use participants whose racial/ethnic identity matches that of the target group for a study investigating intraracial perceptions and judgements. Finally, when calculating punishment scores, the scores would be separated according to setting to understand whether one setting elicits greater punishment than the other.

Conclusion

The present study provided multiple contributions to the study of essentialism, dehumanization, and punishment. First, the study made explicit connections between the aforementioned concepts. Using two separate frameworks, the current study established a link and added a causal component, punishment, bridging the theoretical with the practical. The establishment of uniquely human traits as being capable of being essentialized was also found. Future research can attempt to replicate this finding, though it may be limited to racial groups as the current study only considered this social category. Lastly, the study added to the literature concerning the impact of dehumanization on Asians. Dehumanization research may be explored more when Blacks are the target group, but it is important to expand the literature to include other racial groups.

The current study demonstrated the impact of essentialism, through dehumanization, on punishment largely without the possibility of the demographic variables (e.g., socioeconomic status, education level) confounding the results. The implications of this study are applicable to

the criminal justice system and educational settings. It is important for those in positions of power and influence (e.g., teachers, judges, police officers) to recognize how they perceive racial groups, especially marginalized groups, and understand how that perception can potentially impact who they decide to punish and to what degree. The current study has shown that a percentage of the population believes racial groups to be biologically rooted and informative of its members' nature. Conceiving of racial groups in this manner has the potential to essentialize them and their behavior in ways that deny their humanity, possibly leaving group members vulnerable to the consequences decided by another who does not recognize them as human. Awareness of this perception can lead to establishing educational programs designed to de-essentialize racial conceptions, potentially improving intergroup dynamics within institutions and everyday homes and communities.

APPENDIX A

Essentialist Entitativity scale

Instructions: For each statement, please rate how much you agree from 1 (Completely Disagree) to 6 (Completely Agree).

For each statement, the term "<u>social group</u>" is defined as: a collection of humans that share certain characteristics (ex: race, gender, religion), interact with each other, and share a common identity.

1. Members of social groups are usually very similar.
2. If you know which social group someone belongs to, you know a lot about his/her personality.
3. Despite apparent differences between members of the same social group, they are essentially the same.
4. Members of a social group usually are identical in many aspects.
5. Membership in a social group largely determines someone's identity.
6. Members of a social group share only superficial attributes, but they are quite different.
7. Members of a social group usually differ a lot from each other.
8. Knowing that someone belongs to a social group is not enough to judge a person.
9. Members of certain social groups share many underlying characteristics besides their superficial resemblances or differences.
10. Members of a social group often do not much in common.
11. Membership in a particular social group says nothing about a specific person.
12. Members of certain social groups are often very different although they might look similar at first glance.

Note. Uniformity: items 1, 4, 7, 10; Informativeness: items 2, 5, 8, 11; Inherence: items 3, 6, 9, 12. Ratings: 1 (completely disagree) to 6 (completely agree). Reverse-coded items: 6, 7, 8, 10, 11, 12.

APPENDIX B

Essentialist Naturalness scale

Instructions: For each statement, please rate how much you agree from 1 (Completely Disagree) to 6 (Completely Agree).

For each statement, the term "social group" is defined as: a collection of humans that share certain characteristics (ex: race, gender, religion), interact with each other, and share a common identity.

1. It is usually very clear who belongs to a particular social group and who does not.
2. Categorization of people based on their social group is a very natural thing.
3. Within a social group, it is easy for non-members to become a member (and vice versa).
4. The characteristics of social groups are subject to change over time.
5. Without possessing certain (apparent) characteristics, one cannot truly belong to a particular social category.
6. You belong to a particular social group or you don't, there is no in-between.
7. The categorization of people into social groups is based on nature.
8. Whether or not a person belongs to a particular social group can be easily changed.
9. The current division between different social groups is relatively recent and can change over time.
10. Social groups have necessary characteristics (example: in appearance) that are necessary for someone to belong to that group.
11. It is sometimes very unclear to know which social groups a person belongs to.
12. The categorization of people into social groups is rather artificial.
13. When it comes to social groups, it is not possible to change from being a member to a non-member (or vice versa).
14. Social groups are the way they are and do not change.
15. Social groups seem to have very particular characteristics, but it is possible to belong to a social group without having those characteristics.
16. It is possible for an individual to only partially belong to a social group.
17. Classifying people into social groups is unnatural.

18. The fact that someone belongs to a particular social group cannot be changed.

19. The characteristics of social groups are relatively stable across time.

20. It is not necessary to have specific characteristics to belong to a particular social group.

21. When a person belongs to a particular social group, he/she cannot be a member of another social group as well.

22. It is possible to belong to multiple social groups.

23. Being a member of one social group does not mean that one cannot also be a member of another social group.

24. In a social group, it is impossible for members to also be a member of another social group.

Note. Immutability: items 3, 8, 13, 18; Naturalness: items 2, 7, 12, 17; Discreteness: items 1, 6, 11, 16; Necessity: items 5, 10, 15, 20; Stability: items 4, 9, 14, 19; Exclusivity: items 21, 22, 23, 24. Ratings: 1 (completely disagree) to 6 (completely agree). Reverse-coded items: 3, 4, 8, 9, 11, 12, 15, 16, 17, 20, 22, 23.

APPENDIX C

Diagnostic Ratio Approach

Instructions: You will see a series of traits applied to four groups. Your job is to determine what percentage, from 0 to 100%, of these groups possesses the specific trait.

	Asians	Blacks	Whites	General U.S. population
1. Ignorant				
2. Passive				
3. Sensitive				
4. Crude				
5. Cold				
6. Open-minded				
7. Self-indulgent				
8. Strict				
9. Easy-going				
10. Impulsive				
11. Identical				
12. Outgoing				
13. Immature				
14. Shallow				
15. Empathetic				
16. Reckless				
17. Dull				
18. Irritable				

Note. Animalistic items: 1, 4, 7, 10, 13, 16; Mechanistic items: 2, 5, 8, 11, 14, 17; Neutral items: 3, 6, 9, 12, 15, 18.

APPENDIX D

Punishment Scenarios

Instructions: Your third and final task involves role-playing. You will act in two different roles: a college dean, and a prison warden for a medium-security prison. In those roles, you will read a short scenario involving one person and decide how you will address their behavior.
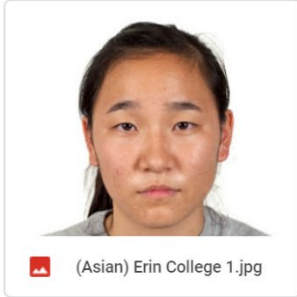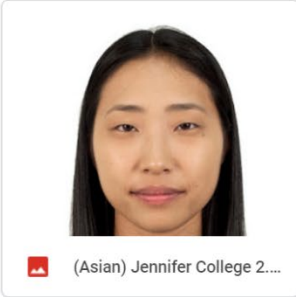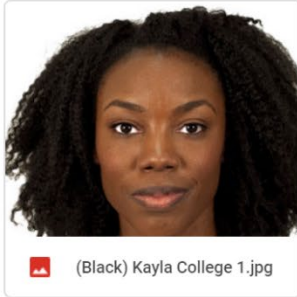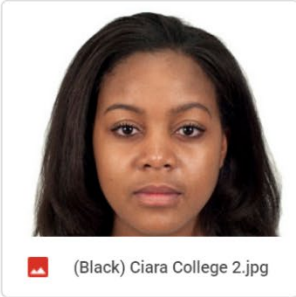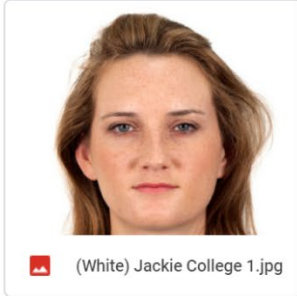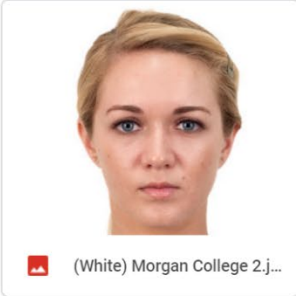
1. College Dean Scenario
   - A school administrator has discovered a large-scale Google drive. The drive included answers to exams, quizzes, and homework for every class in the chemistry department. Further investigation revealed that multiple Google drives exist for other departments such as psychology, statistics, and finance. One student (shown in the picture) is determined to have created and/or shared the drives. She denies any involvement.
   - It has come to the attention of the administration that the president of a prominent student organization is bullying the general members. Students have said the president has thrown shoes at their heads, sabotaged their individual projects, and has created an atmosphere of intimidation. Several members have left the organization permanently. When confronted by the administration, she is standoffish and refuses to admit to bullying any members.
   - A political science professor arrives to his office one morning to discover it has been vandalized. There is visible damage to the desk and windows; graded homework is also missing from the office. Campus police suspect a student and check his class attendants. The student with the lowest grade (shown in the picture) is suspected of committing the act of vandalism. She denies any involvement but ends up remarking on the missing homework. Campus police did not release any information about the missing homework.
   - This student was chosen to represent the college at an upcoming conference. She was supposed to present the results of an original study she conducted during the previous semester. She sent in her study report to the conference organizers. After checking for plagiarism, the organizers discover that most of the paper was copied from an

experiment conducted in the 1990s. The organizers alert the college administrators who confront the student. She denies all accusations of plagiarism.

- A student (shown in the picture) living in a single occupancy dorm has been playing loud music and partying until the early morning every night for more than a month. Her neighbors have asked her to respect the dorm rule (no loud music after 12am) but she has ignored every request. Campus police have ordered her to follow the dorm rules, but she does not listen. Recently, she has gotten louder and started banging on the walls and singing louder.

- The college is a dry campus, meaning alcohol and other substances are not allowed. During a routine room check, the residential adviser (RA) finds rum, vodka, and other prohibited substances in the dorm room of a student (shown in the picture). This student is under 21 years of age. When asked why she brought alcohol onto campus, she replies, "Because I can."

  - o You are required to administer some form of punishment to her. How likely are you to:
    (1) Require her to attend a weekend-long course discussing her behavior?
    (2) Prohibit her from participating in student organizations for one semester (3 months)?
    (3) Prohibit her from attending her graduation ceremony?
    (4) Suspend her for a semester (3 months)?
    (5) Expel her?

2. Prison Warden Scenario
   - Books are being taken from the library. Some of the books are about cooking, the constitution, and fiction. After checking the inmate employee list, one inmate (shown in the picture) is determined to have been involved. While checking her cell, the guards find all the missing books hidden underneath her bed.

   - In the middle of the day, a fight breaks out between two inmates. Once the two are separated, the guards view several scratches and bruises on one of the inmates and none on the other. The other inmates who watched the fight identified the one without scratches and bruises (shown in the picture) as the instigator.

- During a routine cellblock check, guards find cell phones hidden in the mattress of the inmate shown in the picture above. Cell phones are considered contraband, meaning it is illegal for prisoners to have them. She will not say how she obtained the cell phones.

- Every morning for the past month, the prisoner shown in the picture has refused to get out of bed. Guards have ordered her to get out of bed and prepare for the day, and she has ignored the commands. Prisoners are not allowed to refuse the reasonable commands of the guards; being told to get ready for the day is one of those commands.

- This inmate has been accused of talking back to the guards as they pass by. As the guards patrol the cellblock, she can be heard shouting rude remarks. When ordered to stop her shouting, she gets louder and begins cursing.

- During a routine cellblock check, guards find letters written between two inmates that detail plans to escape during the night. Approximately 10 letters were confiscated. The letters are not dated so the guards are unable to determine who wrote the first letter. The earliest appears to be sent by [name]. She claims that the letters were fake, and nothing was going to happen.

  - You are required to administer some form of punishment to her. How likely are you to:
    - (1) Confiscate her leisure items (example: books, magazines)?
    - (2) Suspend her from watching television in the common room?
    - (3) Transfer her from a library job to a janitorial one?
    - (4) Transfer her to a high-security prison?
    - (5) Place her in solitary confinement for 1 week?

(White) Cameron Prison 2....

(White) Morgan College 2.j...

(White) Rebecca Prison 1.j...

(White) Jackie College 1.jpg

(Black) Jade Prison 2.jpg

(Black) Ciara College 2.jpg

(Black) Vickie Prison 1.jpg

(Black) Kayla College 1.jpg

(Asian) Alexa Prison 2.jpg

(Asian) Jennifer College 2....

(Asian) Isabel Prison 1.jpg

(Asian) Erin College 1.jpg

APPENDIX E

Informed Consent form

Study: Perception of Social Group Formation

Investigators: Sarah Shuler

This project has been approved by the Institutional Review Board of Mount Holyoke College. The following informed consent is required by Mount Holyoke College for all participants in human subjects research.

Procedures: The procedures to be followed in the project will be explained to you, and any questions you may have about the aims or methods of the project will be answered.

The purpose of this project is to better understand how people view social groups in the United States, and how they interact with members of those groups. Participation will include two surveys, a perception task, and a role-playing activity. The surveys will be used to assess perceptions of social groups. The perception task is an additional measure to determine how people view different groups. The role-playing activity will require you to act as a decision maker, and after reading a short passage, decide a particular course of action. The estimated total completion time is 40 minutes.

Risks of Being in the Study:

This study is designed to present minimal risk to no risk for participants. Your participation is entirely voluntary and if at any point you would like to skip a question on any of the sections, or withdraw your participation, you may do so. Though you are encouraged to complete every section, you will not be penalized if you choose not to.

Benefits of Being in the Study:

Participants will be offered $2.00.

Confidentiality:

All data in this study will treated as strictly confidential. Your name will never be identified with any of the information you provide; instead, your information will be identified with a number. Only the principal investigator of the project will have access to the list of identification numbers.

The results of this study will be published in a series of peer-reviewed articles in academic journals as well as be presented at academic conferences. Under no circumstances will your name or other identifying characteristics be included.

Voluntary Nature of the Study:

Your participation is voluntary. If you decide to participate, you are free to end your participation at any time without penalty. You may also choose to not answer specific questions on the survey.

Contacts and Questions:

If you have any specific questions or concerns, please do not hesitate to contact the primary investigators: Sarah Shuler (shule22s@mtholyoke.edu). In addition, you may contact the Mount Holyoke College Institutional Review Board (institutional-review-board@mtholyoke.edu) for information about the rights of human subjects at Mount Holyoke-approved research.

Statement of Consent:

I have read and understand the above information. I am 18 years of age or older. I consent to participate in the study. I allow my data to be used for research purposes.

Please Check the box if you consent to participate:

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