Peace and Conflict: Journal of Peace Psychology

Essentially Subhuman: Psychological Essentialism Facilitates Dehumanization

Alexander P. Landry, Elliott Ihm, John Protzko, and Jonathan W. Schooler

Peace and Conflict: Journal of Peace Psychology

Essentially Subhuman: Psychological Essentialism Facilitates Dehumanization

Alexander P. Landry, Elliott Ihm, John Protzko, and Jonathan W. Schooler
Department of Psychological and Brain Sciences, University of California, Santa Barbara

Dehumanization has played a prominent role in myriad human atrocities, which inspired us to investigate its social–cognitive basis. Since dehumanization consists of perceiving another to lack a defining human essence, scholars have suggested the process is grounded in psychological essentialism, the belief that members of a group all share an underlying essence. Indeed, Americans' essentialist thinking predicted their blatant dehumanization of various national outgroups (Study 1). After demonstrating this relationship, we attempted to mitigate dehumanization by reducing the tendency to think in an essentialist manner. Subjects led to hold an incremental theory about human traits (Study 2) or led to question the biological basis of racial differences (Study 3) subsequently expressed less psychological essentialism (limited to the specific aspect of biological essentialism in Study 3), and these reductions in essentialism predicted lower dehumanization. Despite these indirect effects, we generally failed to observe mean differences in dehumanization between experimental conditions, so we encourage future research to investigate third variables that may suppress the effect of essentialism-reducing interventions.

Public Significance Statement
Dehumanization foments aggression and violence, so understanding the psychological mechanisms underlying it is crucial. Our results suggest that one such mechanism is psychological essentialism, laying the groundwork for interventions that aim to attenuate dehumanization by targeting this sociocognitive process.

Dehumanization refers to conceiving of another as a subhuman creature (Smith, 2011). This disengages the moral considerations applied to fellow human beings, facilitating aggression against the dehumanized target (Bandura, 1999; Bandura et al., 1975). Therefore, historians, social psychologists, and political scientists have suggested that dehumanization may enable acts of extreme violence and cruelty (e.g., Goldhagen, 2009; Kelman, 1973; Smith, 2011). Indeed, dehumanization has played a prominent role in colonial exploitation (Goldhagen, 2009), political repression (Snyder, 2011), and outright genocide (Savage, 2009; Smith, 2011). Today, dehumanization is documented in conflicts in Israel and Darfur (Bruneau & Kteily, 2017; Hagan & Rymond-Richmond, 2008), and predicts support for hostile military action, acceptance of civilian casualties, endorsement of torture, and prejudice toward national or ethnic outgroups (Kteily et al., 2015; Kteily & Bruneau, 2017).

Social–Cognitive Roots of Dehumanization

Although it may enable extraordinary atrocities, dehumanization emerges through ordinary social–cognitive processes (Harris & Fiske, 2009). It is predicated on the proclivity for people categorize themselves and others into distinct social groups (see Hornsey, 2008, for a review). Members of different social groups are assumed to share an intrinsic, underlying essence which defines their

Alexander P. Landry https://orcid.org/0000-0003-1579-7326
John Protzko https://orcid.org/0000-0001-5710-8635
ALEXANDER P. LANDRY is a PhD student at Stanford's Graduate School of Business. In 2020, he earned his Bachelor's degree at the University of California, Santa Barbara (UCSB), where he studied the social psychology of intergroup conflict under the tutelage of Dr. Jonathan W. Schooler.

ELLIOTT IHM earned his BS in Psychology from Northern Illinois University in 2014. He is currently a graduate student at UCSB, where he studies peak experiences, neuroplasticity, affective neuroscience, and the nature of consciousness.

JOHN PROTZKO completed his MA in Educational Psychology with a focus on program measurement in evaluation from NYU. He then went on to a PhD in developmental psychology focusing on the raising and development of intelligence. His main research interests are still on raising and the development of intelligence.

JONATHAN W. SCHOOLER is a Professor of Psychology at UCSB. He earned his BA at Hamilton College in 1981 and his PhD at the University of Washington in 1987. Jonathan W. Schooler pursues research on consciousness, memory, the relationship between language and thought, creativity, problem solving, decision making, and dehumanization.

All data and code used for analysis can be found at: https://osf.io/uw5jq/

Correspondence concerning this article should be addressed to Alexander P. Landry, Department of Psychological and Brain Sciences, University of California, Santa Barbara, 251 UCen Rd, Santa Barbara, CA 93106-9660, United States. Email: landry.alex1@gmail.com

membership in that group (Hirschfeld, 1996; Rothbart & Taylor, 1992). This essence is assumed to be unobservable, residing deep within a person and giving rise to all their observable qualities. Such thinking has been termed *psychological essentialism* (Medin & Ortony, 1989).

For instance, Haslam et al. (2000, 2002) found that people tended to believe various groups, such as people of different ethnicities, sexual orientations, and socioeconomic classes, formed coherent entities with clear boundaries distinguishing members from non-members. These social groups were considered to be natural kinds, reflecting inherent categories that are objectively "out there" in the world, akin to how biologists classify different species. Such beliefs are often automatic and ubiquitous, emerging in children as young as 4 (Gelman, 2003) and prevalent across cultures (Atran et al., 2002; Bastian & Haslam, 2008).

Essentialism undergirds many conceptions of what it means to be human. Simply put, people tend to think that something special distinguishes humans from all other creatures, whether that be higher reason, the capacity for complex emotions, sentience, or cultural achievement (e.g., Lieberman, 2013). At the core of our humanity is thought to be a defining essence that gives rise to all of our uniquely human qualities, so to dehumanize another is to deprive them of this common human essence (Haslam et al., 2005; Leyens et al., 2000; Smith, 2011). This renders the dehumanized target fundamentally distinct from, and less worthy than, humankind (Smith, 2011).[1]

The Present Research

Surprisingly little work to date has empirically tested these assumptions about essentialism's role in the process of dehumanization. A notable exception is Leyens et al. (2003), who report an unpublished study in which categorizing participants into meaningful (vs. minimal) groups increased their essentialist thinking about the groups, which in turn led them to demonstrate a reluctance to attribute the outgroup with the capacity to experience complex, "uniquely human" emotions. Similarly, Costello and Hodson (2010, 2014) found individuals who believed humans were fundamentally distinct from, and superior to, nonhuman animals were also more likely to deny immigrants and racial outgroups secondary emotions. Nonetheless, in contrast to such subtle denials of humanity (termed *infrahumanization*; Leyens et al., 2000), many consequential instances of dehumanization are far more overt (e.g., Jews portrayed as vermin in *Der Stürmer*; Smith, 2011). Such blatant dehumanization (i.e., the explicit assertion that another person or group is subhuman) appears to be a more robust factor than infrahumanization in extreme intergroup conflicts (see Kteily & Bruneau, 2017, for review). Therefore, we sought to extend past work linking essentialism with infrahumanization by considering the blatant dehumanization thought to foment hostility and conflict.

To do so, we were informed by Bastian and Haslam (2006), who identified four facets of essentialist thinking: The belief that human attributes are fixed (*immutability*; Levy et al., 1998), the belief that one can generate rich inferences about a person once they know a few of their basic traits (*informativeness*; Rothbart & Taylor, 1992), the tendency to see social groups as unified entities (*discreteness*; Campbell, 1958), and the belief that membership in social categories has an underlying *biological basis* (Keller, 2005). Since the four facets are interrelated (Bastian & Haslam, 2006), it is possible that each of them plays a role in dehumanization. Therefore, we first

measured each of these facets to determine whether essentialism predicted individuals' blatant dehumanization of a variety of national outgroups (Study 1).

We then manipulated essentialist thinking to determine whether it causally facilitates dehumanization (Studies 2 and 3). Although Study 1 considered all four facets of essentialism, here we mainly focused on two facets linked to outgroup prejudice in previous research: immutability beliefs in Study 2 (Hong et al., 2004) and biological basis in Study 3 (Williams & Eberhardt, 2008). The primary aim of these studies was to determine whether undermining these facets of essentialism had downstream effects on attenuating blatant dehumanization.

Study 1

We first sought to establish a consistent relationship between psychological essentialism and blatant dehumanization, hypothesizing that essentialism would predict the dehumanization of several national outgroups. We expected to obtain this result while accounting for individuals' prejudice toward the outgroup, as well as their levels of social dominance orientation and conservatism, all of which are reliably associated with blatant dehumanization (Kteily et al., 2015).

Method

Participants

The three studies reported in this manuscript received approval from the University of California, Santa Barbara's Institutional Review Board. For all studies, data were collected from a convenience sample of Amazon Mechanical Turk workers (Buhrmester et al., 2018).

We initially collected data from 295 participants. This sample was not informed by an a priori power analysis. Instead, we deliberately oversampled in comparison to related research to account for data exclusions based on prespecified exclusion criteria (Bastian & Haslam, 2006, 2008). Namely, we excluded individuals who were not American citizens[2] or who failed attention checks ($n = 40$). Of the remaining 255 Americans, 152 were male, 102 were female, and one identified as nonbinary. The age of the sample ranged from 18 to 78 years ($M = 37.77$, $SD = 12.52$). With this sample size, a post hoc power analysis using the G^*Power software (Faul et al., 2007) revealed we could detect a medium-sized effect ($f^2 = .15$) with power of .99. The smallest effect size we obtained was well above this ($f^2 = .91$). The output for this power analysis and the sensitivity analyses conducted for Studies 2 and 3 are reported in Supplemental Materials—Sample Size Justification.

Materials

Social Dominance Orientation. Social dominance orientation (SDO) refers to individuals' support for group-based domination

---

[1] Despite its potential role in dehumanization, essentialist thinking about social categories is not inherently destructive. For instance, seemingly disparate disadvantaged groups may employ "strategic essentialism" to mobilize unified action (Eide, 2016). We credit an anonymous reviewer with this insight.

[2] For all studies, we focus on American citizens to ensure our participants were considering outgroups when making their evaluations.

and opposition to egalitarian social policies (Pratto et al., 1994). We measured SDO with the 8-item SDO$_{7(S)}$ scale (Ho et al., 2015; $\alpha = .90$), which included items assessing support for group-based dominance (e.g., *An ideal society requires some groups to be on top and others to be on the bottom*) and antiegalitarianism (e.g., *It is unjust to try to make groups equal*). Participants responded using a scale ranging from 1 (*Strongly Oppose*) to 7 (*Strongly Favor*).

Conservatism. To measure conservatism, we followed past research (Landry et al., 2021) asking participants to *Please indicate the extent to which you consider yourself to be liberal or conservative on most political and social issues*, using a slider scale which ranged from 0 (*Extremely Liberal*) to 100 (*Extremely Conservative*).

Psychological Essentialism. Psychological essentialism was measured using the Essentialism Scale (ES+; Bastian & Haslam, 2008; $\alpha = .95$), which measures the four distinct facets of essentialism, namely *immutability* (8 items; $\alpha = .91$), *informativeness* (5 items; $\alpha = .78$), *discreteness* (5 items; $\alpha = .94$), and *biological basis* (4 items; $\alpha = .94$). Participants rated their agreement with each item on a scale from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*).

Ascent Dehumanization. This measure of blatant dehumanization presented participants with the popular "Ascent of Man" image depicting evolutionary progress, ranging from a quadrupedal primate ancestor to a fully modern human (Supplemental Materials—Figure S1; Kteily et al., 2015). They then rated the humanity of various social groups using a slider scale which ranged from 0 (*Least Evolved*) to 100 (*Most Evolved*). Scores were reversed such that higher scores indicated greater dehumanization.

Animalistic–Mechanistic Dehumanization. Haslam (2006) identified two distinct forms of dehumanization. *Animalistic dehumanization* consists of denying the target uniquely human qualities, such as intelligence or creativity. Thus, the dehumanized is likened to a "lower" animal, such as a rat or cockroach. However, one may also deny another person qualities considered central aspects of human nature, even if they also happen to be shared with other animals, such as warmth and curiosity. This *mechanistic dehumanization* renders the dehumanized a mindless automaton. To assess both animalistic and mechanistic dehumanization, we employed a measure developed by Bastian et al. (2013).[3] Participants rated how well a set of 8 traits characterized members of the outgroup, four of which reflected animalistic dehumanization (e.g., *Lacking self-restraint, like animals*) while the other four reflected mechanistic dehumanization (e.g., *Mechanical and cold, like robots*), using a scale that ranged from 1 (*Not At All*) to 7 (*Extremely So*).

Prejudice. Prejudice was measured using the feeling thermometer (Haddock et al., 1993), which asks participants to evaluate a typical outgroup member on a slider scale ranging from 0 (*Extremely Unfavorable*) and 100 (*Extremely Favorable*). Scores were reversed such that higher scores indicated greater prejudice.

Procedure

After providing consent, participants completed the Essentialism Scale. They then evaluated four outgroups (Iranians, Chinese people, Somalis, and North Koreans) and their ingroup (Americans) on the Ascent and Animalistic–Mechanistic (A–M) dehumanization measures, and the prejudice feeling thermometer. The groups were presented in randomized order for each of these measures. Participants then completed the SDO measure. Additionally, an attention check item was embedded in the survey, which asked participants to

select a particular response option to indicate they were paying attention.[4] Finally, participants provided demographic information (including conservatism) and were thoroughly debriefed.

Results

To determine whether psychological essentialism predicted blatant dehumanization, we performed a series of multiple linear regressions with scores on the Essentialism Scale predicting the dehumanization of each of the national outgroups (Iranians, North Koreans, Somalis, and Chinese people) as well as a composite of all these groups.[5] Thus, we performed ten total regressions, modeling each of the four outgroups and the composite on both dehumanization measures (Ascent and Animalistic–Mechanistic). Additionally, in each regression we included outgroup prejudice, SDO, conservatism, and dehumanization of the ingroup (Americans)[6] as covariates. The results of each regression are presented in Table 1, and descriptive statistics and variable intercorrelations are presented in Supplemental Materials—Table S1.

Psychological essentialism significantly predicted dehumanization of each outgroup across all eight regression models, over and above prejudice, SDO, and ideological conservatism. Previous research has implicated essentialism in subtle forms of dehumanization (Costello & Hodson, 2010, 2014; Leyens et al., 2003), but this is the first demonstration to our knowledge of its unique association with the kind of blatant dehumanization that foments hostility and conflict (Kteily & Bruneau, 2017).

Study 2

As mentioned above, psychological essentialism consists of several interrelated facets, including how people see the nature of human traits and abilities (Bastian & Haslam, 2006). An individual may hold an *incremental theory*, believing traits and abilities to be malleable through effort, or they may hold an *entity theory*, seeing them as fixed and immutable (see Dweck, 2008, for a review). Entity theories have been identified as a core aspect of essentialism (termed the immutability dimension; Bastian & Haslam, 2006). Therefore, we sought to induce either an entity or incremental theory in participants, with the expectation that those in the incremental condition would express less psychological essentialism. Moreover, we hypothesized that differences in essentialism between the incremental and entity conditions would account for differences in dehumanization between these conditions.

---

[3] Reliability coefficients for each of the four outgroups are as follows: Iranians ($\alpha = .79$), Chinese people ($\alpha = .79$), Somalis ($\alpha = .78$), North Koreans ($\alpha = .77$).

[4] Such an attention check was also used in the subsequent studies.

[5] All analyses reported in this manuscript were performed with 1,000 bootstrap resamples, except for analyses using PROCESS, which were performed with 5,000 bootstrap resamples.

[6] In controlling for ingroup dehumanization, we follow past research that focuses on relative (rather than absolute) dehumanization to account for individual differences in how the scale is used (e.g., Kteily et al., 2015) while also avoiding some of the problems associated with the use of difference scores (see Landry et al., 2021, for precedent). However, we also examined the effect of essentialism on absolute levels of outgroup dehumanization by repeating these analyses without including ingroup dehumanization as a covariate. We observed the same pattern of results: in each regression, essentialism was a strong predictor of greater (absolute) dehumanization, controlling for prejudice, SDO, and conservatism.

Table 1
Relation of Psychological Essentialism to Dehumanization of Each Outgroup in Study 1

Outgroup	Unstandardized B	Standard error	Standardized β	t	p	95% CI
Iranians (Ascent)	4.00	1.16	.18	3.44	.001	[1.66, 6.31]
Iranians (A–M)	0.14	0.06	.14	2.40	.017	[.01, .26]
Somalis (Ascent)	2.97	1.10	.13	2.69	.008	[.75, 5.21]
Somalis (A–M)	0.16	0.05	.16	3.09	.002	[.06, .27]
North Koreans (Ascent)	2.64	1.20	.12	2.19	.030	[.51, 4.87]
North Koreans (A–M)	0.19	0.04	.24	4.39	<.001	[.11, .28]
Chinese (Ascent)	2.83	0.88	.15	3.22	.001	[1.10, 4.48]
Chinese (A–M)	0.25	0.05	.26	5.01	<.001	[.15, .35]
Composite (Ascent)	3.11	0.91	.16	3.46	.002	[1.27, 4.87]
Composite(A–M)	0.18	0.04	.22	4.39	<.001	[.10, .27]

Note. Controlling for prejudice, social dominance orientation (SDO), ideological conservatism, and Ingroup dehumanization; All regressions performed with 1,000 bootstrap resamples; confidence intervals refer to unstandardized coefficient. A–M = Animalistic–Mechanistic.

Although most work investigating blatant dehumanization has focused on national or ethnic outgroups (e.g., Kteily et al., 2015), we decided to study Americans' perceptions of three groups considered deviant due to their lower societal status: homeless people, heroin addicts, and schizophrenics. According to researchers employing the stereotype content model, although they share a national identity with other Americans, these groups are often stigmatized based on the perception they are cold and incompetent (e.g., Fiske et al., 2019). In fact, these groups are also subtly dehumanized: Individuals frequently fail to engage in normal social cognition when viewing them and deny them the capacity to experience complex mental states (Harris & Fiske, 2006, 2011). However, there is no evidence to our knowledge that researchers in the stereotype content model tradition have examined whether members of groups stereotyped to be low in warmth and competence are also blatantly dehumanized. Moreover, essentialist beliefs may be particularly relevant when considering these "low–low" groups, as their disadvantaged position in society is often thought to arise from inherent personality flaws (Haslam & Ernst, 2002). Therefore, along with establishing a directional relationship between essentialism and blatant dehumanization, we also sought to expand the range of outgroups that we have considered as targets of such dehumanization.

Method

Participants

We collected data from 545 subjects via MTurk, again oversampling based on related research to account for data exclusions (Chiu et al., 1997). We excluded 82 participants who either failed multiple attention checks, were not American citizens, or did not consent to our using their data. Of the remaining 463 Americans, 276 were male, 183 were female, and 4 did not identify as either. The age of the sample ranged from 18 to 78 years ($M = 38.23$, $SD = 12.81$). A sensitivity analysis using $G*Power$ (Faul et al., 2007) determined this sample enabled us to detect an effect of our intervention of $d = .26$ with 80% power.

Materials

Psychological essentialism and dehumanization (Ascent and Animalistic–Mechanistic) were assessed as in Study 1.

Article Manipulations. To induce an incremental or entity theory, we adapted a set of article manipulations (from Chiu et al., 1997). Both manipulations appeared as articles purportedly published in the American Psychological Association's *Science Observer*. The incremental article was titled "Personality Is Changeable and Can Be Developed," and described evidence from clinical interventions, personality psychology, and historical analyses suggesting that "personality seems to be malleable and can be developed." The entity article was titled "Personality, Like Plaster, Is Pretty Stable Over Time," and described a similar body of evidence. However, this article supported the opposite conclusion, that "personality seems to be fixed and stable over time." Both articles are included in Supplemental Materials—Study 2 Manipulations.

Differences Between Articles. We asked participants to respond to the two items *How easy to understand was the article?* and *How credible was the article?* using a scale ranging from 1 (*Extremely Easy to Understand/Not At All Credible*) to 7 (*Extremely Difficult to Understand/100% Credible*), as well as the item *How persuasive was the article?* using a scale which ranged from 1 (*Not At All Persuasive*) to 5 (*Extremely Persuasive*).

Procedure

To reduce demand characteristics, we followed a procedure employed in related work by Williams and Eberhardt (2008). After providing consent, participants were led to believe we were interested in their "perceptions of media issues." To bolster our cover story, they completed filler items about their media consumption and attitudes. Then, they were randomly assigned to read either the incremental ($n = 231$) or entity ($n = 232$) article. After reading the article, they completed the Essentialism Scale. Participants next rated homeless people, heroin addicts, and schizophrenics on the two dehumanization measures. On each of the measures, the groups were presented in randomized order. Participants then evaluated the credibility, comprehensibility, and persuasiveness of the article they read, and provided demographic information. Finally, participants were debriefed and given the opportunity to revoke their consent to let us use their data since minor deception was employed to obtain it.[7]

---

[7] In this study and Study 3, participants completed additional measures for exploratory purposes which can be provided upon request.

Results

Differences Between Articles

We performed three independent-samples t tests to determine whether our article manipulations differed on credibility, comprehensibility, or persuasiveness. A binary variable representing experimental condition (0 = entity, 1 = incremental) was entered as the grouping variable, and scores on the 1-item measures of credibility, comprehensibility, or persuasiveness were entered as the dependent variables, respectively. The articles did not differ on persuasiveness, $M = 3.39$ versus 3.23, $t(461) = 1.57$, $p = .12$, nor comprehensibility, $M = 2.71$ versus 2.76, $t(461) = 0.28$, $p = .78$. However, the incremental article was rated as more credible than the entity article, $M = 5.03$ versus 4.72, $t(461) = 2.49$, $p = .013$.[8]

Differences in Essentialism

To determine whether those reading the entity article would report greater essentialism than those reading the incremental article, we performed another independent-samples t test with scores on the Essentialism Scale as the outcome variable. Indeed, those reading the entity article reported more essentialist thinking ($M = 4.37$, $SD = 0.94$) than those reading the incremental article, $M = 3.74$, $SD = 1.11$, $t(442) = 6.39$, $p < .001$.[9]

Effect of Essentialism on Blatant Dehumanization

We conducted a series of simple mediations using the PROCESS macro for SPSS (Model 4; Hayes, 2018) to test our hypothesis that the differences between conditions in essentialism would explain their differences in dehumanization. First, we created a composite measure of the outgroups (homeless people, drug addicts, and schizophrenics) on the Ascent scale of dehumanization ($a = .93$). We then constructed the mediation model: the binary variable denoting condition (0 = entity, 1 = incremental) was the predictor variable, scores on the ES+ were the mediator,[10] and the Ascent composite was the outcome. We then repeated this process with a composite measure of Animalistic–Mechanistic (A–M) dehumanization ($a = .77$) as the outcome.[11] Path diagrams for each of the models are depicted in Figure 1.

We first examined the residual direct effect of article condition on the dehumanization composites (i.e., c' paths). For both models, there was no residual effect that did not go through essentialist beliefs (Ascent: $\beta = .05$, $p = .42$; A–M: $\beta = -.04$, $p = .67$), suggesting that dehumanization did not differ between the conditions after accounting for essentialism. We then examined the effect of essentialism on dehumanization, controlling for experimental condition (i.e., b path). In line with the results of Study 1, essentialism predicted dehumanization across both models (Ascent: $\beta = .16$, $p = .002$; A–M: $\beta = .18$, $p < .001$). Finally, to test our hypothesis that essentialism would account for the effect of experimental condition on dehumanization, we observed the indirect path of the models. Indeed, we observed an indirect effect of experimental condition through essentialism on both Ascent ($\beta_{indirect} = -.09$, 95% CI [$-.16$, $-.03$]) and Animalistic–Mechanistic dehumanization ($\beta_{indirect} = -.10$, 95% CI [$-.18$, $-.04$]).

Study 3

We conducted Study 3 to confirm and extend the findings of Study 2 by manipulating a separate facet of essentialism and observing its effects on dehumanization. In this study, we focused on biological essentialism, the view that human attributes are determined solely by one's genetic makeup (Haslam et al., 2000). Biological essentialism covaries with the other three facets of essentialism identified by Bastian and Haslam (2006; immutability, discreteness, and informativeness), and has been associated with negative stereotypes, sexism, and prejudice in its own right (e.g., Keller, 2005; Williams & Eberhardt, 2008). Thus, we were interested in whether manipulating biological essentialism would affect psychological essentialism more broadly, and whether such changes would influence blatant dehumanization.

Therefore, we randomly assigned participants to think of racial categories either as biologically determined, as a social construct, or to a control condition. We expected those in the biological essentialism condition would express greater essentialism than those in the social constructionist and control conditions. Conversely, those in the social constructionist condition were expected to express less essentialism than the other conditions. We also hypothesized that the greater essentialism in the biological essentialism condition would exacerbate dehumanization, while the lower essentialism in the social constructionist condition would attenuate it.

Method

Participants

We collected data from 669 subjects via MTurk, again oversampling on the basis of related research to account for data exclusions (Williams & Eberhardt, 2008). We excluded 125 participants who either failed an attention check, were not American citizens, or did not consent to our using their data. Of the 544 remaining participants, 284 were male, 258 were female, and 2 did not identify as either. The age of the sample ranged from 18 to 82 years ($M = 36.72$, $SD = 11.64$). A sensitivity analysis using $G*Power$ (Faul et al., 2007) determined this sample enabled us to detect an effect of our intervention of $d = .26$ with 80% power.

Materials

Psychological essentialism, dehumanization (both Ascent and Animalistic–Mechanistic), and the credibility and comprehensibility of the articles were assessed as in Study 2.

Article Manipulations. To manipulate biological essentialism, we adapted a set of articles developed by Williams and Eberhardt (2008). Both articles putatively described recent findings from geneticists. The essentialism article was titled "Scientists Pinpoint Genetic Underpinnings of Race," and described how geneticists had

---

[8] We observed the same pattern of results when we entered scores on the credibility measure as a covariate in the models reported below.

[9] The incremental condition also had significantly lower scores on each subscale of the ES+.

[10] Given that we explicitly manipulated implicit theories, we also reran these analyses with the immutability subscale of the ES+ removed, as it directly measures implicit theories. Entering a composite of just the other facets of essentialism (i.e., discreteness, informativeness, and biological basis) as the mediator, we observed the same pattern of results as the two models reported in the manuscript.

[11] We also repeated these analyses with each individual outgroup's score on both measures of dehumanization as the dependent variable, and observed a similar of results (Supplemental Materials—Figures S2–S7).

Figure 1

Path Model Showing Indirect Effects of Psychological Essentialism on (a) Ascent and (b) Animalistic–Mechanistic Dehumanization in Study 2
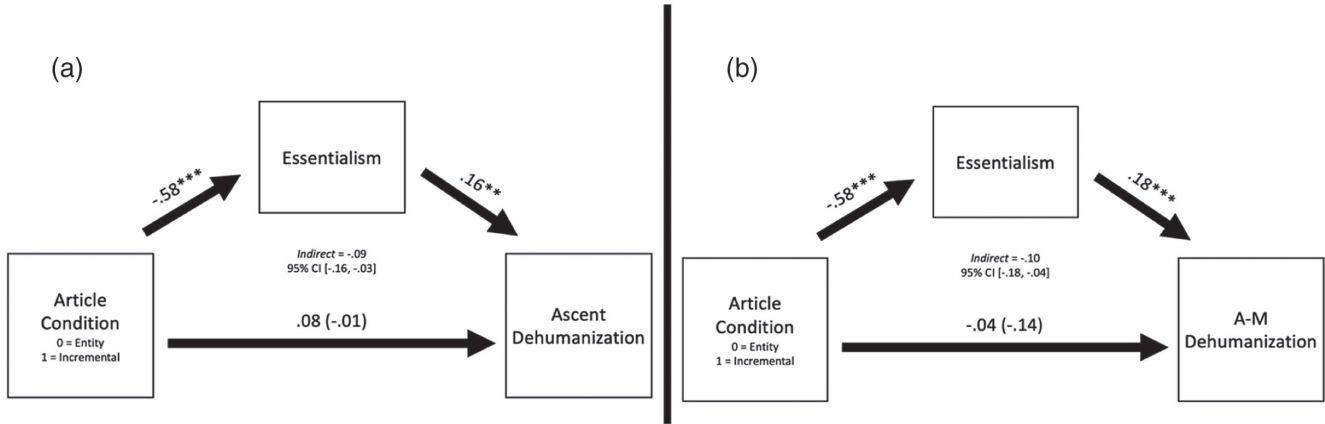
Note. Values reflect standardized β coefficients. Total effect in parentheses.
** $p < .01.$ *** $p < .001.$

"uncovered genetic codes that can be used to determine one's racial background." The social constructionist article was titled "Scientists Revel That 'Race' Has No Genetic Basis." It described the same research, but instead concluded that "classifying people into different 'races' is entirely cultural in origin. It doesn't reflect any biological reality."

The control article was formatted like the other two articles and was also related to genetics. However, it made no reference to differences in human attributes due to biological factors.[12] Articles are included in Supplemental Materials—Study 3 Manipulations.

Procedure

After providing consent, participants were told we were interested in their awareness of media issues and completed several filler items to bolster this cover story. Then, they were randomly assigned to read either the biological essentialism ($n = 178$), social constructionist ($n = 183$), or control ($n = 183$) article. All participants then completed the Essentialism Scale. They then rated four national outgroups (Iranians, Chinese people, Somalis, and North Koreans), presented in randomized order, on the Ascent and Animalistic–Mechanistic measures of dehumanization. They then evaluated the credibility and comprehensibility of the article they read and provided demographic information. Finally, participants were thoroughly debriefed and given the opportunity to withdraw their consent to let us use their data since we employed minor deception to obtain it.

Results

Differences Between Articles

We performed two one-way analysis of variance (ANOVAs) to determine whether the articles differed on credibility or comprehensibility. The full reporting of these results is included in Supplemental Materials—Differences Between Manipulations (Study 3). The control article we employed was rated as both

more credible and comprehensible than the constructionist article, and more credible than the essentialism article. However, the two experimental articles did not differ on either of these dimensions. Since we were primarily concerned with using the control condition to compare against the experimental conditions, we conducted all subsequent analyses as planned.[13]

Differences in Psychological Essentialism

We then sought to determine whether the biological essentialism article increased participants' essentialism, while the social constructionist article decreased it. To do so, we performed a one-way ANOVA with article condition as the between-subjects factor and scores on the Essentialism Scale as the dependent variable. Contrary to expectations, no significant differences emerged, $F(2, 532) = 1.23$, $p = .29$. To determine whether any of the subdomains of psychological essentialism differed between conditions, we repeated this procedure with each of the subscales of the Essentialism Scale as a separate dependent variable. No differences emerged between conditions on the immutability, discreteness, or informativeness subscales.[14] However, we did observe significant differences between conditions on the biological basis subscale, $F(2, 540) = 7.64$, $p = .001$, $\eta_p^2 = .03$. Tukey's HSD tests revealed that those in the constructionist condition ($M = 3.68$, $SD = 1.51$) scored lower on the biological basis subscale than both the essentialism ($M = 4.23$, $SD = 1.40$, $p < .001$), and control conditions ($M = 4.12$, $SD = 1.30$, $p = .003$). However, those in the essentialism condition did not differ from the control condition in biological essentialist thinking, $p = .47$. Perhaps participants had a relatively high level of biological essentialism to begin with, which would be

---

[12] This article was adapted from a 2016 article published on the *Science* website and used with the author's permission: https://www.sciencemag.org/news/2016/06/undead-genes-come-alive-days-after-life-ends

[13] We also repeated all subsequent analyses with just the experimental conditions, and obtained the same pattern of results.

[14] Descriptive statistics for the conditions on each subscale are presented in Supplemental Materials—Table S2.

consistent with past work suggesting this is a very common way people reason about social categories (Keller, 2005).

Effect of Psychological Essentialism on Blatant Dehumanization

We conducted simple mediations using PROCESS (Model 4; Hayes, 2018) to test our hypothesis that the increased essentialism in the biological essentialism condition would exacerbate dehumanization, while the decreased essentialism in the social constructionist condition would attenuate it. As in Study 2, we created composite scores for both the Ascent ($a = .93$) and Animalistic–Mechanistic (A–M; $a = .77$) dehumanization measures. We then conducted two separate models with each composite measure as the dependent variable.[15] In both models, we entered the multicategorical variable denoting condition (0 = control, 1 = essentialism, 2 = constructionist) as the predictor. Since the effects of our manipulation were limited to the biological basis aspect of psychological essentialism, we entered scores on that subscale as the mediator.[16] Path diagrams for each of the models are depicted in Figure 2.

Across both models, the residual direct effect of the social constructionist condition, relative to the control condition, on dehumanization (c' path) was not significant (Ascent: $\beta = -.07$, $p = .47$; A–M: $\beta = .06$, $p = .59$), suggesting biological essentialism fully accounted for the effects. The same was true for the residual direct effect of the essentialism condition, relative to the control condition, on Ascent dehumanization, $\beta = -.12$, $p = .24$, although the residual direct effect for the essentialism condition on A–M dehumanization was significant, $\beta = -.24$, $p = .02$. Importantly, in line with the previous studies, essentialist thinking continued to predict blatant dehumanization. Examining the b path of the models, we observed that scores on the biological basis subscale of the ES+ strongly predicted greater dehumanization (Ascent: $\beta = .23$; A–M: $\beta = .29$, both $p < .001$).

To test the hypothesis that essentialism would account for the effect of article condition on dehumanization, we examined the indirect path. Indeed, the reductions in biological essentialism experienced by those reading the constructionist article, relative to the control condition, predicted lower Ascent ($\beta_{indirect} = -.07$, 95% CI [$-.13, -.02$]) and Animalistic–Mechanistic dehumanization ($\beta_{indirect} = -.08$, 95% CI [$-.15, -.02$]). However, this indirect effect did not occur when comparing the essentialism and control conditions (Ascent: $\beta_{indirect} = .02$, 95% CI [$-.02, .07$]; A–M: ($\beta_{indirect} = .03$, 95% CI [$-.03, .09$]). Considering that the essentialism and control conditions did not differ in their biological essentialism, our failure to find a significant indirect effect when comparing them is unsurprising. We tentatively conclude that we did not observe an indirect effect among those reading the biological essentialism article because the relatively high-baseline levels of biological essentialism among those in the control condition produced a ceiling effect.

General Discussion

To dehumanize another is to perceive them as lacking a common human essence, thereby disengaging the moral considerations typically reserved for fellow humans (Bandura, 1999; Smith, 2011). To dehumanize another, one must have a conception of a defining human essence that the target lacks. Thus, psychological

essentialism has been claimed to undergird dehumanization (Haslam, 2006; Leyens et al., 2000; Smith, 2011). We build on a small body of past work linking essentialism to subtle forms of dehumanization by demonstrating that it also predicts the blatant dehumanization associated with extreme aggression and hostility (Bruneau & Kteily, 2017). This occurred when considering both national (e.g., Iranians, North Koreans) and nonnational (e.g., homeless people, heroin addicts) outgroups, and did so over and above other factors routinely associated with blatant dehumanization (prejudice, SDO, and ideological conservatism; Kteily et al., 2015).

Our results also provide qualified evidence that undermining essentialist thinking may mitigate dehumanization. For instance, leading individuals to hold an incremental, as opposed to entity, view of personality reduced their essentialist thinking, and this accounted for reductions in dehumanization (Study 2). This is consistent with a burgeoning body of work documenting how implicit theory interventions can promote positive intergroup relations (e.g., Halperin et al., 2011). Nonetheless, we failed to find a significant mean difference in dehumanization between the incremental and entity conditions (see Supplemental Materials—Tables S3 and S4). Perhaps a third variable suppressed the differences in dehumanization between conditions.[17] For instance, since essentialist stereotypes about individuals' character are often invoked to justify contemporary social inequality (Haslam & Whelan, 2008), undermining such stereotypes may elicit backlash from those wanting to maintain the status quo (e.g., ideological conservatives; Jost, 2017).

We were also able to reduce biological essentialism by leading participants to view racial categories more as a product of social construction than of biological reality, and this also accounted for reductions in dehumanization (Study 3). However, this result should be interpreted with caution, as the measure of biological essentialism accounting for the indirect effect overlapped conceptually with our manipulation, thereby introducing the possibility of a spurious indirect effect (see Rohrer, 2019). Moreover, as in Study 2, our social constructionism intervention did not lead to an overall decrease in dehumanization among those in this condition. Rather, only those who showed lower biological essentialist thinking as a result of the intervention evinced

---

[15] Again, for robustness we also analyzed each outgroup individually on both measures of dehumanization, and found the same pattern of results across all models (Supplemental Materials—Figures S8–S15).

[16] We note the inclusion of a mediator that overlaps conceptually with our manipulation of biological essentialism introduces the possibility of a spurious indirect effect, particularly in light of the absence of direct or total effects (Rohrer, 2019). We discuss this issue in the general discussion.

[17] It is also possible that we failed to observe a direct or total effect in Study 2 because the facet of essentialism we directly targeted in the manipulation (entity theories, or immutability) is not as crucial a facilitator of dehumanization as other facets. To examine this, we conducted additional regression analyses concerning participants' dehumanization of each of the national outgroups from Studies 1 and 3 (focusing only on data from participants in the control condition in Study 3; $n = 183$). We entered each facet of essentialism (immutability, discreteness, informativeness, and biological basis) as a predictor of dehumanization in separate regressions, controlling for prejudice, SDO, conservatism, and ingroup dehumanization in each. Immutability was indeed a relatively weak predictor of dehumanization, so future work could consider whether targeting the other facets not considered in the present research (i.e., discreteness and informativeness) exert stronger effects. We credit this insight to Borja Martinovic.

Figure 2

Path Model Showing Indirect Effects of Psychological Essentialism on (a) Ascent and (b) Animalistic–Mechanistic Dehumanization in Study 3
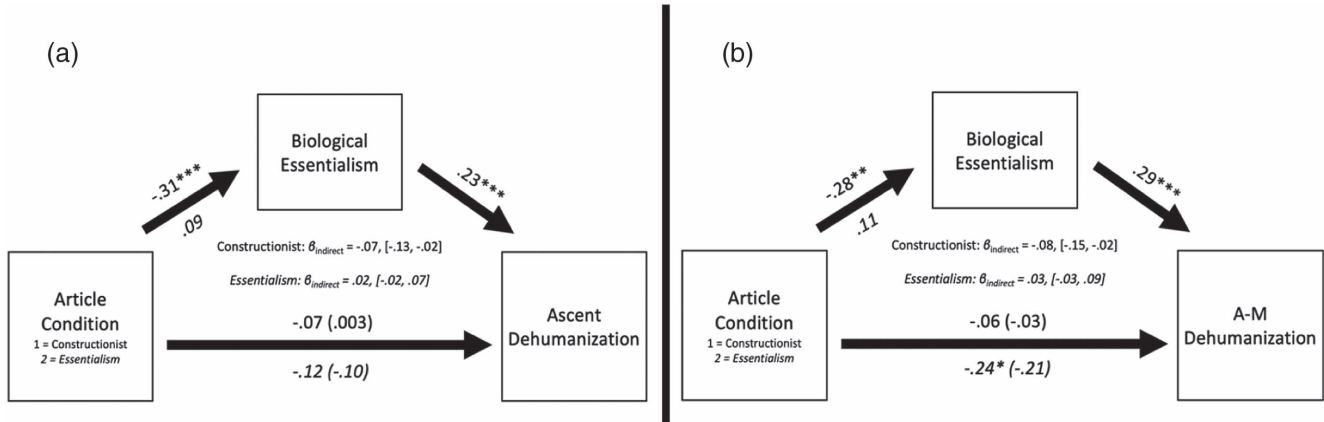
Note. Values reflect standardized β coefficients. Total effect in parentheses. Values for the constructionist condition are above the line, those for the essentialism condition are italicized and below the line.

* *p* < .05.   ** *p* < .01.   *** *p* < .001.

downstream reductions in dehumanization. Again, perhaps constructionist arguments only undermine essentialist thinking, and the dehumanization associated with it, among those more disposed to challenging the status quo, while inciting backlash from those looking to maintain it. Given that individuals led to accept a social constructionist view of race show improved interracial attitudes (Williams & Eberhardt, 2008), it is crucial for research to investigate under what conditions audiences may be more amenable to such a message.

Although we were motivated to investigate blatant dehumanization because of its prominence throughout various instances of intergroup violence (Goldhagen, 2009; Smith, 2011), our studies' lack of ecological validity limits their potential generality to these contexts in which dehumanization is most problematic. Undoubtedly, self-report methodology alone cannot capture many important factors that influence perpetrators' dehumanization of their victims in real-world conflicts, so it should be complemented with more ecologically valid approaches such as systematic analysis of perpetrator discourse, written testimonies, and other archival data. Since blatant dehumanization continues to foment contemporary intergroup conflicts, a synthesis of experimental and archival approaches appears crucial (Bruneau & Kteily, 2017; Hagan & Rymond-Richmond, 2008).

Nonetheless, our research provides a promising foundation from which to investigate ordinary psychological processes contributing to extraordinary acts of violence. It provides critical support for the claim that psychological essentialism is intimately linked with blatant dehumanization (Smith, 2011), while contributing to a burgeoning stream of work demonstrating the effects of essentialist thinking on social cognition more broadly (for a review, see Haslam & Whelan, 2008). Most importantly, we demonstrate that reducing essentialist thinking can have downstream effects on attenuating dehumanization, suggesting encouraging possibilities for improving intergroup relations. We encourage further research to investigate third variables that could amplify or suppress the effects of

essentialism-reducing interventions, and to further specify essentialism's role in the process of dehumanization.

References

Atran, S., Medin, D., & Sousa, P. (2002). Essentialism and folk biology: Evidence from Brazil. *Journal of Cognition and Culture*, *2*(3), 195–223. https://doi.org/10.1163/15685370260225099

Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, *3*(3), 193–209. https://doi.org/10.1207/s15327957pspr0303_3

Bandura, A., Underwood, B., & Fromson, M. E. (1975). Disinhibition of aggression through diffusion of responsibility and dehumanization of victims. *Journal of Research in Personality*, *9*(4), 253–269. https://doi.org/10.1016/0092-6566(75)90001-X

Bastian, B., Denson, T. F., & Haslam, N. (2013). The roles of dehumanization and moral outrage in retributive justice. *PLOS ONE*, *8*(4), Article e61842. https://doi.org/10.1371/journal.pone.0061842

Bastian, B., & Haslam, N. (2006). Psychological essentialism and stereotype endorsement. *Journal of Experimental Social Psychology*, *42*(2), 228–235. https://doi.org/10.1016/j.jesp.2005.03.003

Bastian, B., & Haslam, N. (2008). Immigration from the perspective of hosts and immigrants: Roles of psychological essentialism and social identity. *Asian Journal of Social Psychology*, *11*(2), 127–140. https://doi.org/10.1111/j.1467-839X.2008.00250.x

Bruneau, E., & Kteily, N. (2017). The enemy as animal: Symmetric dehumanization during asymmetric warfare. *PLOS ONE*, *12*(7), Article e0181422. https://doi.org/10.1371/journal.pone.0181422

Buhrmester, M. D., Talaifar, S., & Gosling, S. D. (2018). An evaluation of Amazon's Mechanical Turk, its rapid rise, and its effective use. *Perspectives on Psychological Science*, *13*(2), 149–154. https://doi.org/10.1177/1745691617706516

Campbell, D. T. (1958). Common fate, similarity, and other indices of the status of aggregates of persons as social entities. *Behavioral Science*, *3*(1), 14–25. https://doi.org/10.1002/bs.3830030103

Chiu, C. Y., Hong, Y. Y., & Dweck, C. S. (1997). Lay dispositionism and implicit theories of personality. *Journal of Personality and Social Psychology*, *73*(1), 19–30. https://doi.org/10.1037/0022-3514.73.1.19

Costello, K., & Hodson, G. (2010). Exploring the roots of dehumanization: The role of animal—human similarity in promoting immigrant humanization. *Group Processes & Intergroup Relations*, 13(1), 3–22. https://doi.org/10.1177/1368430209347725

Costello, K., & Hodson, G. (2014). Explaining dehumanization among children: The interspecies model of prejudice. *British Journal of Social Psychology*, 53(1), 175–197. https://doi.org/10.1111/bjso.12016

Dweck, C. S. (2008). *Mindset: The new psychology of success*. Random House Digital.

Eide, E. (2016). Strategic essentialism. In N. Naples, M. Wickramasinghe, W. A. Wong, & R. C. Hoogland (Eds.), *The Wiley Blackwell encyclopedia of gender and sexuality studies* (pp. 1–2). Wiley Blackwell. https://doi.org/10.1002/9781118663219.wbegss554

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175–191. https://doi.org/10.3758/BF03193146

Fiske, S. T., Cuddy, A. J., Peter, G., & Xu, J. (2019). "A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition": Correction to Fiske et al. (2002). *Journal of Personality and Social Psychology*. Advance online publication. https://doi.org/10.1037/pspa0000163

Gelman, S. A. (2003). *The essential child: Origins of essentialism in everyday thought*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780195154061.001.0001

Goldhagen, D. J. (2009). *Worse than war: Genocide, eliminationism, and the ongoing assault on humanity*. Hachette UK.

Haddock, G., Zanna, M. P., & Esses, V. M. (1993). Assessing the structure of prejudicial attitudes: The case of attitudes toward homosexuals. *Journal of Personality and Social Psychology*, 65(6), 1105–1118. https://doi.org/10.1037/0022-3514.65.6.1105

Hagan, J., & Rymond-Richmond, W. (2008). The collective dynamics of racial dehumanization and genocidal victimization in Darfur. *American Sociological Review*, 73(6), 875–902. https://doi.org/10.1177/000312240807300601

Halperin, E., Russell, A. G., Trzesniewski, K. H., Gross, J. J., & Dweck, C. S. (2011). Promoting the Middle East peace process by changing beliefs about group malleability. *Science*, 333(6050), 1767–1769. https://doi.org/10.1126/science.1202925

Harris, L. T., & Fiske, S. T. (2006). Dehumanizing the lowest of the low: Neuroimaging responses to extreme out-groups. *Psychological Science*, 17(10), 847–853. https://doi.org/10.1111/j.1467-9280.2006.01793.x

Harris, L. T., & Fiske, S. T. (2009). Social neuroscience evidence for dehumanised perception. *European Review of Social Psychology*, 20(1), 192–231. https://doi.org/10.1080/10463280902954988

Harris, L. T., & Fiske, S. T. (2011). Dehumanized perception: A psychological means to facilitate atrocities, torture, and genocide? *Zeitschrift für Psychologie mit Zeitschrift für Angewandte Psychologie*, 219(3), 175–181. https://doi.org/10.1027/2151-2604/a000065

Haslam, N. (2006). Dehumanization: An integrative review. *Personality and Social Psychology Review*, 10(3), 252–264. https://doi.org/10.1207/s15327957pspr1003_4

Haslam, N., Bain, P., Douge, L., Lee, M., & Bastian, B. (2005). More human than you: Attributing humanness to self and others. *Journal of Personality and Social Psychology*, 89(6), 937–950. https://doi.org/10.1037/0022-3514.89.6.937

Haslam, N., & Ernst, D. (2002). Essentialist beliefs about mental disorders. *Journal of Social and Clinical Psychology*, 21(6), 628–644. https://doi.org/10.1521/jscp.21.6.628.22793

Haslam, N., Rothschild, L., & Ernst, D. (2000). Essentialist beliefs about social categories. *British Journal of Social Psychology*, 39(1), 113–127. https://doi.org/10.1348/014466600164363

Haslam, N., Rothschild, L., & Ernst, D. (2002). Are essentialist beliefs associated with prejudice? *British Journal of Social Psychology*, 41(1), 87–100. https://doi.org/10.1348/014466602165072

Haslam, N., & Whelan, J. (2008). Human natures: Psychological essentialism in thinking about differences between people. *Social and Personality Psychology Compass*, 2(3), 1297–1312. https://doi.org/10.1111/j.1751-9004.2008.00112.x

Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). Guilford Press.

Hirschfeld, L. A. (1996). *Race in the making: Cognition, culture, and the child's construction of human kinds*. MIT Press.

Ho, A. K., Sidanius, J., Kteily, N., Sheehy-Skeffington, J., Pratto, F., Henkel, K. E., Foels, R., & Stewart, A. L. (2015). The nature of social dominance orientation: Theorizing and measuring preferences for intergroup inequality using the new SDO$_7$ scale. *Journal of Personality and Social Psychology*, 109(6), 1003–1028. https://doi.org/10.1037/pspi0000033

Hong, Y. Y., Coleman, J., Chan, G., Wong, R. Y., Chiu, C. Y., Hansen, I. G., Lee, S.-L., Tong, Y.-Y., & Fu, H. Y. (2004). Predicting intergroup bias: The interactive effects of implicit theory and social identity. *Personality and Social Psychology Bulletin*, 30(8), 1035–1047. https://doi.org/10.1177/0146167204264791

Hornsey, M. J. (2008). Social identity theory and self-categorization theory: A historical review. *Social and Personality Psychology Compass*, 2(1), 204–222. https://doi.org/10.1111/j.1751-9004.2007.00066.x

Jost, J. T. (2017). Ideological asymmetries and the essence of political psychology. *Political Psychology*, 38(2), 167–208. https://doi.org/10.1111/pops.12407

Keller, J. (2005). In genes we trust: The biological component of psychological essentialism and its relationship to mechanisms of motivated social cognition. *Journal of Personality and Social Psychology*, 88(4), 686–702. https://doi.org/10.1037/0022-3514.88.4.686

Kelman, H. C. (1973). Violence without moral restraint: Reflections on the dehumanization of victims and victimizers. *Journal of Social Issues*, 29(4), 25–61. https://doi.org/10.1111/j.1540-4560.1973.tb00102.x

Kteily, N., Bruneau, E., Waytz, A., & Cotterill, S. (2015). The ascent of man: Theoretical and empirical evidence for blatant dehumanization. *Journal of Personality and Social Psychology*, 109(5), 901–931. https://doi.org/10.1037/pspp0000048

Kteily, N. S., & Bruneau, E. (2017). Darker demons of our nature: The need to (re) focus attention on blatant forms of dehumanization. *Current Directions in Psychological Science*, 26(6), 487–494. https://doi.org/10.1177/0963721417708230

Landry, A., Ihm, E., & Schooler, J. W. (2021). Hated but still human: Metadehumanization leads to greater hostility than metaprejudice. *Group Processes & Intergroup Relations*. Advance online publication. https://doi.org/10.1177/1368430220979035

Levy, S. R., Stroessner, S. J., & Dweck, C. S. (1998). Stereotype formation and endorsement: The role of implicit theories. *Journal of Personality and Social Psychology*, 74(6), 1421–1436. https://doi.org/10.1037/0022-3514.74.6.1421

Leyens, J. P., Cortes, B., Demoulin, S., Dovidio, J. F., Fiske, S. T., Gaunt, R., Paladino, M.-P., Rodriguez-Perez, A., Rodriguez-Torres, R. & Vaes, J. (2003). Emotional prejudice, essentialism, and nationalism. The 2002 Tajfel Lecture. *European Journal of Social Psychology*, 33(6), 703–717. https://doi.org/10.1002/ejsp.170

Leyens, J. P., Paladino, P. M., Rodriguez-Torres, R., Vaes, J., Demoulin, S., Rodriguez-Perez, A., & Gaunt, R. (2000). The emotional side of prejudice: The attribution of secondary emotions to ingroups and outgroups. *Personality and Social Psychology Review*, 4(2), 186–197. https://doi.org/10.1207/S15327957PSPR0402_06

Lieberman, P. (2013). *The unpredictable species: What makes humans unique*. Princeton University Press. https://doi.org/10.1515/9781400846702

Medin, D. L., & Ortony, A. (1989). Psychological essentialism. In S. Vosniadou & A. Ortony (Eds.), *Similarity and analogical reasoning* (pp. 179–196). Cambridge University Press. https://doi.org/10.1017/CBO9780511529863.009

Pratto, F., Sidanius, J., Stallworth, L. M., & Malle, B. F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology*, *67*(4), 741–763. https://doi.org/10.1037/0022-3514.67.4.741

Rohrer, J. (2019, October 3). *Indirect effect ex machina*. The 100% CI. http://www.the100.ci/2019/10/03/indirect-effect-ex-machina/

Rothbart, M., & Taylor, M. (1992). Category labels and social reality: Do we view social categories as natural kinds? In G. R. Semin & K. Fiedler (Eds.), *Language and social cognition* (pp. 11–36). Sage Publications.

Savage, R. (2009). *Genocidal dehumanisation as a discursive strategy in the modern era* [Unpublished doctoral thesis]. University of Sydney.

Smith, D. L. (2011). *Less than human: Why we demean, enslave, and exterminate others*. St. Martin's Press.

Snyder, T. (2011). *Bloodlands: Europe between Hitler and Stalin*. Random House.

Williams, M. J., & Eberhardt, J. L. (2008). Biological conceptions of race and the motivation to cross racial boundaries. *Journal of Personality and Social Psychology*, *94*(6), 1033–1047. https://doi.org/10.1037/0022-3514.94.6.1033