Bridging The Divide: The Effect Of Humanizing Information On Attitudes Toward Political Outgroup Members

by

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B.A., Valparaiso University, 2019

Submitted to the Graduate Faculty of the

Dietrich School of Arts and Sciences in partial fulfillment

of the requirements for the degree of

Master of Science

University of Pittsburgh

2021

UNIVERSITY OF PITTSBURGH

DIETRICH SCHOOL OF ARTS AND SCIENCES

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Liberals and conservatives in the United States dislike and dehumanize those on the other side. This divide leads to political stalemates, destroyed relationships, and even violence. I examined the benefits of humanizing members of the political outgroup by providing people with *humanizing information*—cues that signal a person's cognitive and emotional complexity. I examined the effectiveness of humanizing information in three preregistered experiments (N = 1389). Study 1 tested whether learning humanizing information about an outgroup member would reduce bias towards them, relative to a control containing only political information. Study 2 sought to replicate this effect by comparing the humanizing information to a control that contained non-humanizing individuating information. Study 3 tested this effect in the timely context of social media feeds, while also testing whether the benefits of learning humanizing information extended to additional members of the outgroup. Each methodology revealed that, compared to those who read non-humanizing controls, participants who learned humanizing information about a political outgroup member were less hostile and more empathic toward that outgroup member. All three studies also provided evidence that judging the outgroup member as more human contributed to this reduction in bias. Further, Study 3 revealed that the benefits of humanizing information extended to members of the outgroup that were connected to the humanized member. The current studies thus identify a promising avenue for reducing interparty hostility.

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1.0 Introduction

Over recent years, Americans ascribing to different political ideologies have become increasingly hostile toward one another. Liberals and conservatives repudiate those who do not share their views. Political outgroup members are seen as one-dimensional stereotypes—as less than fully human. This dehumanization of political outgroup members thwarts interparty affiliation and cooperation, harming people's relationships and the democratic process. In this paper, I propose a novel method of humanizing members of the political outgroup by providing people with *humanizing information*—cues that signal a person's cognitive and emotional complexity. Across three preregistered experiments, I find that presenting participants with humanizing information about a political outgroup member reduces hostility and promotes empathic effort toward this member. This work thus offers insights into how we might begin to build a bridge between political outgroups, with possible implications for other intergroup conflict contexts.

1.1 Political Conflict in the United States

Perhaps more than ever before, the political climate in the United States is defined by hostility. Liberals and conservatives experience animosity, value violation, bias, and prejudice toward those from the political outgroup (Chambers et al., 2013; Crawford & Brandt. 2020; Iyengar & Westwood, 2015; Moore-Berg et al., 2020; West & Iyengar, 2020; Wetherell et al., 2013). They dislike the other side even more than they love their own, and hostility toward the outgroup now drives political participation more than positivity toward one's ingroup (Finkel et

al., 2020; Iyengar & Krupenkin, 2018). Political partisans extend more cooperation to their political ingroups (Balliet et al., 2016), discriminate against members of the other party (Iyengar & Westwood, 2015), and sacrifice democratic principles to elect a candidate who champions their political interests (Graham & Svolik, 2020). Partisans also choose to affiliate primarily with those who share their political views (Dimock et al, 2014) and marry within party lines (Rosenfeld et al., 2011). Political differences are even dissolving established personal relationships: In 1000 interviews, nearly a third of participants said they ended a relationship with a friend or family member because of disagreements over politics and the 2016 election (Peters, 2018).

Recent theory defines this divide in terms of *political sectarianism*, where people adopt a moralized identity with one political group and see those in the other group as different, dislikable, and immoral (Finkel et al., 2020). This sectarianism is so extreme that people have come to dehumanize members of the political outgroup, seeing them as subhuman simply because of their political identity (Moore-Berg et al., 2020; Schroeder et al., 2017; Martherus et al., 2020; Cassese, 2020).

1.2 Dehumanization of the Political Outgroup

Dehumanization involves a representation of others that is diminished on two attributes: emotional complexity and cognitive complexity (Haslam & Loughnan, 2014). These attributes have been referred to and defined differently in different lines of dehumanization research. The dual model of dehumanization defines these as human nature and human uniqueness, respectively (Haslam, 2006; Haslam et al., 2005; Haslam & Bain, 2007). In mind perception research, these are defined as experience and agency (Gray et al., 2007; Schein & Gray, 2015; Waytz et al., 2010). In

the stereotype content model, these are defined as warmth and competence (Harris & Fiske, 2006). Dehumanization occurs when either one or both of these aspects are denied.

Dehumanization is shockingly common (Haslam & Loughnan, 2014; Haslam & Stratemeyer, 2016). People readily deny the humanity of racial, ethnic, and religious outgroups (Kteily et al., 2015; Dalsklev & Kunst, 2015), enemies in longstanding conflicts (Bruneau & Kteily, 2017), people who are homeless or addicted to drugs (Harris & Fiske, 2006), people who are short in stature (Kunst et al., 2019), and people who suffer from mental illness (Martinez et al., 2011), among others.

Dehumanization is distinct from general disliking (Haslam & Stratemeyer, 2016; Vaes at al., 2021) and often seems to grant people moral license to inflict harm or show indifference toward the plight of the dehumanized group. Although there have been recent challenges to the dehumanization literature (Over, 2021) that have inspired calls for a closer examination of the conditions under which dehumanization will occur and be harmful (Vaes at al., 2021; Giner-Sorolla et al., 2021), considerable research has demonstrated the deleterious consequences of dehumanization for the dehumanized group. Dehumanization stokes hostility (Bruneau & Kteily, 2017; Kteily & Bruneau, 2017a, Kteily & Bruneau, 2017b), reduces empathy (Čehajić et al., 2009), perpetuates negative treatment (Waytz et al, 2010), promotes aggression (Rai et al., 2017), and hinders collaboration and compromise (Bruneau & Kteily, 2017). Dehumanization can even become cyclical, with people who feel dehumanized *by* the outgroup reciprocating that dehumanization *toward* the outgroup (Kteily & Bruneau, 2017a).

In the United States, a growing body of research finds that people see outgroup political members as subhuman caricatures of their political identity (Cassese, 2020; Martherus et al., 2020; Moore-Berg et al., 2020; Schroeder et al., 2017). A number of psychological and contextual factors

may contribute to the dehumanization of the political outgroup. Across a variety of intergroup contexts, people tend to see outgroup members as more homogeneous than ingroup members (Rubin & Badea, 2012; Vandeselaere, 1991), a perception that causes people to buy into stereotypes about the outgroup and generalize those stereotypical judgments to all members (e.g., Park & Hastie, 1987). In the political domain specifically, people assume that outgroup members all share similar values and views (Rutchick et al., 2009), and exaggerate how much the outgroup has stereotype-consistent demographic characteristics (Ahler & Sood, 2017) and ideological perspectives (Chambers et al., 2006; Clifford, 2019).

These homogeneous and stereotypic views of the outgroup are maintained by people having minimal in-person contact with members of the outgroup. Liberals and conservatives tend to self-segregate into ideological silos, limiting the number of friends and neighbors who disagree with them (Motyl et al., 2014; Dimock et al, 2014). Recent work finds that people support breaking off friendships with those whose views are counter to their own (Buliga & MacInnis, 2020). Without opportunities to learn about diverse members of the outgroup and have their stereotypes violated (e.g., Kunda & Oleson, 1995), homogenous and stereotypic views of the outgroup are able to flourish.

These homogeneous and stereotypic views are also reinforced through media portrayals of the outgroup. Many Americans live in media bubbles where they encounter only views and opinions that are concordant with their own (Jurkowitz & Mitchell, 2020). This is exacerbated by liberals and conservatives only trusting partisan news sources that are congruent with their views (Jurkowitz et al., 2020). Even when people encounter views that are counter to their own, these are often dismissed through a process of motivated partisan reasoning (Munro et al., 2010; Reeder et al., 2005; Van Bavel & Pereira, 2018).

A similar process occurs on social media. Though there is some evidence that liberals and conservatives interact with each other on social media (Bakshy et al., 2015; Barberá et al., 2015), these interactions often lead to increased, rather than decreased, animosity (Bail et al., 2018). This might be because partisan interactions on social media often lead to moral outrage—anger and disgust toward those who violate their moral standards (Brady & Crockett, 2019; Crockett, 2017). Because content that produces moral outrage is shared more often on social media and is more likely to "go viral" (Brady et al., 2019a; Brady et al., 2019b, Brady et al., 2017; Frimer et al., 2019), liberals and conservatives are often exposed to inflammatory posts and tweets that perpetuate stereotypes and hostility (Finkel et al., 2020) and promote dehumanization (Dalsklev & Kunst, 2015).

On the whole, people are frequently exposed to information about the political outgroup that reinforces homogeneous and stereotypic views, with little opportunity for interactions and experiences that counter these perceptions. Dehumanization of the outgroup thus presents a major barrier to improving interparty relations, and I sought to attenuate this barrier by humanizing political outgroup members.

1.3 Humanizing the Political Outgroup

How might we help people adopt a more humanized view of the political outgroup? The process of humanization requires knowledge of a person's or group's human qualities—attributes that separate them from animals and objects and provide evidence of their capacity to experience complex emotions and cognitions (Gray et al., 2007; Harris & Fiske, 2006; Haslam, 2006; Haslam et al., 2005; Haslam & Bain, 2007; Schein & Gray, 2015; Waytz et al., 2010). I therefore developed

brief narratives about political outgroup members that conveyed aspects of who they are as people—their emotional experiences, personal characteristics, social roles, life goals—all of which portray them as feeling, thinking beings. I hypothesized that these portrayals would signal the outgroup member's humanness, thereby making them worthier of moral consideration and empathy.

This method for humanizing the political outgroup builds off established interventions aimed at reducing intergroup bias (see Paluck et al., 2020 for a review and meta-analysis of different methods). Research on the benefits of intergroup contact (Allport, 1955; Pettigrew, 1998) suggests that, under certain conditions, having in-person contact with outgroup members reduces intergroup bias and outgroup dehumanization (Brambilla et al., 2013; Bruneau et al., 2020; Capozza et al., 2017; Dovidio et al., 2003; Pettigrew & Tropp, 2006; 2008). Even Extended Contact—where participants are shown evidence of an ingroup member befriending an outgroup member (Cernat, 2011; Tezanos-Pinto et al., 2010; Wright et al., 1997)—and Imagined Contact—where participants vividly imagine having a positive interaction with an outgroup member (Harwood et al, 2011; Husnu & Crisp, 2010; Miles & Crisp. 2014, Warner & Vallamil, 2017)—have benefits for prejudice reduction. Through contact, people have opportunities to learn about an outgroup member, information that humanizes that specific outgroup member and casts doubt on stereotypes about the group more broadly.

Other successful interventions focus on increasing empathy and perspective-taking toward the outgroup. Perspective-taking interventions often encourage participants to put themselves in the shoes of the outgroup by, for example, writing down the experiences and feelings of an outgroup member (e.g., Todd et al., 2011). These interventions attenuate bias towards outgroup members and ease intergroup tensions (Bruneau & Saxe, 2012; Galinsky & Moskowitz, 2010;

Todd et al., 2011). By helping people understand the thoughts and feelings of members of the outgroup, empathy and perspective-taking interventions provide opportunities for people to see the outgroup as possessing these human qualities.

An additional category of interventions utilizes entertainment or media. For example, watching television shows (e.g., *Queer Eye for the Straight Guy* and *Will & Grace*) about outgroup members is linked to reduced bias towards those groups (Schiappa et al., 2005; Schiappa et al., 2006). Reading literary fiction has been found to increase theory of mind (Kidd & Castano, 2013) and reduce prejudice toward outgroups (Vezzali et al., 2015). Like empathy and perspective-taking interventions, these interventions provide narratives about characters that give insight into their emotions and cognitions and thus foster a more humanized view of the outgroup.

Although each of these categories of interventions demonstrate that learning about the outgroup and relating to their human experience can reduce intergroup bias, I developed an intervention that would leverage these key psychological ingredients in the unique context of political conflict. Because this context is wrought with normative hostility where there is little motivation to empathize, little voluntary and cooperative contact, and frequent exposure to negative, stereotypical portrayals of the political outgroup, I designed an intervention that might successfully humanize political opponents even among participants with minimal motivation to cooperate with the outgroup. Further, because there is more frequent online contact than in-person contact between political outgroup members, I designed an intervention that could be administered online and even on social media platforms (Study 3). Finally, it is a minimal and light-touch intervention that only requires people to read small amounts of information, thereby offering possibilities for scaling up the intervention to broaden its reach.

1.4 Research Overview

The goal of the present research was to reduce bias toward a member of the political outgroup by providing a more humanized view of this person. I tested the impact of humanizing information on a political outgroup member across three preregistered experiments. In Study 1, I tested whether learning humanizing information about an outgroup member would reduce bias towards them, relative to a control containing only political information about this person. In Study 2, I sought to replicate this effect by comparing the humanizing information to a control that included individuating but non-humanizing information. In Study 3, I tested this effect in the timely context of social media feeds. In all three studies, I tested the hypothesis that presenting political partisans with humanizing information about outgroup members would improve perceptions of them and decrease hostility. In each of these studies, I also tested whether judging the outgroup as more human mediated this reduction in bias. In addition, in Studies 2 and 3 I tested whether the benefits of humanization extended to the broader political outgroup, which would suggest that promoting a humanized view of outgroup members is an important step toward reducing political animus.

All studies were preregistered at https://osf.io/a23rz/?view_only=15a5c4524de645f19d8728a960888d19. Sample sizes were also preregistered, aiming to recruit 100 (or more) participants per condition in every study (Simmons et al., 2013). To see all preregistered analyses not reported in the paper, please see Appendices E, F, and G.

2.0 Study 1

In Study 1, I aimed to test the effectiveness of humanizing information on reducing bias toward a political outgroup (vs. ingroup) member. Liberal and conservative participants read about a target who ostensibly belonged to either their political outgroup or ingroup. Participants were randomly assigned to read one of three profiles. For those in the political cue control condition, they read only about the target's political orientation. This condition was compared to one of two humanizing conditions that differed only by when the target's political orientation was presented. In the early political cue condition, participants learned of the target's orientation before learning humanizing information about the target. In the late political cue condition, participants learned of the target's orientation after learning humanizing information about the target. Based on primacy effects in impression formation (Asch, 1946; Sullivan, 2019), I explored whether the timing in which the target was humanized mattered, anticipating that the humanizing information might be most effective if presented prior to learning political cue information.

2.1 Methods

2.1.1 Participants

I planned to collect a sample of 600 from Prolific Academic, an online recruitment site shown to be effective for social science research (Palan & Schitter, 2018). The total collected sample was 602 participants. As was preregistered, I excluded those who failed the attention check

(n = 5), leaving a final sample of 597 (292 female, 298 male, 5 non-binary/third gender, M_{age} = 38.36, SD_{age} = 13.53). Using selection criteria in Prolific, I screened to include roughly equal numbers of liberals (n = 299) and conservatives (n = 298). A sensitivity analysis at 90% power revealed that I was powered to detect a small interaction effect (f = .15; Faul et al., 2007).

2.1.2 Materials and Procedure

2.1.2.1 Manipulations

Study 1 was a 2 (political ingroup vs outgroup) X 3 (humanizing information with early political cue vs. humanizing information with late political cue vs. non-humanizing political cue control) experimental study. Participants first encountered one of six vignettes about a fictional character named Alex, all of which took the form of describing a day in the life of Alex. These vignettes differed on two dimensions. First, Alex was described as a member of either the participant's political ingroup (e.g., a conservative participant read that Alex was conservative) or outgroup (e.g., a conservative participant read that Alex was liberal). Second, the vignettes contained either humanizing information about Alex (e.g., her life story, social roles, personality, cognitions, and emotions)—with the political cue presented either before or after the humanizing information was presented—or no humanizing information about Alex in the control condition. See Appendix B for full manipulation text.

2.1.2.2 Outcomes

Manipulation Check. As a manipulation check and mediator, participants completed an ascent dehumanization measure (Kteily et al., 2015). The ascent dehumanization measure is considered a blatant measure of dehumanization, the type of dehumanization reserved for

outgroups that people are most prejudiced against. It asked participants to rate Alex on a pictorial representation of dehumanization that contained five silhouettes, ranging from ancestors reminiscent of modern apes, to more upright ancestors, to full humans. Participants used a slider to indicate where they thought Alex belonged on these images using a scale of 1 (Very animalistic) to 100 (Very human).

Participants also completed a measure of infrahumanization (adapted from Leyens et al., 2001), which is considered a subtler measure of dehumanization. Participants rated how likely Alex was to feel six primary emotions (e.g., "Happiness") and six secondary emotions (e.g., "Enjoyment"). Primary emotions are simple emotions shared by both animals and humans. Secondary emotions are more nuanced and complex emotions reserved for only humans. Previous work has found that people tend to attribute more secondary emotions to the ingroup than the outgroup (Leyens et al., 2001). Emotions were measured on a scale of 1 (Not at all likely) to 7 (Very likely) ($\alpha_{primary}$ = .68; $\alpha_{secondary}$ = .64).

Negative Affect. Participants then completed a measure of negative affect (adapted from Husnu & Crisp, 2010). This measured how participants felt toward Alex, ranging from very positive emotions to very negative emotions. Participants rated Alex on six different affective pairs (e.g., Warm/Cold; Admiration/Disgust) on a nine-point scale (α = .92).

Empathic Effort. Participants completed a measure of empathic effort towards Alex (adapted from Schumann et al., 2014). This measure assessed how willing participants would be to put forth effort to empathize with Alex. This measure included six items (e.g., "When talking to Alex, to what extent would you try to put yourself in her shoes?") and was measured on a scale of 1 (Not at all) to 7 (Very much) (α = .95).

Intergroup Anxiety. Participants then completed a measure of intergroup anxiety (Stephan & Stephan, 1985). This measure asked participants to imagine an interaction with Alex and indicate their feelings of anxiety on ten items (e.g., awkward, self-conscious) using a scale of 1 (Not at all) to 7 (Very much) ($\alpha = .90$). This measure is based on evidence that people often feel anxiety and threat when encountering outgroup members (e.g., Littleford et al., 2005).

Perceived Morality. Participants completed a measure of perceived morality (adapted from Brambilla et al., 2013). Participants answered four items (e.g., honest, trustworthy) about Alex's morality on a scale of 1 (Not at all) to 7 (Extremely) ($\alpha = .94$).

Additional Measures. In addition to the primary outcomes, for exploratory purposes participants also completed measures of implicit theories of empathy (Schumann et al, 2014), implicit theories of groups (Halperin et al., 2011), symbolic threat (Stephan et al., 1999), network heterogeneity (Scheufele et al., 2006), and strength of political affiliation.

2.2 Results

As was preregistered, I first ran a 2 (group condition: ingroup vs. outgroup) X 3 (humanizing condition: humanizing information with early political cue vs. humanizing information with late political cue vs. non-humanizing political cue control) factorial ANOVA on each of the outcomes. The two humanizing conditions did not differ from each other on any outcome, suggesting that the order of presentation of the humanizing information and political information did not influence the effectiveness of the humanization information. I therefore present these two conditions collapsed in the analyses below for simplicity and consistency of design across studies. However, results using the full design are presented in Appendix E. I also

preregistered that all analyses would control for demographic variables. However, because controlling for these variables did not affect the results, below I report models without these controls for ease of interpretation (see Appendix E for models that control for demographics).

2.2.1 Manipulation Check

For all outcomes, condition means are presented in Table 1 and test statistics are presented in Table 2. As a manipulation check, I conducted 2 (group condition: ingroup vs. outgroup) X 2 (humanizing condition vs. non-humanizing control) ANOVA on the ascent dehumanization measure. There was a significant effect of group condition: relative to when Alex was an outgroup member, participants who read that Alex was an ingroup member saw her as more human. There was a marginally significant effect of humanizing condition, such that people in the humanizing (vs. control) condition tended to see Alex as more human. Finally, there was a significant interaction, such that the humanizing condition increased the perception that outgroup Alex was human and consequently helped close the gap between the ingroup and outgroup.

It should be noted that the ascent dehumanization measure—as in other studies that have used this measure (e.g., Kteily et al., 2015)—had a non-normal distribution (skew = -3.56, kurtosis = 16.54) due to 57% of participants rating Alex as fully human. I therefore re-ran this analysis on only participants who did not attribute full humanity to Alex (i.e., gave her a score < 100). Doing so revealed a similar pattern of results with a significant interaction, where participants in the humanizing condition perceived Alex as more human when she was an outgroup member.

I conducted the same 2 (group condition: ingroup vs. outgroup) X 2 (humanizing condition vs. non-humanizing control) ANOVA on the infrahumanization measure. There was a significant effect of group condition on primary emotions, such that when Alex was an ingroup (vs. outgroup)

member, participants saw her as more capable of primary emotions. There was no effect of group condition on secondary emotions. There was also a significant effect of humanizing condition on secondary emotions, and a marginally significant effect on primary emotions, such that people in the humanizing (vs. control) condition saw her as more capable of primary and secondary emotions. There were no significant interactions on primary or secondary emotions, suggesting that the humanizing condition humanized both ingroup and outgroup Alex, possibly due to statements in this condition that specifically mentioned Alex's emotions.

2.2.2 Outcome Variables

Given the large number of outcome variables, I then conducted a 2 (group condition: ingroup vs. outgroup) X 2 (humanizing condition vs. non-humanizing control) multivariate ANOVA on all remaining outcomes (negative affect; empathic effort; intergroup anxiety; perceived morality). This analysis revealed significant main effects of group condition ($F(4, 590) = 34.17$, Wilks' $\lambda = .81$, $p < .001$, $\eta_p^2 = .19$), humanizing condition ($F(4, 590) = 45.71$, Wilks' $\lambda = .76$, $p < .001$, $\eta_p^2 = .24$), and the predicted interaction ($F(4, 590) = 5.86$, Wilks' $\lambda = .96$, $p < .001$, $\eta_p^2 = .04$).

To unpack these effects, I conducted 2 (group condition: ingroup vs. outgroup) X 2 (humanizing condition: humanizing condition vs. non-humanizing control) ANOVAs on each outcome separately (see Tables 1 and 2). On all outcomes, a significant main effect of group condition emerged. Relative to when Alex was an outgroup member, participants who read that Alex was an ingroup member saw her as more moral, reported less intergroup anxiety and negative affect toward her, and indicated greater willingness to invest effort to empathize with her.

On most outcomes, there was also a significant main effect of humanizing condition. People in the humanizing (vs. control) condition saw Alex as more moral, reported less intergroup anxiety, less negative affect toward her, and greater willingness to invest empathic effort. However, there were also significant interactions on all outcomes (see Table 2 for simple effects). As can be seen in Figure 1, the humanizing condition improved outgroup perceptions and consequently helped close the gap between the ingroup and outgroup—though in no case did it entirely eliminate it.

2.2.3 Mediation Through Ascent Dehumanization

Finally, I tested indirect effects of the manipulation through the ascent dehumanization manipulation check.[1] All indirect effects were calculated using PROCESS model 8 (which allows for a moderator to act on the *a* and *c* paths of the mediation model) with 5000 bootstrapped samples. Humanizing condition was entered as the X variable, with group condition as the moderating variable. All models showed significant moderated mediation, such that there were significant indirect effects on all outcome variables for those in the outgroup condition but not for

[1] I ran mediation models through ascent dehumanization and not infrahumanization because the ascent measure offers a more direct assessment of dehumanization. Further, there is ambiguity regarding what infrahumanization assessed in the current study because (a) the humanizing condition increased the perception of both primary and secondary emotions in both the ingroup and outgroup conditions, likely because the humanizing condition specifically mentioned Alex's emotions, (b) inconsistent with prior work on infrahumanization, those in the control condition did not view the outgroup as being less capable of experiencing secondary emotions than the ingroup (see Table 1), and (c) neither primary (r = -.08, p = .218) nor secondary emotions (r = .03, p = .584) were associated with ascent dehumanization. Infrahumanization was not measured in Studies 2 or 3.

those in the ingroup condition (see Table 3 and Figure 2 for full results). Results did not change when using the ascent dehumanization < 100 measure as the mediator.

2.3 Discussion

Study 1 revealed that including humanizing information when describing an outgroup member significantly reduces bias towards this member on a number of different measures. I found the expected interaction on most outcomes, demonstrating that humanizing information works to reduce bias towards the outgroup while having smaller or no effects on the ingroup. One exception was the infrahumanization measures, which showed only a main effect of humanizing information on both primary and secondary emotions. This finding suggests that learning humanization information simply allowed people to see Alex as more capable of experiencing all emotions, regardless of whether she was part of their ingroup or outgroup. I also found no consistent differences between the early and late political cue conditions, suggesting that humanizing information might be effective regardless of when people learn about the target's political orientation.

3.0 Study 2

Study 1 found a significant effect of humanizing information when compared to a political cue information control. However, this first study failed to address potential effects of the length of the information participants received about the target. It is possible that the humanizing information used in Study 1 reduced bias because it required participants to think about the outgroup for a longer period of time. Similarly, the difference in the amount of information presented may have created demand characteristics because the political information was far more salient in the control condition where participants received almost no other information about Alex. A related concern is that Study 1 did not differentiate humanizing information from other forms of individuating information (Singletary & Hebl, 2009). Prior work finds that individuating information—any information about a specific person, such as their behavior, hobbies, or appearance (Kunda & Sherman-Williams, 1993)—can reduce reliance on group stereotypes (Krueger & Rothbart, 1988; Kunda & Sherman-Williams, 1993) and mitigate biased perceptions (Singletary & Helb, 2009). All of these concerns point to the importance of including a similar length control that includes non-humanizing individuating information. Doing so would provide more compelling evidence for the benefits of humanizing information by demonstrating that it is specifically humanizing information about a person that can reduce bias in this political context.

Study 2 worked to address these concerns by attempting to replicate the effects from Study 1 with a different design. Given the non-significant differences between early and late political cues, Study 2 used only one humanizing condition with the political cue presented early in the narrative. This condition was compared to a control condition about a day in the life of Alex that was matched for the amount of information in the humanizing condition. Further, the ingroup

condition was replaced with a non-political control condition to test how the effects may replicate when no political information is given. Finally, I included new measures to assess how the effect may generalize to perceptions of the political outgroup.

3.1 Method

3.1.1 Participants

I recruited 400 participants from Prolific. As was preregistered, I excluded those who failed the attention check (n = 5), leaving a final sample of 395 (207 female, 177 male, 10 non-binary/third gender/prefer not to say, M_{age} = 37.08, SD_{age} = 13.34). As in Study 1, I screened in Prolific to include roughly equal numbers of liberals (n = 198) and conservatives (n = 197). A sensitivity analysis at 90% power revealed that I was again powered to detect a small interaction effect (f = .16).

3.1.2 Materials and Procedure

Manipulations. Study 2 was a 2 (group condition: nonpolitical vs. outgroup) X 2 (humanizing condition: humanizing information vs. similar length individuating information) experimental design. Participants again read one of four vignettes about a fictional character named Alex, all of which took the form of describing a day in the life of Alex. In the experimental condition, the vignette was identical to the early cue humanizing condition from Study 1. In the control, the vignette was of similar length and contained information about the character without

including any humanizing information (e.g., "Alex starts her day by getting out of bed, turning off her alarm, and showering and brushing her teeth. After she gets dressed, she turns on the TV and listens to it as she heads into the kitchen to make breakfast"). To strengthen the contrast between the humanizing and control condition, I included one segment that subtly implied dehumanization ("Alex folds each piece of clothing slowly and mindlessly, her movements almost robotic. She stares off into the distance, not thinking about anything in particular"). The manipulations also differed by political group. In the outgroup condition, the character was identified as a political outgroup member. In the non-political condition, the character's political orientation was not mentioned. See Appendix C for full manipulation text.

Manipulation Check. As a manipulation check and potential mediator, participants completed the same measure of ascent dehumanization used in Study 1.

Alex Outcome Measures. As in Study 1, participants completed measures of negative affect ($\alpha = .95$), empathic effort ($\alpha = .94$), intergroup anxiety ($\alpha = .89$), and perceived morality ($\alpha = .95$) toward Alex. New to Study 2, participants also completed a new measure of identity fusion with Alex (Aron et al., 1992). Participants saw a series of overlapping circles labeled "Me" and "Alex." The circles ranged from 1 (*not at all overlapping*) to 7 (*entirely overlapping*). Participants were instructed to choose the image that best represented how distinct vs. similar they felt from Alex. I predicted that people would see Alex as more similar when she was humanized.[2]

Broader Outgroup Measures. To test extension to the general outgroup, I included a measure of ascent dehumanization of the political outgroup. This took the same form as the Alex

[2] The identity fusion measures were added after preregistering this study, and thus were not included in the preregistration.

measure of ascent dehumanization, except participants were instructed to rate "those of a different political party than you." I also included a measure of ingroup-outgroup identity fusion. This was framed in the same way as the Alex identity fusion measure, except the circles were labeled as "Liberals" and "Conservatives."

Additional Variables. Participants also completed the same implicit theories of empathy, implicit theories of groups, symbolic threat, network heterogeneity, and strength of political affiliation scales from Study 1.

3.2 Results

3.2.1 Manipulation Check

For all outcomes, condition means are presented in Table 4 and test statistics are presented in Table 5. I first conducted 2 (group condition: ingroup vs. outgroup) X 2 (humanizing condition: humanizing information vs. similar length individuating information) ANOVA on the ascent dehumanization manipulation check. There was a significant effect of group condition. Relative to when Alex was an outgroup member, participants who did not learn of Alex's political orientation saw her as more human. There was a significant effect of humanizing condition. People in the humanizing (vs. control) condition saw Alex as more human. There was no significant interaction, suggesting that learning humanizing information increased perceptions of humanness in both the outgroup and nonpolitical conditions.

3.2.2 Outcome Variables

As in Study 1, we first conducted a 2 (group condition: nonpolitical vs. outgroup) X 2 (humanizing information vs. similar length individuating information) multivariate ANOVA on all remaining Alex outcomes. This analysis revealed main effects of group condition ($F(5, 387) = 9.51$, Wilks' $\lambda = .89$, $p < .001$, $\eta_p^2 = .11$), and humanizing condition ($F(5, 387) = 21.44$, Wilks' $\lambda = .78$, $p < .001$, $\eta_p^2 = .22$). The interaction was not significant ($F(5, 387) = .76$, Wilks' $\lambda = .99$, $p = 577$, $\eta_p^2 = .01$).

I then ran 2 (group condition: nonpolitical vs. outgroup) X 2 (humanizing condition: humanizing information vs. similar length individuating information) ANOVAs on each Alex outcome (see Tables 4 and 5). Across all outcomes, there was a significant main effect of group condition. Relative to those who read that Alex was an outgroup member, participants who were not told of Alex's political identity saw her as more moral and reported less negative affect toward her, less intergroup anxiety, more willingness to invest empathic effort, and more identity fusion with her.

There was also a significant main effect of humanizing condition across all outcomes—people in the humanizing (vs. control) condition saw Alex as more moral, and reported less negative affect toward her, less intergroup anxiety, more willingness to invest empathic effort, and more identity fusion with her. There were no significant interactions.

I then ran the same multivariate ANOVA on both broader outgroup outcomes. This analysis revealed no significant main effects or interactions (*ps* > .179). Follow-up 2 (group condition: nonpolitical vs. outgroup) X 2 (humanizing condition: humanizing information vs. similar length individuating information) ANOVAs on these two measures also revealed no significant effects (see Tables 4 and 5).

3.2.3 Mediation Through Ascent Dehumanization

Finally, I tested indirect effects of the manipulation through the manipulation check. All indirect effects were calculated using PROCESS model 8 with 5000 bootstrapped samples. As depicted in Figure 3, there were significant indirect effects on all outcome variables for those in the both the nonpolitical control and outgroup conditions (see Table 6 for full results).

3.3 Discussion

Study 2 showed benefits of humanizing information for perceptions of both political outgroup members and a target whose political orientation was unknown. Humanizing information thus reduced bias toward political outgroup members, replicating the results of Study 1. Unlike in Study 1, there were no significant interaction effects, suggesting that the manipulation worked equally well for both nonpolitical and outgroup members. This is likely because nonpolitical people are not automatically treated with the same positive and humanized perceptions as ingroup members. Therefore, the manipulation also worked to increase humanized perceptions of this ambiguous target.

Study 2 also replicated the results of Study 1 using a different, individuating information control condition. It therefore demonstrated benefits when being compared to a condition that allowed people to learn a similar amount of information about Alex and spend a similar amount of time thinking about a political outgroup member. However, Study 2 failed to show extension effects of the manipulation to perceptions of the general outgroup. In Study 3, I focused on

replicating the benefits of humanizing information using a different manipulation and testing for extension to the broader outgroup in different ways.

4.0 Study 3

Studies 1 and 2 found consistent effects of humanizing information on reducing bias toward a single political outgroup member. However, a number of questions remain. First, is the perception of humanness a robust mechanism underlying this effect? I hypothesized that humanizing information reduces bias by increasing perceptions of the humanity of a political outgroup member, and found indirect effects through the ascent dehumanization measure in Studies 1 and 2. However, due to issues with the skewed distribution of responses to this measure, I sought additional evidence for this mechanism using different measures. I therefore included humanization and mind perception measures to test for mediation through these variables in Study 3.

Second, in Study 2 I found no benefits of humanizing information to perceptions of the general outgroup. But what if we test a more proximal form of extension, where the benefits of humanizing a single outgroup member spread to people in that person's social network? If so, humanizing even a single outgroup member has the potential to create a ripple effect, opening the door to more and more opportunities to humanize the outgroup and eventually reduce hostility toward it more broadly. Thus, in Study 3, instead of testing extension to the entire political outgroup, I tested extension to people who are directly connected to the humanized person.

Third, in Study 3 I embedded the humanizing manipulation in the externally valid and timely context of social media feeds, where people may encounter this kind of information naturally. Within this context, I developed a novel behavioral outcome by giving participants an opportunity to comment on the target's politicized social media post. I therefore tested whether

humanizing information embedded in a social media context could promote more civil and open-minded dialogue with a political outgroup member.

4.1 Method

4.1.1 Participants

I recruited 402 participants from Prolific Academic. As was preregistered, I excluded those who failed the attention check (n = 4) leaving a final sample of 397 (188 female, 205 male, 2 non-binary/third gender, 2 prefer not to identify, M_{age} = 35.70, SD_{age} = 14.26). As in previous studies, I screened to include roughly equal numbers of liberals (n = 201) and conservatives (n = 196). A sensitivity analysis at 90% power revealed that I was again powered to detect a small interaction effect (f = .16).

4.1.2 Materials and Procedure

Manipulations. Study 3 was a 2 (ingroup vs. outgroup) X 2 (humanizing information vs. control) online experiment using a simulated Twitter feed. Participants were informed that the study was about how people perceive others based on social media profiles. They were asked to imagine that the profile belonged to someone they met recently, but did not yet know very well. Participants then encountered a simulated Twitter feed. All Tweets were created using tweetgen.com to ensure that they appeared authentic. The Tweets were ostensibly written by either a political ingroup or outgroup member named Alex. For the control condition, there was only one

Tweet containing political cue information (e.g., "Just watched the Republican National Convention! Great Speakers! #Republican #RNC2020"). In the experimental condition, participants saw the same political cue messages, as well as five additional Tweets that included humanizing information (see Appendix D for Tweets).

Manipulation Check. As manipulation checks and mediators, participants completed two new measures. Participants first completed a measure of humanization towards the Tweet author (adapted from Bastian & Haslam, 2010). This includes six human uniqueness traits (e.g., "refined and cultured") and six human nature traits (e.g., "emotional, responsive, and warm"), each measured on a scale of 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) ($\alpha = .91$).

Second, participants completed a measure of mind perception of the Tweet author (adapted from Gray et al., 2007). This includes two items that measure experience/emotion (e.g., "feeling pleasure"), and four items that measure agency (e.g., "planning"), each measured on a scale of 1 (*Not at all*) to 7 (*Very much*) ($\alpha = .91$).

Tweet Response Measures. Next, participants completed the same negative affect ($\alpha = .95$), empathic effort ($\alpha = .93$), and perceived morality ($\alpha = .95$) scales from the previous three studies. Intergroup anxiety and identify fusion were not measured in this study due to length considerations.

Commenting on Political Tweet. As a behavioral measure, participants were asked to write a comment responding to one of the target's Tweets. Participants read, "Below is another Tweet by Alex. Imagine that you comment on this Tweet. What would you say in response to Alex's Tweet?" The additional Tweets were about taxes and were crafted to be aligned with conservative beliefs ("Lower taxes will be better for our country. Those who make money should

be allowed to spend it as they wish. #Republican") or liberal beliefs ("Higher taxes will be better for our country. They fund social welfare programs that benefit those in need. #Democrat").

Extension to Social Network. To assess degree of extension beyond the humanized target, participants completed a novel assessment inspired by social network analysis (Borgatti et al., 2009; Denny, 2014). Social network analysis uses visual representations of social networks to understand connections between people and how those connections affect behavior (e.g., how information travels between people). In this framework, each person in the network is an actor, or a "node," who is connected to others. In Study 3, participants viewed a visual representation of the Tweeter's social network (see Figure 4). I specified that all connections were bidirectional friendships. Some of these friends were directly connected to the Tweeter (e.g., Lucas). Other people in the network were indirectly connected to the Tweeter, with one or more people in between (e.g., Ava). Participants were asked to rate and assess four people in the network (Lucas, Emma, James, Sophia) using shortened versions of the negative affect (α_{Lucas} = .86; α_{Emma} = .83; α_{James} = .82; α_{Sophia} = .83), morality (r_{Lucas} = .85; r_{Emma} = .86; r_{James} = .87; r_{Sophia} = .86), and empathic effort scales (α_{Lucas} = .92; α_{Emma} = .91; α_{James} = .92; α_{Sophia} = .94). Participants also rated the perceived political orientation of the four people on a scale of 1 (*Strong liberal*) to 7 (*Strong conservative),* and how similar they thought each person was to the Tweeter on a scale of 1 (*Not at all similar*) to 7 (*Very Similar*).

Additional Measures. Finally, participants completed a number of additional measures as potential covariates including familiarity with Twitter, cognitive strain, and perceived

demographics of the Tweeter.[3] Participants also completed an exploratory measure of perceived network heterogeneity.

4.2 Results

4.2.1 Manipulation Check

For all outcomes, condition means are presented in Table 7 and test statistics are presented in Table 8). As in previous studies, I first ran 2 (group condition: ingroup vs. outgroup) X 2 (humanizing condition: control vs. humanizing information) ANOVAs on humanization and mind perception. There was a significant main effect of group condition, such that participants who read about an ingroup (vs. outgroup) member saw them as more human on both measures. There was also a significant main effect of humanizing condition. Compared to participants in the control condition, those in the humanizing condition saw the Tweeter as more human on both measures. Finally, there was a significant interaction on both humanization measures, such that the humanizing condition worked to close the gap between ingroup and outgroup perceptions.

[3] Simultaneously controlling for familiarity with Twitter, cognitive strain, and perceived gender of the Tweeter did not reduce any of the Tweeter outcome measures to non-significant.

4.2.2 Tweeter Outcome Measures

I ran 2 (group condition: ingroup vs. outgroup) by 2 (humanizing condition: humanizing information vs. control) ANOVAs on each remaining outcome (see Tables 7 and 8). On all outcomes, there was a significant main effect of group condition. Participants who read about an ingroup member saw them as more moral, and reported less negative affect toward them and greater willingness to invest empathic effort toward them than those who read about an outgroup member.

For most outcomes, there was a significant main effect of humanizing condition. Compared to participants in the control condition, those in the humanizing condition saw the Tweeter as more moral and reported less negative affect toward them. However, on all outcomes there were significant interactions, such that the humanizing condition worked to close the gap between ingroup and outgroup perceptions (see Table 8 for simple effects and Figure 5 for pattern of interactions).

4.2.3 Mediation Through Humanization and Mind Perception

Next, I tested humanization as the mechanism for our effects by running parallel moderated mediation models (PROCESS Model 8 with 5000 bootstrapped samples) with humanizing condition (X) acting though both humanization and mind perception (M's) to each of the three main outcome variables (Y; negative affect, empathic effort, and morality). Group condition was entered as a moderating variable on the *a* and *c* paths. For all outcomes, I found significant indirect effects through both humanization and mind perception when the target was an outgroup member (see Table 9 for indirect effects and Figure 6 for moderated mediation models). When the target

was an ingroup member, I found significant indirect effects only through humanization. The same indirect effects were found when mind perception and humanization were included as mediators in separate models.

4.2.4 Written Tweet Responses

Participant Tweet responses were coded in two ways. First, they were coded by LIWC software (Pennebaker et al., 2015) for percentage of words in each response that was classified as moral, negative, or positive. Across all LIWC outcomes there were no consistent effects of humanizing condition (see Appendix G for full results).

To provide more in depth and contextual coding, all the messages were then coded by two raters who were blind to condition and hypotheses on 1-7 scales of openness, empathy, civility, hostility, and moral outrage (interrater correlations M = .65, range = .50-.70). Based on the pattern of correlations between these categories, they were aggregated into two factors. Openness and empathy were aggregated to represent understanding toward the Tweeter (α = .92). Civility, hostility, and moral outrage were aggregated to represent antagonism (higher values indicate lower civility, higher hostility, and higher moral outrage α = .89). There were main effects of group condition on both variables, such that people commenting on an outgroup (vs. ingroup) post were less understanding, $F(1, 390) = 143.10$, $p < .001$, $\eta_p^2 = .27$, and more antagonistic, $F(1, 390) = 51.54$, $p < .001$, $\eta_p^2 = .12$. There was also a significant impact of humanizing condition on antagonism, $F(1, 390) = 4.29$, $p = .039$, $\eta_p^2 = .01$, such that people commenting in the humanizing condition were less antagonistic in their messages. However, antagonism scores were heavily positively skewed (skew = 3.27, kurtosis = 14.05), with most participants responding to the target with low antagonism. This distribution created six statistical outliers ($Z \geq 3.5$), with five in the

outgroup control condition and 1 in the outgroup humanizing condition. Whereas square root and log10 transformations did not reduce the effect of humanizing condition (*p*s < .05), and winsorizing the data to the nearest non-extreme value resulted in a marginal effect (p = .089), removing these outliers completely reduced the effect to non-significance (p = .344). However, I believe these outliers are meaningful data and suggest that the humanizing manipulation is functioning to reduce the more extreme antagonistic responses observed in the control condition.

4.2.5 Extension Effects

Finally, I tested whether the effects extended beyond the target using the social network map. First, I examined how participants perceived the political orientation of each of the four friends. I ran a 2 (group condition: ingroup vs. outgroup) X 2 (humanizing condition: humanizing information vs. control) by 4 (target: Lucas vs. Emma vs. James vs. Sophia) repeated measures ANOVA on the perceived political orientation of the four friends (Lucas was directly connected to Alex; Emma was separated from Alex by 1 person; James was separated from Alex by 2 people; Sophia was separated from Alex by 3 people). Perceived orientation was recoded so that higher values indicate higher perceived outgroup orientation. There was a significant group condition X target interaction, $F(3, 387) = 92.94$, $p < .001$, $\eta_p^2 = .42$. Examining the simple effects, there were significant ingroup vs. outgroup differences for Lucas and Emma (*ps* < .001), such that those in the outgroup condition saw Lucas and Emma as having significantly higher outgroup orientation ($M_{\text{Lucas}} = 5.27$, $SE_{Lucas} = .11$; $M_{\text{Emma}} = 4.46$, $SE_{Emma} = .09$) than those in the ingroup condition ($M_{\text{Lucas}} = 2.58$, $SE_{Lucas} = .11$; $M_{\text{Emma}} = 3.14$, $SE_{Emma} = .09$). There was no significant difference on perceived orientation for James (p = .330), and a small but significant reversal on the perceived orientation of Sophia (p = .038). These findings suggest that participants only viewed the two most

proximal friends (Lucas and Emma) as outgroup members in the outgroup condition (and as ingroup members in the ingroup condition). Further supporting this distinction between targets, a repeated measures ANOVA on perceived similarity to Alex revealed a main effect of target ($F(3, 387) = 216.02$, $p < .001$, $\eta_p^2 = .63$), such that the perceived similarity to Alex significantly decreased as each friend became further removed from Alex in the network (all *ps* < .001).

These findings suggest that participants in the outgroup condition might only hold bias toward Lucas and Emma, the two proximal friends who they viewed as outgroup members. To test this, I ran the same repeated measures ANOVA on negative affect, empathic effort, and morality of the friends. On all three outcomes, there were significant group condition X target interactions (*ps* < .001), such that those in the outgroup (vs. ingroup) condition held more negative perceptions toward Lucas (*ps* < .001) and Emma (*ps* < .048), whereas there were no group condition differences for James and Sophia (*ps* >.257). There was therefore only bias for the humanizing condition to reduce for Lucas and Emma.

To explore the impact of humanizing information on these first two network members, I ran 2 (group condition: ingroup vs. outgroup) X 2 (humanizing condition: humanizing information vs. control) ANOVAs on perceptions of Lucas and Emma (see Table 10 for condition means and Table 11 for test statistics). For both targets, the humanizing condition helped to reduce negative affect and promote empathic effort when participants were in the outgroup condition. Although in the predicted direction, there were no significant benefits of humanizing condition on the perceived morality of the targets.

4.3 Discussion

Study 3 successfully replicated the effects of humanizing information on negative affect, empathic effort, and morality, in the new context of a Twitter feed. I again saw evidence of the manipulation increasing humanization on two new measures of humanization. I also found the expected indirect effects, implying that the manipulation is reducing outgroup hostility by causing participants to see outgroup members as more fully human.

The impact of the manipulation on the behavioral Tweet response measure was mixed. Antagonism expressed toward the Tweeter was extremely low in this paradigm, but the humanizing condition seemed to reduce more extreme instances of antagonism. Although more research on behavioral outcomes is necessary, I believe these results offer preliminary evidence that humanizing information might promote less antagonistic dialogue in real world settings where antagonism is rampant.

Study 3 found encouraging extension effects on the humanized target's social network. When participants viewed members of the target's network as political outgroup members and were consequently biased against these members, learning humanizing information about the target worked to reduce this bias. These findings suggest that although humanizing a single member of a political outgroup might not function to reduce bias toward the entire outgroup (at least not in the subtle ways tested in the present research), doing so can serve to reduce bias against members of the outgroup that are connected to the humanized member. I see this as a step in the direction of reducing interparty hostility, several outgroup members at a time.

5.0 General Discussion

Disputes over politics have entered people's homes, taking over their dinner conversations and straining their relationships. Partisans demonize the other side, judging their values to be inferior and immoral. Rather than seek understanding across the aisle, people have come to believe it is appropriate to shut out, talk over, or even spew hatred at those who do not share their political values and perspectives. The normative nature of this political animus has perhaps blinded us to just how toxic it can be, threatening not only our personal relationships, but also infecting our democracy, stressing our economy, and costing countless lives. In the last few years alone, the U.S. Capitol was stormed during a violent attack against Congress, the results of our presidential election were disputed, the government shut down for the longest period of time in American history, and the response to the COVID-19 pandemic has suffered as a result of politicized policies.

With the current political landscape looking as dire as it does, it is important to keep an eye toward change. Widespread change will require efforts by political leaders, the media, and the electorate. In this paper, I identify an avenue for intervention that targets dehumanized perceptions of the outgroup. By targeting these harmful perceptions, conservatives and liberals can begin to see each other as ideological counterparts rather than as depraved adversaries.

Across three well-powered, preregistered studies, I demonstrated that presenting participants with humanizing information about a political outgroup member consistently reduced negative perceptions and hostility toward that member. I found benefits of humanizing information delivered in different ways (a "day-in-the-life narrative"; Tweets ostensibly written by the outgroup member), and compared to both a political information only control and individuating but non-humanizing information control. I also found benefits of humanizing information on

diverse measures of dehumanization (blatant dehumanization; human nature and human uniqueness; mind perception), diverse measures of hostility (negative affect; empathic effort; intergroup anxiety; perceived morality; identity fusion), and a behavioral measure of antagonism in response to an outgroup member's politicized social media post.

On a theoretical level, this work provides evidence that outgroup members can be humanized by reading minimal amounts of information that promotes perceptions of emotional and cognitive complexity. This is critical as there are relatively few evidence-based methods of reducing dehumanization. Researchers in this area identify only intergroup contact and building a superordinate identity as tested methods for reducing dehumanization, and argue that finding additional methods is an important focus for future research (Haslam and Loughnan, 2014). It is possible that the process of humanizing outgroup members is itself creating a superordinate identity of humanness, effectively recategorizing outgroup members as full members of the larger human community (Gaertner et al., 1993).

This intervention is also conceptually similar to work on self-affirmation interventions. Self-affirmation interventions work to broaden the concept of the self to focus on and include other domains (Cohen & Sherman, 2014). Humanizing information might function in a similar way, but toward outgroup members. By helping people see outgroup members as being capable of more complex thought and emotion, it effectively broadens the concept of the outgroup member. This expansive view of the outgroup might make them seem worthier of moral regard and treatment, and potentially make them seem less threatening (similar to how an expansive self-view renders various threats less threatening; Cohen & Sherman, 2014).

Notably, humanizing information was effective despite participants having no explicit intention of learning about or being charitable toward the outgroup. These findings are

encouraging in a context that is wrought with normative hostility and little motivation to build a bridge across the aisle. This work also demonstrated a novel form of extension to outgroup members. Using a social network map to represent friends of the humanized target, I discovered that humanizing information can benefit outgroup members who are connected to the humanized member. This finding suggests that creating opportunities to change perceptions of even a single outgroup member can have benefits that extend beyond that person, even if not to the entire group. Finally, this research replicates previous work demonstrating the impact of humanized views on a number of downstream outcomes such as empathy (Čehajić et al., 2009) and perceived morality (Waytz et al., 2010).

On a practical level, humanizing information represents a minimal intervention with potentially large impacts. Like many of the established interventions in the domain of intergroup bias reduction, our method constitutes a "light touch" or "wise" intervention—a treatment that is inexpensive, brief in duration, and easy to implement, but precisely targeted (Paluck et al., 2020; Walton & Wilson, 2018). In this way, this intervention may be scalable to places where political hostility is common and normalized. One such place is social media, where partisan interactions often devolve into moral outrage (Brady & Crockett, 2019), leading to heightened polarization (Bail et al., 2018). However, our work suggests that presenting people with humanizing information about outgroup members online—and even on a social media platform—can effectively humanize outgroup members and consequently reduce hostility.

Despite these encouraging findings, I found several boundary conditions to the benefits of this subtle intervention. First, I found only limited support for behavioral change toward outgroup members. This suggests that a stronger or repeated dose of humanizing information might be required to inspire these more effortful behavioral changes toward the outgroup. Future studies

should test this possibility directly by using other behavioral measures and increasing the strength and dose of the manipulation.

Similarly, I found that humanizing information was successful at reducing hostility toward the humanized target and members of the target's social network, but these benefits did not extend to the broader outgroup. Given the intensity of negative perceptions in this political context, it is not surprising that it is challenging to get positive perceptions to spread from a single member to the broader outgroup, even though people readily apply stereotypes to the entire group. However, as with intergroup contact, it is possible that extension to the broader outgroup occurs under certain circumstances (e.g., Fuochi et al., 2020) and this possibility presents exciting directions for future research.

Finally, I did not assess whether humanizing information produces enduring benefits. Although few studies in the domain of intergroup conflict have examined whether light-touch interventions have lasting effects, a large number of studies in other contexts (e.g., education; close relationships) have demonstrated that subtle but precisely-targeted interventions can create enduring changes to how people perceive and interact with the world (see Walton & Wilson, 2018, for review). Future studies should assess how long, and under what conditions, the benefits of humanized perceptions last.

The current findings generate a number of other important directions for future research. First, future work might test this intervention in other intergroup conflict contexts where dehumanization is prevalent. Second, future work might test how humanizing information affects in-person interactions. All the studies I presented involved computer or text-based responses to outgroup members. Can learning humanizing information also lead to more productive and civil in-person interactions? Third, future work might test how humanizing information can be scaled

up in contexts such as social media. With more than two thirds of Americans getting at least some of their news from social media (Pew Research Center, 2018), humanizing messages about conservatives and liberals could spread quickly and easily on these platforms. Researchers could conduct large-scale field studies on these platforms to test the effectiveness of embedding humanizing information in social media ads and messages.

5.1 Concluding Thoughts

Contempt toward political outgroup members has reached disastrous levels. It is time to reverse the trend. Across three studies, I demonstrated that providing people with humanizing information about an outgroup member—simply information that suggests they are thinking, feeling beings—can effectively reduce bias toward that member and even connected members of the outgroup. The current studies thus answer a recent call for research aimed at developing methods for mitigating political sectarianism (Finkel et al., 2020). While more work needs to be done on the effects of humanizing information, I believe that any intervention that helps mitigate the pervasive and crippling partisan hostility we are currently living is an important first step towards building a more unified society.

Appendix A Tables and Figures

Table 1 Descriptive statistics by condition, Study 1

	Ingroup		Outgroup	
	Control *M* (*SD*)	Humanizing *M* (*SD*)	Control *M* (*SD*)	Humanizing *M* (*SD*)
Ascent Dehumanization	96.77 (5.78)	95.90 (7.84)	88.82 (18.20)	93.34 (12.92)
Ascent Dehumanization < 100	91.03 (6.43)	89.62 (9.53)	77.86 (20.38)	85.59 (15.83)
Infrahumanization Primary	3.99 (.89)	4.13 (.90)	4.18 (.89)	4.35 (.92)
Infrahumanization Secondary	3.71 (.87)	4.16 (.81)	3.87 (.79)	4.22 (.87)
Negative Affect	3.18 (1.32)	2.31 (1.05)	5.19 (1.62)	3.16 (1.66)
Empathic Effort	5.51 (1.02)	5.45 (1.15)	4.61 (1.31)	5.20 (1.24)
Intergroup Anxiety	2.62 (.78)	2.48 (.83)	3.57 (1.19)	2.90 (1.20)
Morality	5.49 (1.02)	6.14 (.76)	4.58 (1.33)	5.74 (1.09)

Table 2 Test statistics for ANOVAs, Study 1

	F	*p*	η_p^2
Ascent Dehumanization			
Main effect of group condition	26.70	<.001	.04
Main effect of humanizing condition	3.21	.074	.01
Group X humanizing interaction	7.00	.008	.01
Within control condition: outgroup vs. ingroup	23.04	<.001	.04
Within humanizing condition: outgroup vs. ingroup	4.71	.030	.01
Within outgroup: humanizing vs. control	9.91	.002	.02
Within ingroup: humanizing vs. control	.36	.548	.00
Ascent Dehumanization < 100			
Main effect of group condition	20.12	<.001	.07
Main effect of humanizing condition	2.72	.100	.01
Group X humanizing interaction	5.68	.018	.02
Within control condition: outgroup vs. ingroup	17.76	<.001	.07
Within humanizing condition: outgroup vs. ingroup	3.32	.070	.01
Within outgroup: humanizing vs. control	9.51	.002	.04
Within ingroup: humanizing vs. control	.24	.628	.00
Infrahumanization Primary Emotions			
Main effect of group condition	6.79	.009	.01
Main effect of humanizing condition	3.81	.051	.01
Group X humanizing interaction	.04	.833	.00
Infrahumanization Secondary Emotions			
Main effect of group condition	2.42	.120	.00
Main effect of humanizing condition	30.96	<.001	.05
Group X humanizing interaction	.51	.476	.00
Negative Affect			
Main effect of group condition	136.33	<.001	.19
Main effect of humanizing condition	138.58	<.001	.19
Group X humanizing interaction	22.12	<.001	.04
Within control condition: outgroup vs. ingroup	101.11	<.001	.15
Within humanizing condition: outgroup vs. ingroup	36.10	<.001	.06
Within outgroup: humanizing vs. control	136.63	<.001	.19
Within ingroup: humanizing vs. control	24.82	<.001	.04
Empathic Effort			
Main effect of group condition	31.66	<.001	.05
Main effect of humanizing condition	6.71	.010	.01
Group X humanizing interaction	9.80	.002	.02
Within control condition: outgroup vs. ingroup	29.90	<.001	.05
Within humanizing condition: outgroup vs. ingroup	4.63	.032	.01
Within outgroup: humanizing vs. control	16.47	<.001	.03
Within ingroup: humanizing vs. control	.14	.704	.00
Intergroup Anxiety			
Main effect of group condition	60.18	<.001	.09
Main effect of humanizing condition	21.36	<.001	.04
Group X humanizing interaction	8.72	.003	.01
Within control condition: outgroup vs. ingroup	43.24	<.001	.07
Within humanizing condition: outgroup vs. ingroup	17.14	<.001	.03
Within outgroup: humanizing vs. control	28.88	<.001	.05
Within ingroup: humanizing vs. control	1.38	.240	.00
Morality			
Main effect of group condition	54.00	<.001	.08
Main effect of humanizing condition	102.52	<.001	.15
Group X humanizing interaction	8.08	.005	.01

Within control condition: outgroup vs. ingroup	39.15	<.001	.06
Within humanizing condition: outgroup vs. ingroup	15.07	<.001	.03
Within outgroup: humanizing vs. control	84.66	<.001	.13
Within ingroup: humanizing vs. control	26.34	<.001	.04

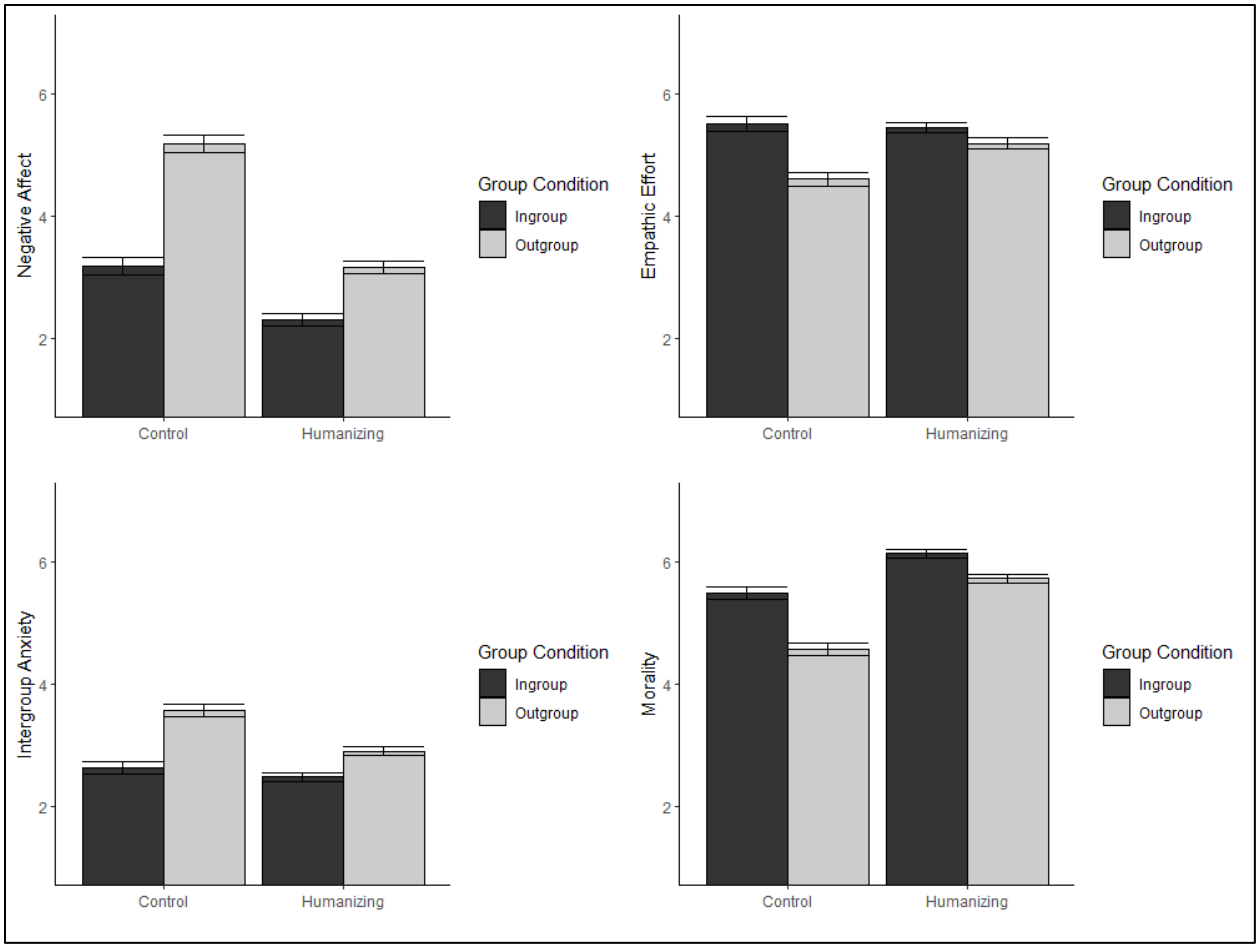

Figure 1 Negative affect (top left), empathic effort (top right), intergroup anxiety (bottom left), and morality (bottom right) as a function of group condition and humanizing condition. Error bars represent ±1 standard error from the mean, *Study 1*

Table 3 Indirect effects, Study 1 (significant paths bolded)

	Indirect Effect	***SE***	**95% CI**
Condition → Ascent Dehumanization → Outcome			
Negative Affect			
Ingroup	.03	.03	-.03, .10
Outgroup	**-.18**	**.08**	**-.36, -.02**
Empathic Effort			
Ingroup	-.03	.02	-.07, .02
Outgroup	**.13**	**.06**	**.02, .26**
Intergroup Anxiety			
Ingroup	.02	.02	-.02, .07
Outgroup	**-.12**	**.05**	**-.23, -.02**
Morality			
Ingroup	-.03	.03	-.08, 02
Outgroup	**.15**	**.07**	**.02, .28**

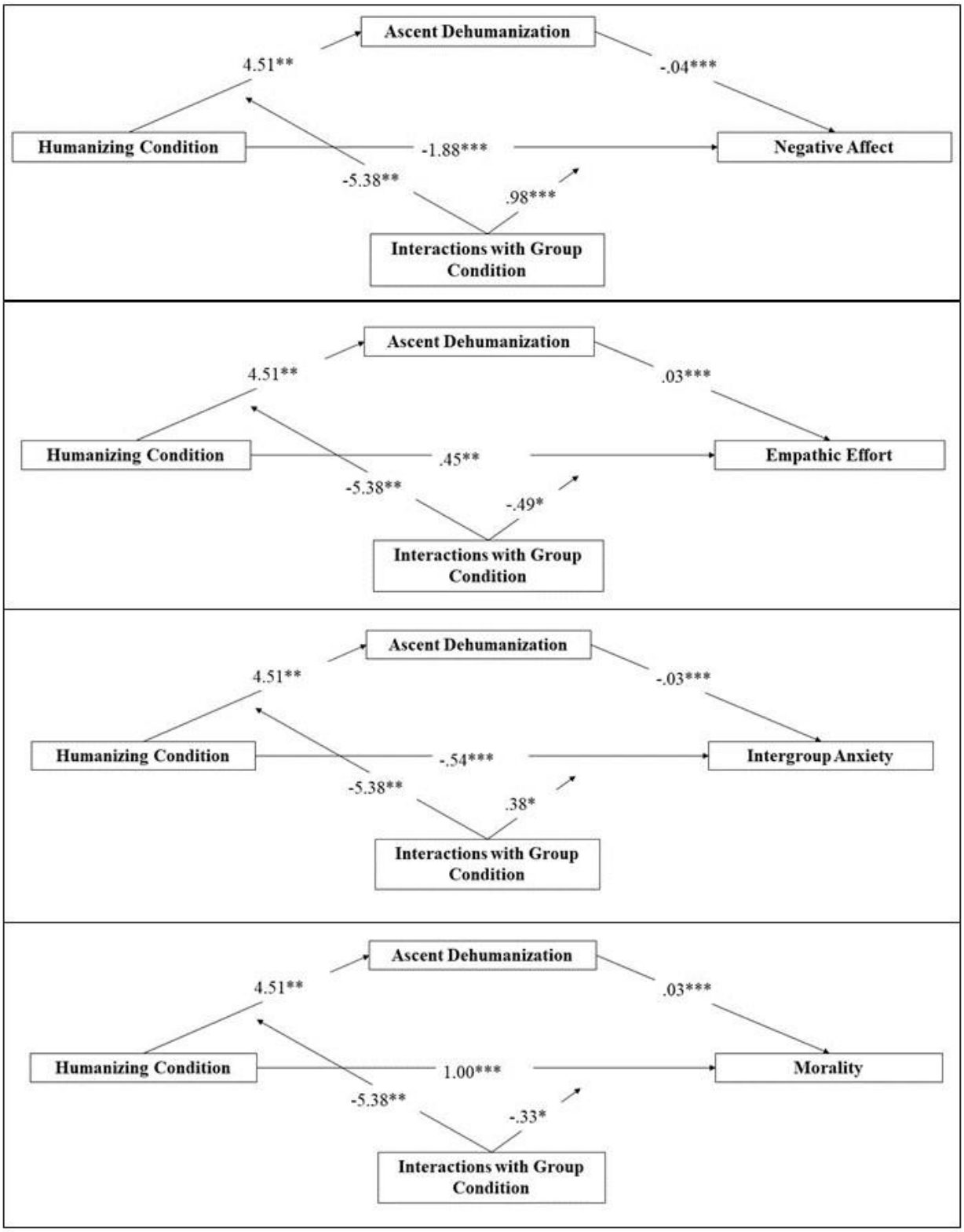

Figure 2 Moderated mediation models. For ease of interpretation, group condition is coded as 0 = outgroup, 1 = ingroup, Study 1

Table 4 Descriptive statistics by condition, Study 2

	Nonpolitical		Outgroup	
	Control *M* (*SD*)	Humanizing *M* (*SD*)	Control *M* (*SD*)	Humanizing *M* (*SD*)
Ascent Dehumanization	92.93 (13.52)	97.32 (6.94)	89.28 (16.45)	93.93 (10.29)
Ascent Dehumanization < 100	82.95 (16.52)	90.82 (10.36)	80.89 (17.97)	85.55 (11.47)
Negative Affect	3.29 (1.20)	2.15 (1.27)	4.35 (1.57)	2.80 (1.42)
Empathic Effort	5.18 (1.00)	5.45 (1.12)	4.61 (1.21)	5.30 (1.10)
Intergroup Anxiety	2.82 (.92)	2.42 (.73)	3.38 (1.00)	2.83 (1.04)
Morality	5.26 (1.00)	6.03 (.85)	4.64 (1.21)	5.68 (1.10)
Inclusion of Alex in Self	3.67 (1.62)	3.89 (1.46)	2.92 (1.38)	3.32 (1.62)
Ascent Dehumanization towards Outgroup	79.61 (28.57)	81.33 (26.45)	82.70 (24.07)	85.58 (20.69)
Inclusion of Outgroup in Ingroup	2.36 (1.32)	2.34 (1.29)	2.54 (1.09)	2.57 (1.37)

Table 5 Test statistics for ANOVAs, Study 2

Alex Outcome Measures	*F*	*p*	η_p^2
Ascent Dehumanization			
Main effect of group condition	7.92	.005	.02
Main effect of humanizing condition	13.08	<.001	.03
Group X humanizing interaction	.01	.918	.00
Ascent Dehumanization < 100			
Main effect of group condition	2.31	.131	.01
Main effect of humanizing condition	6.73	.010	.04
Group X humanizing interaction	.44	.506	.00
Negative Affect			
Main effect of group condition	38.70	<.001	.09
Main effect of humanizing condition	94.30	<.001	.19
Group X humanizing interaction	2.14	.144	.01
Empathic Effort			
Main effect of group condition	10.38	.001	.03
Main effect of humanizing condition	18.60	<.001	.05
Group X humanizing interaction	3.50	.062	.01
Intergroup Anxiety			
Main effect of group condition	26.46	<.001	.06
Main effect of humanizing condition	25.17	<.001	.06
Group X humanizing interaction	.68	.409	.00
Morality			
Main effect of group condition	21.24	<.001	.05
Main effect of humanizing condition	73.94	<.001	.16
Group X humanizing interaction	1.59	.208	.00
Inclusion of Alex in Self			
Main effect of group condition	18.43	<.001	.05
Main effect of humanizing condition	4.04	.045	.01
Group X humanizing interaction	.34	.560	.00
Outgroup Outcome Measures	*F*	*p*	η_p^2
Ascent Dehumanization towards Outgroup			
Main effect of group condition	2.11	.147	.01
Main effect of humanizing condition	.83	.362	.00
Group X humanizing interaction	.05	.818	.00
Inclusion of Outgroup in Ingroup			
Main effect of group condition	2.46	.117	.01
Main effect of humanizing condition	.01	.941	.00
Group X humanizing interaction	.05	.819	.00

Table 6 Indirect effects, Study 2 (significant paths bolded)

	Indirect Effect	*SE*	95% CI
Condition → Ascent Dehumanization → Outcome			
Negative Affect			
Nonpolitical	**-.17**	**.06**	**-.30, -.05**
Outgroup	**-.18**	**.09**	**-.37, -.04**
Empathic Effort			
Nonpolitical	**.10**	**.04**	**.03, .19**
Outgroup	**.11**	**.06**	**.02, .25**
Intergroup Anxiety			
Nonpolitical	**-.07**	**.03**	**-.15, -.02**
Outgroup	**-.08**	**.04**	**-.16, -.02**
Morality			
Nonpolitical	**.11**	**.04**	**.03, 20**
Outgroup	**.12**	**.06**	**.02, .25**
Inclusion of Alex in Self			
Nonpolitical	**.08**	**.04**	**.02, 16**
Outgroup	**.09**	**.05**	**.01, .20**

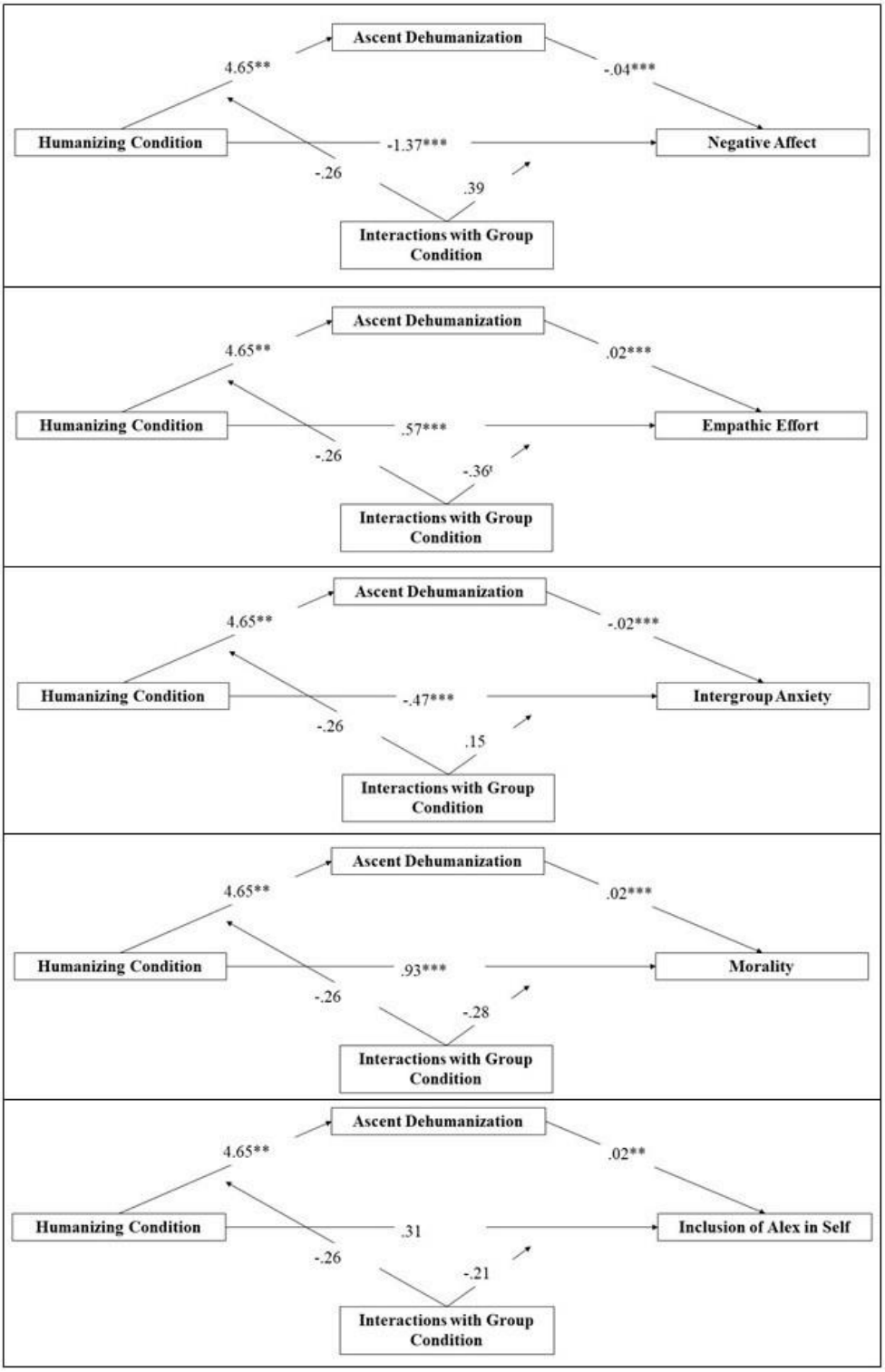

Figure 3 Moderated mediation models. For ease of interpretation, group condition is coded as 0 = outgroup, 1 = nonpolitical control, Study 2

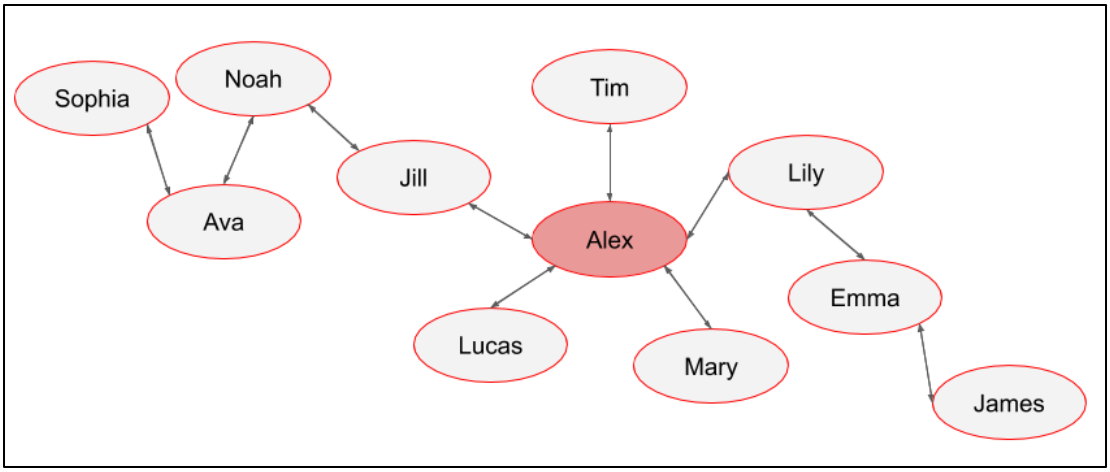

Figure 4 Social network map, Study 3

Table 7 Descriptive statistics by condition, Study 3

	Ingroup		Outgroup	
	Control *M* (*SD*)	Humanizing *M* (*SD*)	Control *M* (*SD*)	Humanizing *M* (*SD*)
Humanization	5.31 (.84)	5.69 (.85)	4.17 (1.11)	5.03 (.99)
Mind Perception	5.88 (1.11)	5.91 (1.00)	5.08 (1.31)	5.64 (1.01)
Negative Affect	3.09 (1.35)	2.80 (1.40)	5.51 (2.15)	3.87 (1.77)
Empathic Effort	5.75 (.95)	5.58 (1.10)	4.77 (1.29)	5.22 (1.03)
Morality	5.35 (1.01)	5.56 (1.06)	4.20 (1.49)	5.01 (1.11)

Table 8 Test statistics for ANOVAs, Study 3

	F	*p*	η_p^2
Humanization			
Main effect of group condition	87.53	<.001	.18
Main effect of humanizing condition	42.10	<.001	.10
Group X humanizing interaction	6.17	.013	.02
Within control condition: outgroup vs. ingroup	69.92	<.001	.15
Within humanizing condition: outgroup vs. ingroup	23.67	<.001	.06
Within outgroup: humanizing vs. control	40.56	<.001	.09
Within ingroup: humanizing vs. control	7.95	.005	.02
Mind Perception			
Main effect of group condition	22.62	<.001	.05
Main effect of humanizing condition	7.13	.008	.02
Group X humanizing interaction	5.85	.016	.02
Within control condition: outgroup vs. ingroup	25.67	<.001	.06
Within humanizing condition: outgroup vs. ingroup	2.74	.099	.01
Within outgroup: humanizing vs. control	13.05	<.001	.03
Within ingroup: humanizing vs. control	.03	.859	.00
Negative Affect			
Main effect of group condition	104.89	<.001	.21
Main effect of humanizing condition	31.81	<.001	.08
Group X humanizing interaction	15.42	<.001	.04
Within control condition: outgroup vs. ingroup	100.12	<.001	.20
Within humanizing condition: outgroup vs. ingroup	19.99	<.001	.05
Within outgroup: humanizing vs. control	46.11	<.001	.11
Within ingroup: humanizing vs. control	1.46	.228	.00
Empathic Effort			
Main effect of group condition	36.82	<.001	.09
Main effect of humanizing condition	1.57	.211	.00
Group X humanizing interaction	7.76	.006	.02
Within control condition: outgroup vs. ingroup	39.09	<.001	.09
Within humanizing condition: outgroup vs. ingroup	5.40	.021	.01
Within outgroup: humanizing vs. control	8.21	.004	.02
Within ingroup: humanizing vs. control	1.17	.281	.00
Morality			
Main effect of group condition	51.48	<.001	.12
Main effect of humanizing condition	18.61	<.001	.05
Group X humanizing interaction	6.21	.013	.02
Within control condition: outgroup vs. ingroup	46.61	<.001	.11
Within humanizing condition: outgroup vs. ingroup	10.99	.001	.03
Within outgroup: humanizing vs. control	23.34	<.001	.06
Within ingroup: humanizing vs. control	1.65	.200	.00

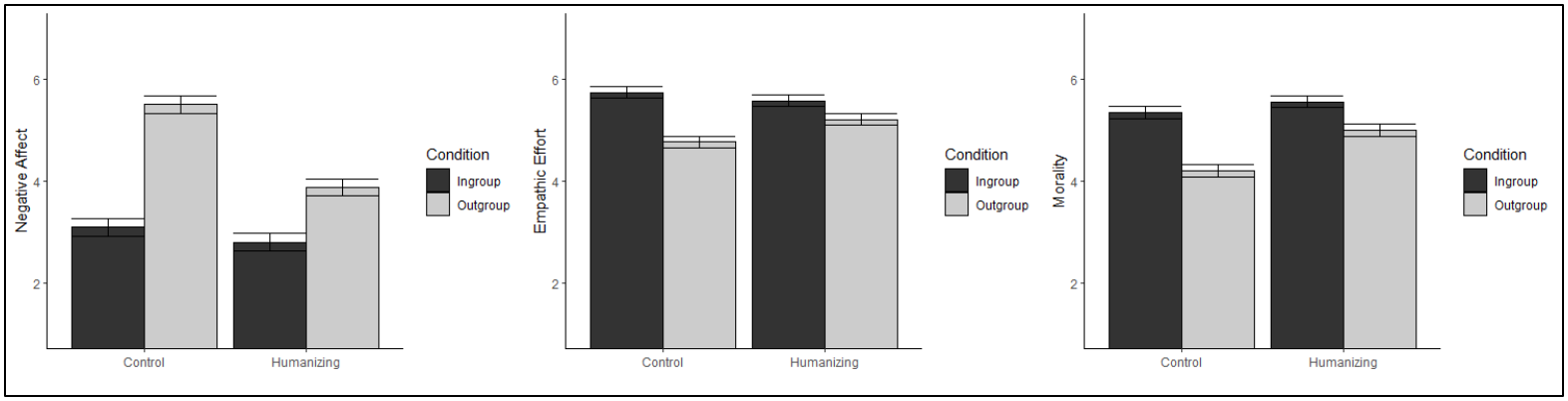

Figure 5 Negative affect (left), empathic effort (middle), morality (right) as a function of group condition and humanizing condition. Error bars represent ±1 standard error from the mean, Study 3

Table 9 Indirect effects for moderated mediation models, Study 3 (significant paths bolded)

	Indirect Effect	SE	95% CI
Negative Affect			
Humanizing Condition -> Mind Perception -> Negative Affect			
Ingroup	-.00	.03	-.07, .05
Outgroup	**-.10**	**.05**	**-.22, -.01**
Humanizing Condition -> Humanization -> Negative Affect			
Ingroup	**-.41**	**.13**	**-.68, -.15**
Outgroup	**-.93**	**.17**	**-1.26, -.59**
Empathic Effort			
Humanizing Condition -> Mind Perception -> Empathic Effort			
Ingroup	.01	.05	-.08, .10
Outgroup	**.17**	**.06**	**.06, .31**
Humanizing Condition -> Humanization -> Empathic Effort			
Ingroup	**.11**	**.05**	**.03, .21**
Outgroup	**.24**	**.08**	**.09, .42**
Morality			
Humanizing Condition -> Mind Perception -> Morality			
Ingroup	.00	.03	-.05, .07
Outgroup	**.10**	**.05**	**.02, .21**
Humanizing Condition -> Humanization -> Morality			
Ingroup	**.18**	**.06**	**.06, .31**
Outgroup	**.41**	**.10**	**.23, .61**

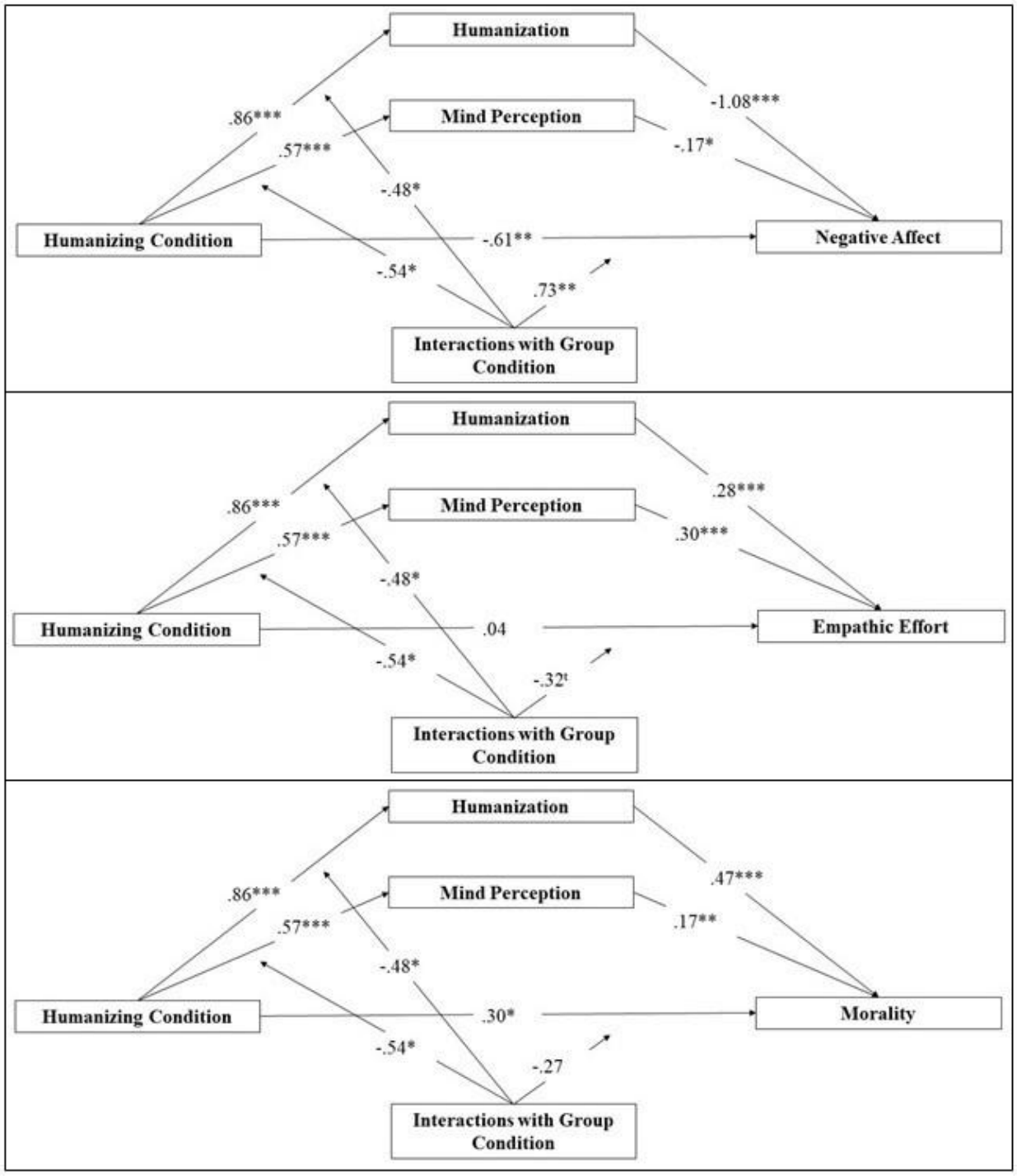

Figure 6 Moderated mediation models. For ease of interpretation, group condition is coded as 0 = outgroup, 1 = ingroup, Study 3

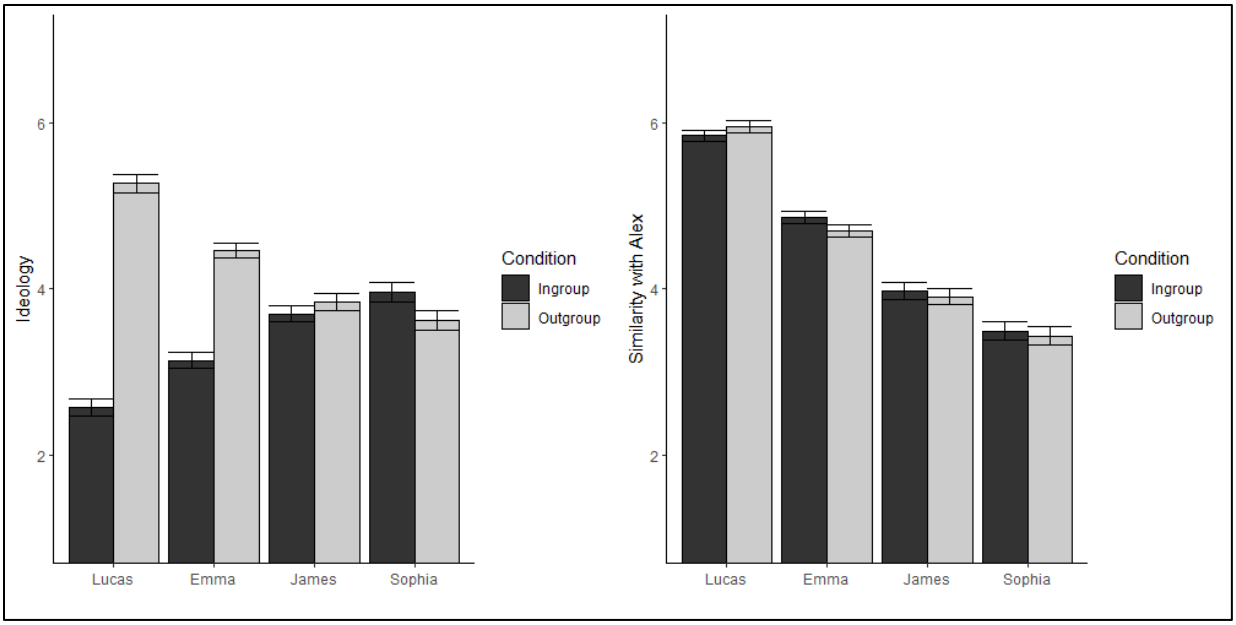

Figure 7 Repeated measures ANOVAs on outgroup political orientation (left) and similarity to Alex (right), Study 3

Table 10 Descriptive statistics on extension effects by condition, Study 3

	Ingroup		Outgroup	
	Control *M* (*SD*)	Humanizing *M* (*SD*)	Control *M* (*SD*)	Humanizing *M* (*SD*)
Lucas Negative Affect	3.72 (1.45)	3.41 (1.53)	4.97 (1.78)	4.45 (1.40)
Emma Negative Affect	3.94 (1.32)	3.77 (1.34)	4.41 (1.33)	4.03 (1.31)
Lucas Empathic Effort	5.60 (1.03)	5.37 (1.14)	4.63 (1.47)	5.02 (1.16)
Emma Empathic Effort	5.41 (1.06)	5.18 (1.16)	4.85 (1.34)	5.17 (1.05)
Lucas Morality	4.97 (1.01)	4.97 (1.12)	4.24 (1.25)	4.48 (1.00)
Emma Morality	4.78 (.98)	4.81 (1.02)	4.51 (1.04)	4.69 (.90)

Table 11 Test statistics for ANOVAs on extension effects, Study 3

	F	*p*	η_p^2
Lucas Negative Affect			
Main effect of group condition	53.82	<.001	.12
Main effect of humanizing condition	7.25	.007	.02
Group X humanizing interaction	.45	.501	.00
Emma Negative Affect			
Main effect of group condition	7.49	.006	.02
Main effect of humanizing condition	4.21	.041	.01
Group X humanizing interaction	.55	.459	.00
Lucas Empathic Effort			
Main effect of group condition	29.04	<.001	.07
Main effect of humanizing condition	.41	.525	.00
Group X humanizing interaction	6.31	.012	.02
Within control condition: outgroup vs. ingroup	31.13	<.001	.07
Within humanizing condition: outgroup vs. ingroup	4.15	.042	.01
Within outgroup: humanizing vs. control	4.99	.026	.01
Within ingroup: humanizing vs. control	1.74	.187	.00
Emma Empathic Effort			
Main effect of group condition	5.99	.015	.02
Main effect of humanizing condition	.14	.709	.00
Group X humanizing interaction	5.50	.019	.01
Within control condition: outgroup vs. ingroup	11.46	.001	.03
Within humanizing condition: outgroup vs. ingroup	.01	.943	.00
Within outgroup: humanizing vs. control	3.73	.054	.01
Within ingroup: humanizing vs. control	1.93	.165	.01
Lucas Morality			
Main effect of group condition	30.93	<.001	.07
Main effect of humanizing condition	1.18	.278	.00
Group X humanizing interaction	1.28	.259	.00
Emma Morality			
Main effect of group condition	3.96	.047	.01
Main effect of humanizing condition	1.27	.261	.00
Group X humanizing interaction	.56	.457	.00

Note. Lucas is directly connected to Alex and Emma is connected to Alex through 1 person.

Appendix B Study 1 Manipulations

Non-Humanizing Political Cue Control

Alex is a 36 year old woman. As part of her daily routine, Alex spends time watching her favorite channel, Fox/MSNBC. Today, a well known Republican/Democrat is giving an interview. As someone who holds conservative/liberal political views, Alex is fascinated by the interview.

Humanizing Information with Early Political Cue

Alex is a 36 year old woman who lives with her husband and 10-year old son. They live 25 minutes from where Alex grew up. People who know Alex describe her as outgoing, loyal, and hardworking. During a typical day, she wakes up her son, Jake, at 6:45am so he can begin getting ready for school. Alex then starts making breakfast and packing lunches. Breakfast is usually something simple, such as oatmeal, and lunch is usually a turkey or peanut butter and jelly sandwich with fruit and yogurt. As part of her morning routine, Alex turns on the TV to her favorite channel, Fox/MSNBC, as she prepares the meal. Today, a well known Republican/Democrat is giving an interview. As someone who holds conservative/liberal political views, Alex is fascinated by the interview. She takes a break from watching to tell her son that breakfast is ready, and returns promptly to the kitchen table where she continues to watch the interview with her husband.

After breakfast is done, Alex lets the dog outside as Jake grabs his backpack and lunch. Alex gets in the car with Jake, and realizes that she forgot her cell phone inside. Frustrated, she runs back inside to grab it before leaving. Alex drives Jake to his school. This is one of her favorite times of day, because they get to talk about all kinds of things that make Jake happy, like sports, Minecraft, and guitar lessons. When they arrive, Alex yells from the car that she loves him as Jake

walks into the building. Jake gets embarrassed by this, which Alex finds adorable. Alex then drives to work.

Alex works in retail at a local store. Throughout the day, Alex assists in various tasks such as restocking, helping customers, etc. Alex enjoys her job, but it can be stressful at times. Today, there is a customer who is being difficult. The customer wants a certain product that the store no longer carries and is raising her voice at one of Alex's coworkers. As the customer is visibly upset, Alex calmly explains the problem and then offers to find another local store that still carries the item. The customer appreciates Alex's great customer service. Overall, Alex feels fulfilled by her job. It helps pay the bills, and she gets to help people like the customer today.

After work, Alex heads home while Alex's husband picks up Jake. After eating a snack of cheese and veggies that Alex prepared for him, Jake begins on his homework, while Alex and her husband talk about their days. Alex's husband also had some stressful interactions at work today, so they bond over their shared experience. Alex's mother then calls on the phone. Despite living so close to each other, Alex and her mother sometimes have a strained relationship. However, her mother has had a few health scares lately, which has caused Alex to put aside their differences and reconnect with her mother.

Alex feels bad that the dog had to stay cooped up at home all day, so she opts to take the dog for a long walk, while her husband stays home to help Jake with his homework. On the walk, Alex runs into an old friend, Jolene, who she knew in high school. Alex is happily surprised to see her. They discuss what they are both doing these days and how they both have families now. Jolene is surprised to learn that Alex is in retail, as she remembers Alex's dream of becoming a writer. Alex tells Jolene that she had to put writing on hold in favor of something more practical that would have a guaranteed paycheck, but that she still writes as a hobby. After

reminiscing with Jolene about old times for a few minutes, Alex heads home to help Jake with the latter part of his homework while her husband makes dinner.

Once homework is done, dinner is ready and the family eats at around 7:00pm, their usual dinner time. They ask Jake how his day was and have a nice discussion over dinner. Afterwards, they always do a fun family activity, like going for a walk, playing a board game, watching one of Jake's favorite shows, or having family reading time. Tonight, they choose to play the game "The Settlers of Catan," which is one of their favorites. When they are finished playing, Alex and her husband kiss Jake goodnight and remind him to brush his teeth before going to bed. Alex and her husband spend a bit more time together then head to bed shortly after.

Humanizing Information with Late Political Cue

Alex is a 36 year old woman who lives with her husband and 10-year old son. They all live 25 minutes from where Alex grew up. People who know Alex describe her as outgoing, loyal, and hardworking. During a typical day, she wakes up her son, Jake, at 6:45am so he can begin getting ready for school. Alex then starts making breakfast and packing lunches. Breakfast is usually something simple, such as oatmeal, and lunch is usually a turkey or peanut butter and jelly sandwich with fruit and yogurt.

After breakfast is done, Alex lets the dog outside as Jake grabs his backpack and lunch. Alex gets in the car with Jake, and realizes that she forgot her cell phone inside. Frustrated, she runs back inside to grab it before leaving. Alex drives Jake to his school. This is one of her favorite times of day, because they get to talk about all kinds of things that make Jake happy, like sports, Minecraft, and guitar lessons. When they arrive, Alex yells from the car that she loves him as Jake

walks into the building. Jake gets embarrassed by this, which Alex finds adorable. Alex then drives to work.

Alex works in retail at a local store. Throughout the day, Alex assists in various tasks such as restocking, helping customers, etc. Alex enjoys her job, but it can be stressful at times. Today, there is a customer who is being difficult. The customer wants a certain product that the store no longer carries and is raising her voice at one of Alex's coworkers. As the customer is visibly upset, Alex calmly explains the problem and then offers to find another local store that still carries the item. The customer appreciates Alex's great customer service. Overall, Alex feels fulfilled by her job. It helps pay the bills, and she gets to help people like the customer today.

After work, Alex heads home while Alex's husband picks up Jake. After eating a snack of cheese and veggies that Alex prepared for him, Jake begins on his homework, while Alex and her husband talk about their days. Alex's husband also had some stressful interactions at work today, so they bond over their shared experience. Alex's mother then calls on the phone. Despite living so close to each other, Alex and her mother sometimes have a strained relationship. However, her mother has had a few health scares lately, which has caused Alex to put aside their differences and reconnect with her mother.

Alex feels bad that the dog had to stay cooped up at home all day, so she opts to take the dog for a long walk, while her husband stays home to help Jake with his homework. On the walk, Alex runs into an old friend, Jolene, who she knew in high school. Alex is happily surprised to see her. They discuss what they are both doing these days and how they both have families now. Jolene is surprised to learn that Alex is in retail, as she remembers Alex's dream of becoming a writer. Alex tells Jolene that she had to put writing on hold in favor of something more practical that would have a guaranteed paycheck, but that she still writes as a hobby. After reminiscing with

Jolene about old times for a few minutes, Alex heads home to help Jake with the latter part of his homework while her husband makes dinner.

Once homework is done, dinner is ready and the family eats at around 7:00pm, their usual dinner time. They ask Jake how his day was and have a nice discussion over dinner. Afterwards, they always do a fun family activity, like going for a walk, playing a board game,

watching one of Jake's favorite shows, or having family reading time. Tonight, they choose to play the game "The Settlers of Catan," which is one of their favorites. When they are finished playing, Alex and her husband kiss Jake goodnight and remind him to brush his teeth before going to bed. As part of her evening routine, Alex turns on the TV to her favorite channel, Fox/MSNBC. Today, a well known Republican/Democrat is giving an interview. As someone who holds conservative/liberal political views, Alex is fascinated by the interview. She takes a break from watching to get ready for bed, and returns promptly to the TV where she continues to watch the interview with her husband. Alex and her husband spend a bit more time together then head to bed shortly after.

Appendix C Study 2 Manipulations

Non-Political Individuating Information Control

Alex is a 36 year old woman. When she is on her own, she does several things throughout the day. The following is an example of what a typical day for her looks like when she is on her own and doesn't have any work or family responsibilities to take care of.

Alex starts her day by getting out of bed, turning off her alarm, and showering and brushing her teeth. After she gets dressed, she turns on the TV and listens to it as she heads into the kitchen to make breakfast. Breakfast is usually something simple. Once she makes breakfast, she sits down to eat and watch the TV. She gets up once to put her finished dish in the sink and sits back down to finish watching the show she had started. When she is ready to leave the house, she grabs her keys and wallet. Today is grocery day. She buys the food needed for the week. After driving back from the store, she heads inside and puts her groceries in the fridge and in the pantry. Once she is done putting away the food, she makes herself a snack.

After the snack, Alex decides to do some laundry. Alex puts in a load of laundry, and flips through some magazines while waiting for it to be done washing. After an hour, she switches the laundry to the dryer, and adds another load into the washer. After a couple hours of laundry, she decides to eat lunch. After Alex makes food and eats, she decides to fold the clean laundry. Alex folds each piece of clothing slowly and mindlessly, her movements almost robotic. She stares off into the distance, not thinking about anything in particular. After folding the laundry and putting it away, Alex heads out again to go to an appointment with her optometrist. She is going to get a routine eye exam because her prescription for her contact lenses has expired and she needs to order more. After the exam, she places her order for contact lenses then heads home.

After pulling up to her house, she notices that the weather is warm so she takes a short walk. As she walks, she hears birds chirping and squirrels running about. She walks around the block and picks up her mail on the way. She looks through her bills and sorts it into junk mail and important things she needs to look at later. Back at home, she decides to tidy up a bit. She wipes the counters, sweeps the floors, and vacuums the carpets. After this she moves on to doing some outdoor chores. She goes outside, sweeps the porch, and picks some dead leaves off bushes. After this, she changes into workout clothes and heads to the gym.

She walks into the gym and goes into the locker room before heading out to the machines. The local gym has several machines, including chest presses, bicep and tricep bars, leg presses, treadmills, and spin bikes. After using several of the machines, she decides to cool down and use some of the equipment available to the gym attendees, including a foam roller and yoga mat. After this, she goes back into the locker room and showers. She leaves the gym and heads back home.

Upon arriving home, she goes into the kitchen and makes a meal. After eating, she cleans the dishes and dries them off. She goes through the important mail she picked up earlier in the day, and pays a few of the bills that came.

She then watches a movie. The movie is decent, so she decides to watch the whole thing. Once the movie is done, Alex decides to play a few games on her phone. She plays a bit longer than she had intended. She goes into the bathroom, washes her face, and brushes her teeth. She gets into bed and falls asleep shortly after.

Political Individuating Information Control

Alex is a 36 year old woman. When she is on her own, she does several things throughout the day. The following is an example of what a typical day for her looks like when she is on her own and doesn't have any work or family responsibilities to take care of.

Alex starts her day by getting out of bed, turning off her alarm, and showering and brushing her teeth. After she gets dressed, she turns on the TV and listens to it as she heads into the kitchen to make breakfast. Breakfast is usually something simple. Once she makes breakfast, she sits down to eat. As part of her morning routine, Alex turns on the TV to her favorite channel, Fox/MSNBC. Today, a well known Republican/Democrat is giving an interview. As someone who holds conservative/liberal political views, Alex is fascinated by the interview. She gets up once to put her finished dish in the sink and sits back down to finish watching the interview she had started. When she is ready to leave the house, she grabs her keys and wallet. Today is grocery day. She buys the food needed for the week. After driving back from the store, she heads inside and puts her groceries in the fridge and in the pantry. Once she is done putting away the food, she makes herself a snack.

After the snack, Alex decides to do some laundry. Alex puts in a load of laundry, and flips through some magazines while waiting for it to be done washing. After an hour, she switches the laundry to the dryer, and adds another load into the washer. After a couple hours of laundry, she decides to eat lunch. After Alex makes food and eats, she decides to fold the clean laundry. Alex folds each piece of clothing slowly and mindlessly, her movements almost robotic. She stares off into the distance, not thinking about anything in particular. After folding the laundry and putting it away, Alex heads out again to go to an appointment with her optometrist. She is going to get a

routine eye exam because her prescription for her contact lenses has expired and she needs to order more. After the exam, she places her order for contact lenses then heads home.

After pulling up to her house, she notices that the weather is warm so she takes a short walk. As she walks, she hears birds chirping and squirrels running about. She walks around the block and picks up her mail on the way. She looks through her bills and sorts it into junk mail and important things she needs to look at later. Back at home, she decides to tidy up a bit. She wipes the counters, sweeps the floors, and vacuums the carpets. After this she moves on to doing some outdoor chores. She goes outside, sweeps the porch, and picks some dead leaves off bushes. After this, she changes into workout clothes and heads to the gym.

She walks into the gym and goes into the locker room before heading out to the machines. The local gym has several machines, including chest presses, bicep and tricep bars, leg presses, treadmills, and spin bikes. After using several of the machines, she decides to cool down and use some of the equipment available to the gym attendees, including a foam roller and yoga mat. After this, she goes back into the locker room and showers. She leaves the gym and heads back home.

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She then watches a movie. The movie is decent, so she decides to watch the whole thing. Once the movie is done, Alex decides to play a few games on her phone. She plays a bit longer than she had intended. She goes into the bathroom, washes her face, and brushes her teeth. She gets into bed and falls asleep shortly after.

Non-Political Humanizing Information

Alex is a 36 year old woman who lives with her husband and 10-year old son. They live25 minutes from where Alex grew up. People who know Alex describe her as outgoing, loyal, and hardworking. During a typical day, she wakes up her son, Jake, at 6:45am so he can begin getting ready for school. Alex then starts making breakfast and packing lunches. Breakfast is usually something simple, such as oatmeal, and lunch is usually a turkey or peanut butter and jelly sandwich with fruit and yogurt.

After breakfast is done, Alex lets the dog outside as Jake grabs his backpack and lunch. Alex gets in the car with Jake, and realizes that she forgot her cell phone inside. Frustrated, she runs back inside to grab it before leaving. Alex drives Jake to his school. This is one of her favorite times of day, because they get to talk about all kinds of things that make Jake happy, like sports, Minecraft, and guitar lessons. When they arrive, Alex yells from the car that she loves him as Jake walks into the building. Jake gets embarrassed by this, which Alex finds adorable. Alex then drives to work.

Alex works in retail at a local store. Throughout the day, Alex assists in various tasks such as restocking, helping customers, etc. Alex enjoys her job, but it can be stressful at times. Today, there is a customer who is being difficult. The customer wants a certain product that the store no longer carries and is raising her voice at one of Alex's coworkers. As the customer is visibly upset, Alex calmly explains the problem and then offers to find another local store that still carries the item. The customer appreciates Alex's great customer service. Overall, Alex feels fulfilled by her job. It helps pay the bills, and she gets to help people like the customer today.

After work, Alex heads home while Alex's husband picks up Jake. After eating a snack of cheese and veggies that Alex prepared for him, Jake begins on his homework, while Alex and her

husband talk about their days. Alex's husband also had some stressful interactions at work today, so they bond over their shared experience. Alex's mother then calls on the phone. Despite living so close to each other, Alex and her mother sometimes have a strained relationship. However, her mother has had a few health scares lately, which has caused Alex to put aside their differences and reconnect with her mother.

Alex feels bad that the dog had to stay cooped up at home all day, so she opts to take the dog for a long walk, while her husband stays home to help Jake with his homework. On the walk, Alex runs into an old friend, Jolene, who she knew in high school. Alex is happily surprised to see her. They discuss what they are both doing these days and how they both have families now. Jolene is surprised to learn that Alex is in retail, as she remembers Alex's dream of becoming a writer. Alex tells Jolene that she had to put writing on hold in favor of something more practical that would have a guaranteed paycheck, but that she still writes as a hobby. After reminiscing with Jolene about old times for a few minutes, Alex heads home to help Jake with

the latter part of his homework while her husband makes dinner.

Once homework is done, dinner is ready and the family eats at around 7:00pm, their usual dinner time. They ask Jake how his day was and have a nice discussion over dinner. Afterwards, they always do a fun family activity, like going for a walk, playing a board game, watching one of Jake's favorite shows, or having family reading time. Tonight, they choose to play the game "The Settlers of Catan," which is one of their favorites.

When they are finished playing, Alex and her husband kiss Jake goodnight and remind him to brush his teeth before going to bed. Alex and her husband spend a bit more time together then head to bed shortly after.

Political Humanizing Information

Alex is a 36 year old woman who lives with her husband and 10-year old son. They live25 minutes from where Alex grew up. People who know Alex describe her as outgoing, loyal, and hardworking. During a typical day, she wakes up her son, Jake, at 6:45am so he can begin getting ready for school. Alex then starts making breakfast and packing lunches. Breakfast is usually something simple, such as oatmeal, and lunch is usually a turkey or peanut butter and jelly sandwich with fruit and yogurt. As part of her morning routine, Alex turns on the TV to her favorite channel, Fox/MSNBC, as she prepares the meal. Today, a well known Republican/Democrat is giving an interview. As someone who holds conservative/liberal political views, Alex is fascinated by the interview. She takes a break from watching to tell her son that breakfast is ready, and returns promptly to the kitchen table where she continues to watch the interview with her husband.

After breakfast is done, Alex lets the dog outside as Jake grabs his backpack and lunch. Alex gets in the car with Jake, and realizes that she forgot her cell phone inside. Frustrated, she runs back inside to grab it before leaving. Alex drives Jake to his school. This is one of her favorite times of day, because they get to talk about all kinds of things that make Jake happy, like sports, Minecraft, and guitar lessons. When they arrive, Alex yells from the car that she loves him as Jake walks into the building. Jake gets embarrassed by this, which Alex finds adorable. Alex then drives to work.

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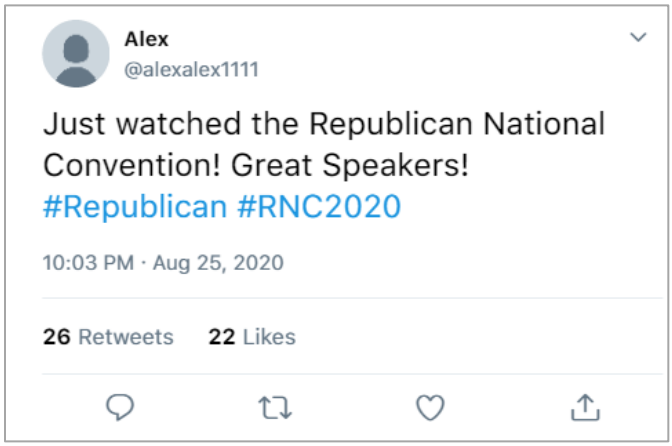
When they are finished playing, Alex and her husband kiss Jake goodnight and remind him to brush his teeth before going to bed. Alex and her husband spend a bit more time together then head to bed shortly after.

Appendix D Study 3 Manipulations

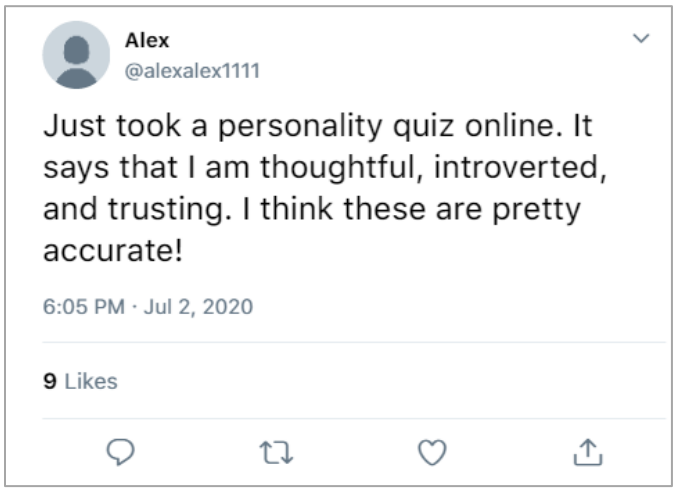
Control

Republican Condition (i.e., ingroup condition for conservatives; outgroup condition for liberals)

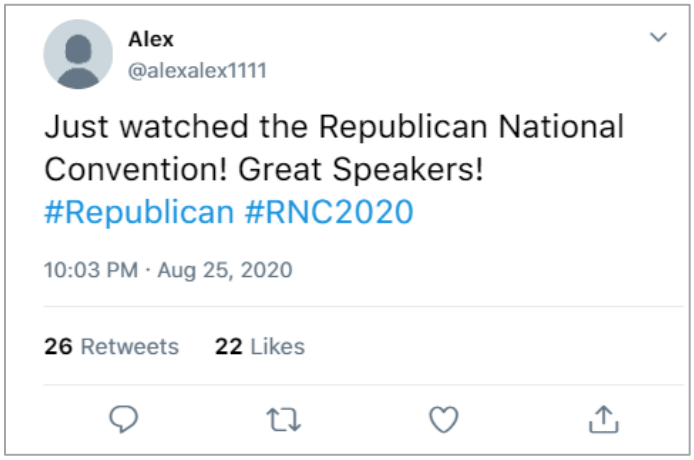


Democrat Condition (i.e., ingroup condition for liberals; outgroup condition for conservatives)

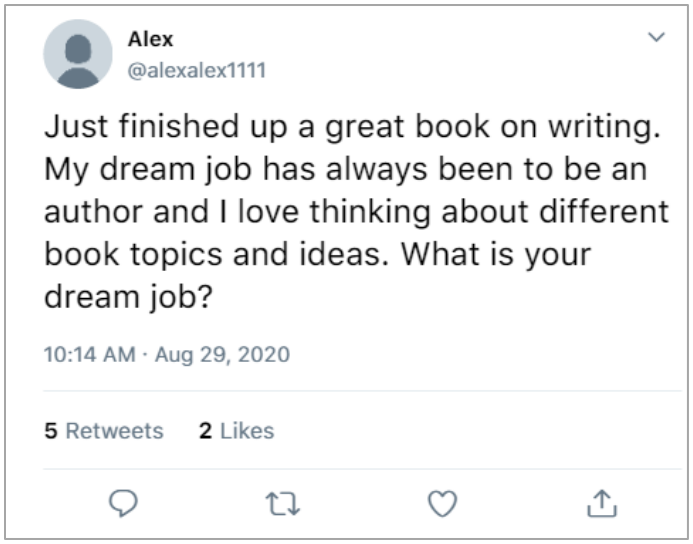
Humanizing Information




Alex
@alexalex1111
Made my son Jake his favorite breakfast, chocolate chip pancakes! He was so happy :) great way to start the day
10:14 AM · Jul 6, 2020
5 Likes


Alex
@alexalex1111
Just watched the Republican National Convention! Great Speakers! #Republican #RNC2020
10:03 PM · Aug 25, 2020
26 Retweets 22 Likes


Alex
@alexalex1111
Just watched the Democratic National Convention! Great Speakers! #Democrat #DNC2020
10:03 PM · Aug 18, 2020
26 Retweets 22 Likes


Alex
@alexalex1111
Just finished up a great book on writing. My dream job has always been to be an author and I love thinking about different book topics and ideas. What is your dream job?
10:14 AM · Aug 29, 2020
5 Retweets
2 Likes

Appendix E Additional Analyses Study 1

Table 12 Test statistics for 2 (group condition: ingroup vs. outgroup) X 3 (humanizing condition: humanizing information with early political cue vs. humanizing information with late political cue vs. non-humanizing political cue control) ANOVAs, Study

	F	*p*	η_p^2
Ascent Dehumanization			
Main effect of group condition	20.54	<.001	.03
Main effect of humanizing condition	1.60	.202	.01
Group X humanizing interaction	3.73	.025	.01
Within control condition: outgroup vs. ingroup	22.98	<.001	.04
Within early humanizing condition: outgroup vs. ingroup	1.11	.292	.00
Within late humanizing condition: outgroup vs. ingroup	4.07	.044	.01
Within outgroup: early humanizing vs. late humanizing vs. control	5.07	.007	.02
Within ingroup: early humanizing vs. late humanizing vs. control	.30	.740	.00
Ascent Dehumanization < 100			
Main effect of group condition	15.28	<.001	.06
Main effect of humanizing condition	1.37	.256	.01
Group X humanizing interaction	2.90	.057	.02
Within control condition: outgroup vs. ingroup	17.63	<.001	.07
Within early humanizing condition: outgroup vs. ingroup	1.04	.310	.00
Within late humanizing condition: outgroup vs. ingroup	2.42	.121	.01
Within outgroup: early humanizing vs. late humanizing vs. control	4.75	.009	.04
Within ingroup: early humanizing vs. late humanizing vs. control	.17	.844	.00
Infrahumanization Primary Emotions			
Main effect of group condition	7.96	.005	.01
Main effect of humanizing condition	1.92	.148	.01
Group X humanizing interaction	.36	.697	.00
Infrahumanization Secondary Emotions			
Main effect of group condition	1.97	.161	.00
Main effect of humanizing condition	16.01	<.001	.05
Group X humanizing interaction	.85	.429	.00
Negative Affect			
Main effect of group condition	114.03	<.001	.16
Main effect of humanizing condition	69.23	<.001	.19
Group X humanizing interaction	11.03	<.001	.04
Within control condition: outgroup vs. ingroup	100.82	<.001	.15
Within early humanizing condition: outgroup vs. ingroup	18.10	<.001	.03
Within late humanizing condition: outgroup vs. ingroup	17.90	<.001	.03
Within outgroup: early humanizing vs. late humanizing vs. control	68.19	<.001	.19
Within ingroup: early humanizing vs. late humanizing vs. control	12.44	<.001	.04
Empathic Effort			
Main effect of group condition	23.43	<.001	.04
Main effect of humanizing condition	3.57	.029	.01
Group X humanizing interaction	6.32	.002	.02
Within control condition: outgroup vs. ingroup	28.96	<.001	.05

Within early humanizing condition: outgroup vs. ingroup	7.35	.007	.01
Within late humanizing condition: outgroup vs. ingroup	.10	.747	.00
Within outgroup: early humanizing vs. late humanizing vs. control	8.53	<.001	.03
Within ingroup: early humanizing vs. late humanizing vs. control	1.40	.247	.01
Intergroup Anxiety			
Main effect of group condition	51.16	<.001	.08
Main effect of humanizing condition	10.77	<.001	.04
Group X humanizing interaction	4.52	.011	.02
Within control condition: outgroup vs. ingroup	43.14	<.001	.07
Within early humanizing condition: outgroup vs. ingroup	11.21	.001	.02
Within late humanizing condition: outgroup vs. ingroup	6.23	.013	.01
Within outgroup: early humanizing vs. late humanizing vs. control	14.69	<.001	.05
Within ingroup: early humanizing vs. late humanizing vs. control	.69	.501	.00
Perceived Morality			
Main effect of group condition	45.74	<.001	.07
Main effect of humanizing condition	51.37	<.001	.15
Group X humanizing interaction	5.59	.004	.02
Within control condition: outgroup vs. ingroup	39.22	<.001	.06
Within early humanizing condition: outgroup vs. ingroup	15.97	<.001	.03
Within late humanizing condition: outgroup vs. ingroup	2.21	.138	.00
Within outgroup: early humanizing vs. late humanizing vs. control	43.35	<.001	.13
Within ingroup: early humanizing vs. late humanizing vs. control	13.81	<.001	.05

Table 13 Test statistics for 2 (group condition: ingroup vs. outgroup) X 2 (humanizing condition vs. non-humanizing control) ANCOVA controlling for demographics, Study 1

	F	*p*	η_p^2
Ascent Dehumanization			
Group Condition	27.53	<.001	.05
Humanizing Condition	3.63	.057	.01
Humanizing X Group	7.68	.006	.01
Race	.17	.682	.00
Political Orientation	1.15	.285	.00
Gender	.42	.515	.00
Age	1.95	.163	.00
Ascent Dehumanization < 100			
Group Condition	20.65	<.001	.08
Humanizing Condition	2.80	.096	.01
Humanizing X Group	5.81	.017	.02
Race	.06	.806	.00
Political Orientation	.78	.377	.00
Gender	.54	.464	.00
Age	1.77	.185	.01
Infra Primary			
Group Condition	5.41	.020	.01
Humanizing Condition	3.57	.059	.01
Humanizing X Group	.26	.614	.00
Race	.00	.986	.00
Political Orientation	4.76	.029	.01
Gender	.21	.649	.00
Age	9.77	.002	.02
Infra Secondary			
Group Condition	1.86	.173	.00
Humanizing Condition	30.94	<.001	.05
Humanizing X Group	.16	.689	.00
Race	.00	.975	.00
Political Orientation	.01	.906	.00
Gender	3.63	.057	.01
Age	8.78	.003	.02
Negative Affect			
Group Condition	149.09	<.001	.20
Humanizing Condition	152.25	<.001	.21
Humanizing X Group	26.52	<.001	.04
Race	7.76	.006	.01
Political Orientation	28.68	<.001	.05
Gender	.93	.337	.00
Age	2.77	.096	.01
Empathic Effort			
Group Condition	32.08	<.001	.05
Humanizing Condition	5.04	.025	.01
Humanizing X Group	11.20	.001	.02
Race	3.48	.062	.01
Political Orientation	2.45	.118	.00
Gender	5.18	.023	.01
Age	.45	.501	.00
Intergroup Anxiety			
Group Condition	74.90	<.001	.11
Humanizing Condition	25.75	<.001	.04

Humanizing X Group	12.57	<.001	.02
Race	1.28	.258	.00
Political Orientation	26.73	<.001	.04
Gender	2.79	.096	.01
Age	17.55	<.001	.03
Morality			
Group Condition	62.62	<.001	.10
Humanizing Condition	105.60	<.001	.15
Humanizing X Group	9.71	.002	.02
Race	5.15	.024	.01
Political Orientation	19.01	<.001	.03
Gender	.11	.745	.00
Age	5.22	.023	.01

Additional Preregistered Analyses

Symbolic Threat

In addition to the outcome measures presented in the paper, I also preregistered the additional outcome measure of symbolic threat which assesses how much participants view the political outgroup as violating their values or culture (Stephan et al., 1999). I ran the same 2 (group condition: ingroup vs. outgroup) X 2 (humanizing condition: humanizing condition vs. non-humanizing control) factorial ANOVA on this variable. There was a significant effect of group (F (1, 593) = 6.25, p = .013, η^2_p = .01), such that participants in the outgroup condition indicated feeling less threatened by the outgroup (M = 5.44, SE = .06), than did those in the ingroup condition (M = 5.66, SE = .06). There was a significant effect of humanizing condition (F (1, 593) = 4.62, p = .032, η^2_p = .01), such that participants in the humanizing information condition indicated feeling less threatened by the outgroup (M = 5.46, SE = .05), than did those in the control condition (M = 5.65, SE = 07). These results did not change with the addition of demographic controls.

Appendix F Additional Analyses Study 2

Table 14 Test statistics for 2 (group condition: nonpolitical vs. outgroup) X 2 (humanizing information vs. similar length individuating information) ANCOVA controlling for demographics, Study 2

	F	*p*	η_p^2
Ascent Dehumanization			
Group Condition	6.14	.014	.02
Humanizing Condition	14.55	<.001	.04
Humanizing X Group	.03	.853	.00
Race	.13	.723	.00
Political Orientation	2.74	.099	.01
Gender	13.23	<.001	.04
Age	.13	.717	.00
Ascent Dehumanization < 100			
Group Condition	1.68	.197	.01
Humanizing Condition	6.88	.010	.04
Humanizing X Group	.49	.487	.00
Race	.61	.436	.00
Political Orientation	.07	.791	.00
Gender	11.09	.001	.07
Age	2.11	.148	.01
Negative Affect			
Group Condition	36.71	<.001	.09
Humanizing Condition	91.43	<.001	.20
Humanizing X Group	2.09	.149	.01
Race	.01	.917	.00
Political Orientation	1.70	.193	.01
Gender	8.48	.004	.02
Age	2.94	.087	.01
Empathic Effort			
Group Condition	8.93	.003	.02
Humanizing Condition	20.37	<.001	.05
Humanizing X Group	2.22	.137	.01
Race	.07	.787	.00
Political Orientation	.65	.420	.00
Gender	12.61	<.001	.03
Age	1.07	.301	.00
Intergroup Anxiety			
Group Condition	24.66	<.001	.06
Humanizing Condition	23.52	<.001	.06
Humanizing X Group	.98	.323	.00
Race	.00	.978	.00
Political Orientation	25.91	<.001	.07
Gender	2.04	.154	.01
Age	1.71	.192	.01
Morality			
Group Condition	16.93	<.001	.04

Humanizing Condition	69.81	<.001	.16
Humanizing X Group	.91	.340	.00
Race	3.24	.073	.01
Political Orientation	1.74	.188	.01
Gender	3.32	.069	.01
Age	.44	.509	.00
Identity Fusion with Alex			
Group Condition	16.70	<.001	.04
Humanizing Condition	3.45	.064	.01
Humanizing X Group	.27	.602	.00
Race	1.60	.206	.00
Political Orientation	4.95	.027	.01
Gender	.00	.993	.00
Age	.72	.397	.00
Ascent Dehumanization towards Outgroup			
Group Condition	2.37	.125	.01
Humanizing Condition	.84	.361	.00
Humanizing X Group	.03	.858	.00
Race	2.26	.134	.01
Political Orientation	7.75	.006	.02
Gender	16.36	<.001	.04
Age	.02	.890	.00
Ingroup-Outgroup Identity Fusion			
Group Condition	2.24	.135	.01
Humanizing Condition	.01	.930	.00
Humanizing X Group	.03	.861	.00
Race	.11	.736	.00
Political Orientation	.37	.545	.00
Gender	.18	.669	.00
Age	.19	.661	.00

Additional Preregistered Analyses

Symbolic Threat

As in Study 1, I assessed symbolic threat in Study 2. A 2 X 2 factorial ANOVA on this variable revealed no significant main effects or interactions (all *ps* > .134).

Moderation by Implicit Theories of Groups and Implicit Theories of Empathy

When preregistering the study, I mistakenly stated I would be testing mediation by Implicit Theories of Groups (ITG) and Implicit Theories of Empathy (ITE). I meant to say that I would be running exploratory moderation analyses with these variables. As these variables were presented prior to the manipulation, a mediation analysis would not make conceptual sense. Moderation analyses with these variables revealed no consistent interactions with humanizing condition (see Table 15 and 16).

Table 15 Test statistics for regressions including ITG interactions, Study 2

	B	*SE*	*β*	*t*	*p*	R^2
Ascent Dehumanization						.08
Humanizing Condition	4.30	1.78	.17	2.42	.016	
Group Condition	-3.80	1.77	-.15	-2.15	.032	
ITG	-1.95	.94	-.21	-2.08	.039	
Humanizing X Group	.41	2.48	.01	.17	.868	
Humanizing X ITG	1.50	1.24	.12	1.21	.226	
Group X ITG	.11	1.36	.01	.08	.934	.
Humanizing X Group X ITG	-.92	1.82	-.05	-.50	.616	
Negative Affect						.27
Humanizing Condition	-1.13	.20	-.36	-5.78	<.001	
Group Condition	1.07	.20	.34	5.50	<.001	
ITG	.04	.10	.04	.39	.697	
Humanizing X Group	-.42	.28	-.12	-1.52	.130	
Humanizing X ITG	.10	.14	.06	.72	.473	
Group X ITG	.16	.15	.09	1.06	.288	
Humanizing X Group X ITG	-.19	.20	-.08	-.91	.364	
Empathic Effort						.11
Humanizing Condition	.27	.16	.12	1.70	.090	
Group Condition	-.58	.16	-.25	-3.71	<.001	
ITG	-.04	.08	-.04	-.44	.664	
Humanizing X Group	.43	.22	.16	1.95	.052	
Humanizing X ITG	-.06	.11	-.06	-.56	.575	
Group X ITG	-.25	.12	-.20	-2.05	.041	
Humanizing X Group X ITG	.35	.16	.21	2.17	.031	
Intergroup Anxiety						.12
Humanizing Condition	-.40	.13	-.20	-2.95	.003	
Group Condition	.56	.13	.29	4.25	<.001	
ITG	.01	.07	.02	.16	.877	
Humanizing X Group	-.16	.19	-.07	-.83	.405	
Humanizing X ITG	-.06	.09	-.07	-.67	.501	
Group X ITG	.09	.10	.09	.90	.370	
Humanizing X Group X ITG	-.01	.14	-.01	-.05	.960	
Morality						.20
Humanizing Condition	.78	.15	.33	5.15	<.001	
Group Condition	-.62	.15	-.27	-4.14	<.001	
ITG	.03	.08	.04	.42	.678	
Humanizing X Group	.27	.21	.10	1.26	.210	
Humanizing X ITG	-.03	.11	-.03	-.32	.749	
Group X ITG	-.09	.12	-.07	-.78	.435	
Humanizing X Group X ITG	.01	.16	.01	.07	.943	

Table 16 Test statistics for regressions including ITE interactions, Study 2

	B	*SE*	*β*	*t*	*p*	R^2
Ascent Dehumanization						.07
Humanizing Condition	4.56	1.78	.18	2.56	.011	
Group Condition	-3.26	1.77	-.13	-1.84	.067	
ITE	-1.53	.931	-.17	-1.65	.101	
Humanizing X Group	-.12	2.49	-.00	-.05	.962	
Humanizing X ITE	1.05	1.27	.09	.83	.408	
Group X ITE	-.59	1.29	-.05	-.46	.648	
Humanizing X Group X ITE	1.06	1.75	.06	.61	.543	
Negative Affect						.29
Humanizing Condition	-1.13	.19	-.36	-5.84	<.001	
Group Condition	1.03	.19	.33	5.36	<.001	
ITE	-.01	.10	-.01	-.10	.920	
Humanizing X Group	-.40	.27	-.11	-1.45	.147	
Humanizing X ITE	.14	.14	.09	1.03	.303	
Group X ITE	.33	.14	.21	2.36	.019	
Humanizing X Group X ITE	-.29	.19	-.14	-1.53	.128	
Empathic Effort						.11
Humanizing Condition	.28	.16	.12	1.77	.078	
Group Condition	-.54	.16	-.23	-3.44	.001	
ITE	-.07	.08	-.08	-.84	.402	
Humanizing X Group	.40	.22	.15	1.80	.072	
Humanizing X ITE	-.01	.11	-.01	-.09	.928	
Group X ITE	-.18	.11	-.16	-1.57	.117	
Humanizing X Group X ITE	.15	.16	.10	.98	.330	
Intergroup Anxiety						.14
Humanizing Condition	-.40	.13	-.21	-3.04	.003	
Group Condition	.54	.13	.27	4.08	<.001	
ITE	.06	.07	.09	.92	.358	
Humanizing X Group	-.14	.19	-.06	-.73	.464	
Humanizing X ITE	-.15	.09	-.16	-1.60	.110	
Group X ITE	.10	.10	.10	1.03	.306	
Humanizing X Group X ITE	.07	.13	.05	.54	.589	
Morality						.22
Humanizing Condition	.78	.15	.34	5.23	<.001	
Group Condition	-.60	.15	-.26	-4.03	<.001	
ITE	-.02	.08	-.03	-.32	.749	
Humanizing X Group	.25	.21	.09	1.19	.233	
Humanizing X ITE	.08	.11	.07	.75	.451	
Group X ITE	-.20	.11	-.18	-1.86	.063	
Humanizing X Group X ITE	.04	.15	.02	.25	.805	

Appendix G Additional Analyses Study 3

Table 17 Test statistics for 2 (ingroup vs. outgroup) X 2 (humanizing information vs. control) ANCOVA controlling for demographics, Study 3

	F	*p*	η_p^2
Humanization			
Group Condition	86.26	<.001	.18
Humanizing Condition	39.75	<.001	.09
Humanizing X Group	4.61	.032	.01
Race	.94	.333	.00
Political Orientation	2.13	.146	.01
Gender	6.64	.010	.02
Age	1.11	.294	.00
Mind Perception			
Group Condition	23.43	<.001	.06
Humanizing Condition	6.27	.013	.02
Humanizing X Group	4.19	.041	.01
Race	.09	.760	.00
Political Orientation	.26	.608	.00
Gender	.37	.543	.00
Age	.49	.486	.00
Negative Affect			
Group Condition	114.99	<.001	.23
Humanizing Condition	32.65	<.001	.08
Humanizing X Group	17.20	<.001	.04
Race	.49	.485	.00
Political Orientation	40.48	<.001	.10
Gender	.18	.671	.00
Age	.25	.618	.00
Empathic Effort			
Group Condition	32.25	<.001	.08
Humanizing Condition	1.49	.223	.00
Humanizing X Group	6.81	.009	.02
Race	.27	.602	.00
Political Orientation	.05	.818	.00
Gender	.34	.560	.00
Age	.00	.994	.00
Morality			
Group Condition	55.41	<.001	.13
Humanizing Condition	19.75	<.001	.05
Humanizing X Group	6.64	.010	.02
Race	.74	.389	.00
Political Orientation	21.47	<.001	.05
Gender	4.21	.041	.01
Age	.46	.497	.00

Additional Preregistered Analyses

LIWC Coded Outcomes

I also examined the Tweet responses using the LIWC software (Pennebaker et al., 2015). There was a significant effect of group condition on all outcomes. People in the outgroup (vs. ingroup) condition responded with more words, less positive emotion words, and more negative emotion words. There was only a significant effect of humanizing condition on positive emotions, such that people in the humanizing (vs. control) condition responded with less positive emotion words (see Table 18).

Table 18 Test statistics for 2 (ingroup vs. outgroup) X 2 (humanizing information vs. control) ANOVAs, Study 3

	F	*p*	η_p^2
Word Count			
Group Condition	14.48	<.001	.04
Humanizing Condition	.83	.364	.00
Humanizing X Group	.01	.946	.00
Positive Emotion			
Group Condition	10.90	.001	.03
Humanizing Condition	4.56	.033	.01
Humanizing X Group	1.07	.302	.00
Negative Emotion			
Group Condition	10.11	.002	.03
Humanizing Condition	.03	.854	.00
Humanizing X Group	1.29	.257	.00

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