Empathy, Dehumanization, and Misperceptions: A Media Intervention Humanizes Migrants and Increases Empathy for Their Plight but Only if Misinformation About Migrants Is Also Corrected

Samantha L. Moore-Berg[1,2] ⓘ, Boaz Hameiri[1,3] ⓘ,
and Emile G. Bruneau[1,2]

Abstract

Anti-migrant policies at the U.S. southern border have resulted in the separation and long-term internment of thousands of migrant children and the deaths of many migrants. What leads people to support such harsh policies? Here we examine the role of two prominent psychological factors—empathy and dehumanization. In Studies 1 and 2, we find that empathy and dehumanization are strong, independent predictors of anti-migrant policy support and are associated with factually false negative beliefs about migrants. In Study 3, we interrogated the relationship between empathy/dehumanization, erroneous beliefs, and anti-migrant policy support with two interventions: a media intervention targeting empathy and dehumanization and an intervention that corrects erroneous beliefs. Both interventions were ineffective separately but reduced anti-migrant policy support when presented together. These results suggest a synergistic relationship between psychological processes and erroneous beliefs that together drive harsh anti-migrant policy support.

Keywords

migrants, empathy, dehumanization, intervention

Despite being a "nation of immigrants," the United States has a long history of discrimination against migrants and refugees (Young, 2017). Recently, there has been an increase in policies designed to deter immigration, especially at the U.S. southern border (American Immigration Council, 2020). Although the influx of undocumented migrants into the United States through its southern border is at a 20-year low (Radford, 2019), the previous administration has expressed concern that "the United States of America has been invaded by hundreds of thousands of people coming through Mexico and entering our country illegally" (The White House, 2019) and has enacted anti-migrant policies to restrain immigration, including the systematic removal of migrant children from their families and their long-term detention in internment camps (Dickerson, 2019). What leads Americans to support or oppose such policies?

One potential driver of anti-migrant policy support is dehumanization. Dehumanization is associated with unwillingness to help others, including immigrants (Bruneau et al., 2018; Esses et al., 2013; Rowatt et al., 2020), and an increased willingness to support punishment and harm (Bruneau & Kteily, 2017; Haslam, 2006; Kteily et al., 2015; Utych, 2018),

especially toward those deemed harm-worthy (Haslam et al., 2012). By contrast, empathy increases the desire to help and reduces support for causes of suffering (Batson, 2009; Batson & Ahmad, 2009; Stephan & Finlay, 1999). But empathy is often reserved for those we believe are "worthy" (Bandura, 2002; Opotow, 1990; Zaki, 2014): to those who are virtuous and similar to us or our in-groups (e.g., Cikara et al., 2011; Stürmer et al., 2006). Taken together, we predict that people who overestimate the prevalence of unworthy behaviors among undocumented migrants (e.g., using children as props; gang membership) will dehumanize migrants more and express less

[1] Annenberg School for Communication, University of Pennsylvania, Philadelphia, PA, USA
[2] Beyond Conflict, Boston, MA, USA
[3] The Evens Program in Conflict Resolution and Mediation, Tel Aviv University, Israel

Corresponding Author:
Samantha Moore-Berg, Annenberg School for Communication, University of Pennsylvania, 3620 Walnut St., Philadelphia, PA 19104, USA.
Email: samantha.mooreberg@asc.upenn.edu

empathy for migrant suffering, which will then be associated with stronger anti-migrant policy support.

We focus here on two narratives about migrant criminality that are prevalent in both liberal and conservative media. First, the belief that a large proportion of undocumented migrants are gang members who intend to extend their criminal influence, and second, a belief that a high proportion of children trying to gain entry into the United States "are being used as pawns by the smugglers and traffickers" (Bump, 2018). Both narratives have been extensively covered in the media (e.g., Lankford et al., 2019; Fernandez & Jordan, 2019; Singman, 2019) and represent exaggerations of reality: Department of Homeland Security (DHS) data show that in 2017, 228 of the 526,901 total undocumented migrants detained at the border, or less than 1%, were affiliated with gangs (Chinoy et al., 2018), and only 46 children apprehended at the border in 2017 were suspected of being accompanied across the border by adults who were not their parents, which represents <.1% of the 41,435 undocumented children apprehended at the southern border that year (Bump, 2018). Given the pervasiveness of coverage, we predicted that Americans would overestimate the prevalence of gang members and children used as props to gain entry.

Here we examined the relationship between narratives of migrant criminality, the psychological processes of empathy and dehumanization, and anti-migrant policy support. We also examined whether these effects are moderated by political affiliation, which to our knowledge has yet to be examined in the literature. Past research demonstrates that conservatism is positively associated with dehumanization and anti-migrant policy support (e.g., Bruneau et al., 2018) and negatively associated with empathy (e.g., Hasson et al., 2018), but coverage of migrant criminality narratives is prevalent in both liberal and conservative media (e.g., Lankford et al., 2019; Fernandez & Jordan, 2019; Singman, 2019). Therefore, we examined whether these criminality narratives are more prevalent and/or consequential for Democrats and/or Republicans in bolstering dehumanization and reducing empathy toward migrants, and correspondingly, anti-migrant policy support.

In Studies 1 and 2, we examined the degree to which Americans dehumanize migrants and withhold empathy for their suffering and determined how strongly empathy and dehumanization are associated with estimates of migrant criminality and anti-migrant policy support. In Study 3, we sought to intervene in these relationships by correcting overestimates and/or inducing empathy toward migrants through a media intervention.

Study 1

Method

Participants

We recruited 1,265 people (unweighted) from the nonpartisan research organization NORC at the University of Chicago.[1,2] We excluded 212 participants for failing the embedded attention

check ("Please select 5 for this question.") and 32 participants who did not follow instructions (i.e., participants who indicated over 100% for the estimates), resulting in a final unweighted sample of 1,021. Ultimately, 1,009 participants (weighted) were included in the final sample (560 Democrats, 449 Republicans), which approximated U.S. demographics by race (66% White, 15% Black, 15% Latinx, 2% Asian, and 2% Other), gender (54% female), age ($M = 47.56$ years, $SD = 16.62$), and U.S. geographic region (17% Northeast, 23% Midwest, 38% South, and 22% West). (See Supplemental Table S1 for Study demographic details compared to benchmarks.) We use weighted values in all Study 1 analyses.

Measures and Procedure

We report all measures, manipulations, and exclusions in all studies.

Beliefs About Migrant Criminality

Participants read the following prompt:

> "Many people who do not currently have immigration documentation to enter the U.S. ("undocumented migrants") are trying to gain entry into the U.S. by crossing the Southern Border. Three reasons why people may seek to gain entry is because they are (1) gang members who intend to extend their criminal influence, (2) asylum seekers who are trying to flee violence and oppression and save themselves and their families, or (3) economic migrants who are trying to find work."

Participants were then asked to estimate the percentage of undocumented migrants at the southern border who belong to each of these three groups (in random order).

We then asked participants to estimate the percentage of migrant children at the southern border who are being used by adults who are not their parents: "There have been stories of undocumented migrant adults using children (who are not their own) to gain entry at the U.S. southern border" and then asked to "estimate the percent (%) of migrant children at the southern border who are being used as props by adults who are not their parents."

Dehumanization

We measured the dehumanization of undocumented migrants (and filler groups in randomized order) with the "Ascent of (Hu)Man" Scale (Kteily et al., 2015), which asked participants to provide humanity judgments using a sliding scale spanned by the Ascent of (Hu)Man diagram. We anchored responses at the $0 = least$ *evolved/civilized* and $100 = most$ *evolved/civilized* sides of the image. We reverse-coded the scores for "undocumented migrants" such that higher scores indicate greater dehumanization.

Anti-Migrant Policies

We assessed anti-migrant policy support with five randomized items including three policies implemented by the Trump

Table 1. Study 1 Correlations and Descriptive Statistics.

A. Overall

Measures	1	2	3	4
1. Percentage of gang members	—			
2. Percentage of children props	.57***	—		
3. Dehumanization	.24***	.31***	—	
4. Anti-migrant policies	.40***	.49***	.34***	—
Overall M (SD)	15.42 (16.69)	26.55 (25.80)	28.52 (31.21)	3.27 (1.56)

B. Democrats and Republicans

Measures	1	2	3	4
1. Percentage of gang members	—	.45***	.09	.18***
2. Percentage of children props	.58***	—	.19***	.37***
3. Dehumanization	.32***	.34***	—	.23***
4. Anti-migrant policies	.35***	.34***	.39***	—
Democrats M (SD)	10.49 (13.77) [a]	18.35 (22.94) [a]	23.63 (28.27) [a]	2.36 (1.07) [a]
Republicans M (SD)	21.56 (17.94) [b]	36.78 (25.54) [b]	34.73 (33.60) [b]	4.40 (1.30) [b]

Note. For section B, above the horizontal line are Republican correlations, and below the horizontal line are Democrat correlations; a and b superscript comparisons are within variable; values that share the same superscript did not differ from each other (t test $p > .05$), and values with different superscripts differed from each other (t test $p < .05$).
***$p < .001$.

administration (e.g., "Any person who crosses the border illegally with a child should be separated from that child for court processing") and two policies favored by the Obama administration (e.g., "Deportation should only be enforced for people who threaten national security and public safety"; see Supplemental Materials for all items). Participants responded using a Likert-type scale anchored at $1 = $ *strongly disagree* and $7 = $ *strongly agree* ($\alpha = .84$; for similar measures, see Bruneau et al., 2018; Kteily et al., 2015).

Demographics

Participants answered demographic questions about their race, gender, geographic region, and political affiliation. We consider as Democrat all participants who indicated strong Democrat, weak Democrat, or lean Democrat, and we consider as Republican all participants who indicated strong Republican, weak Republican, and lean Republican.

Results

For means, standard deviations, and correlations, see Table 1.

We first examined the penetrance of narratives about criminality and immorality of undocumented migrants. On average, participants perceived that 15.42% ($SD = 16.69\%$) of migrants crossing the southern border are gang-affiliated; by political party, Democrats estimated 10.49% ($SD = 13.77\%$), and Republicans estimated 21.56% ($SD = 17.94\%$). Although Republicans' estimates were significantly greater than Democrats' estimates, $t(1,007) = 11.08$, $p < .001$, $d = .69$, 95% confidence interval (CI) [9.10, 13.02], mean estimates by both

groups were nearly an order of magnitude greater than the $\sim 1\%$ of undocumented migrants who are suspected by the DHS of being associated in some way with a gang (Chinoy et al., 2018; one-sample t tests: Democrat: $t(559) = 16.31$, $p < .001$, $d = .69$, 95% CI [8.35, 10.64]; Republican: $t(448) = 24.28$, $p < .001$, $d = 1.15$, 95% CI [18.89, 22.22]; full sample: $t(1,008) = 27.44$, $p < .001$, $d = .86$, 95% CI [13.39, 15.45]). Overall, 86% of participants numerically overestimated the percentage of migrants associated with gangs (78% of Democrats, 95% of Republicans[3]; see Figure 1).

For the second estimate, participants predicted, on average, that 26.55% ($SD = 25.80\%$) of undocumented children are being used as props to gain entry into the United States: Democrats estimated 18.35% ($SD = 22.94\%$), and Republicans estimated 36.78% ($SD = 25.54\%$). Again, although Republicans' estimates were significantly greater than Democrats' estimates, $t(1,007) = 12.05$, $p < .001$, $d = .76$, 95% CI[15.42, 21.42], mean estimates from both groups were more than two orders of magnitude higher than the $<.1\%$ of undocumented migrant children suspected by the DHS of being brought into the United States by nonparents (Bump, 2018; one-sample t tests: Democrat: $t(559) = 18.83$, $p < .001$, $d = .80$, 95% CI [16.35, 20.16]; Republican: $t(448) = 30.43$, $p < .001$, $d = 1.44$, 95% CI [34.31, 39.05]; full sample: $t(1,008) = 32.57$, $p < .001$, $d = 1.03$, 95% CI [24.86, 28.04]). Overall, 97% of participants overestimated the percentage of migrant children being trafficked (94% of Democrats and 99% of Republicans; see Figure 1).

Consistent with our predictions, using Hayes's (2018) PROCESS Version 3.5 (Model 4), we found an indirect effect of gang member estimates on anti-migrant policies through dehumanization (indirect effect $= .05$, Boot $SE = .01$, 95%
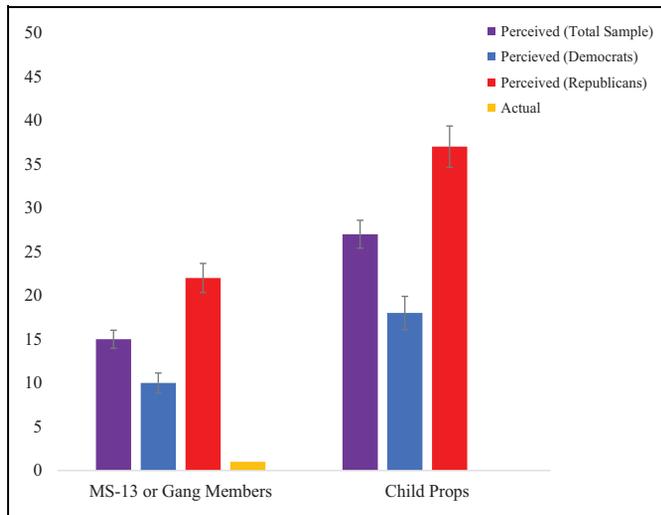
Figure 1. Study 1 mean estimates for the percentage of immigrants who are gang members and who use children as props to enter the United States, shown for the total sample, Democrats, Republicans, and actual values. *Note.* Error bars represent 95% confidence intervals.

CI [.03, .08]) and an indirect effect of estimates of children used as props on anti-migrant policies through dehumanization (indirect effect = .06, Boot SE = .01, 95% CI [.04, .08]; see Figure S1). Furthermore, as shown in Table 1B, correlations between all of the variables were generally stronger among Democrats than Republicans. This was also reflected in the following analyses.

In particular, we examined whether the indirect effects were moderated by political affiliation using Hayes's (2018) PROCESS Version 3.5 (Model 59). There was a significant moderated indirect effect of gang member estimates on anti-migrant policies through dehumanization (index = −.05, Boot SE = .02, 95% CI [−.09, −.01]); indirect effects were significant for Democrats (effect = .06, Boot SE = .02, 95% CI [.03, .10]) but not Republicans (effect = .01, Boot SE = .01, 95% CI [−.01, .03]). There was not a significant moderated indirect effect of child prop estimates on anti-migrant policies through dehumanization (index = −.03, Boot SE = .02, 95% CI [−.07, .01]), but there was a significant indirect effect for both Democrats (effect = .06, Boot SE = .02, 95% CI [.03, .10]) and Republicans (effect = .03, Boot SE = .01, 95% CI [.01, .05]). However, the pattern of results was consistent—indirect effects among Republicans were descriptively smaller. For complete indirect effect analyses, moderation indirect effect analyses and reverse indirect effects path models, see Supplemental Materials.

Discussion

Among a representative sample of Americans, both Democrats and Republicans significantly overestimate the types of migrants entering the United States through its southern border. Estimates of gang member affiliates were over 15-fold greater than DHS statistics, and the mean percentage of children estimated to be used as props was over 250-fold greater than DHS

statistics. We also found that individual differences in overestimations predicted support for policies through their associations with dehumanization. Results suggest that erroneous beliefs about migrant criminality are associated with the dehumanization of migrants, particularly among Democrats. In Study 2, we sought to replicate Study 1 effects and extend our analysis to include empathy and dehumanization as parallel predictors of anti-migrant policy support.

Study 2

Method

Participants

We recruited 1,439 participants from a Qualtrics panel to complete this Study. We excluded 260 participants for failing the attention check ("Please answer 'strongly agree' for this question."), resulting in 1,179 participants in the final sample (607 Democrats, 562 Republicans), which approximated U.S. census proportions by gender (44% female), age (M = 48.12 years; SD = 17.88), geographic region (Northwest: 19%, Midwest: 20%, South: 38%, and West: 23%), but not race (79% White, 7% Black, 7% Latinx, 4% Asian, and 3% Other).

Measures and Procedure

Estimations

We assessed estimates of gang members and children used as props as in Study 1.

Dehumanization

To obtain a more comprehensive measure of dehumanization, we included two counterbalanced measures: The Ascent of (Hu)Man Scale (Kteily et al., 2015), as in Study 1, and a multi-item blatant dehumanization measure, in which participants rated "illegal/undocumented migrants" on 16 traits (e.g., primitive, agressive, barbaric; see Supplemental Materials for all items) using a 0 = *not at all* to 7 = *extremely so* Likert-type scale. We averaged responses across traits to create a multi-item dehumanization score (α = .79). We computed an overall dehumanization score by averaging both standardized dehumanization scores (Kteily et al., 2016).

Empathy Toward Migrants

Participants indicated their empathy levels toward migrants with three questions: "How much empathy do you feel for parents whose children are taken from them as they cross into the U.S.?" "How much empathy do you feel for children who are taken from their parents when they try to cross into the U.S.?" "How much empathy do you feel for migrants at the southern border, in general?" Participants used a sliding scale anchored at 0 = *none* and 100 = *a lot*. We averaged these ratings to create an overall empathy score (α = .92; for similar measures, see Bruneau et al., 2015; Bruneau & Kteily, 2017).

Table 2. Study 2 Correlations and Descriptive Statistics.

A. Overall

Measures	1	2	3	4	5
1. Percentage of gang members	—				
2. Percentage of children props	.36***	—			
3. Dehumanization	.42***	.44***	—		
4. Empathy	−.37***	−.47***	−.65***	—	
5. Anti-migrant policies	.38***	.49***	.61***	−.76***	—
Overall M (SD)	15.76 (17.67)	34.77 (30.37)	−.01 (.87)	64.36 (32.05)	3.63 (1.40)

B. Democrats and Republicans

Measures	1	2	3	4	5
1. Percentage of gang members	—	.20***	.35***	−.22***	.16***
2. Percentage of children props	.40***	—	.32***	−.33***	.29***
3. Dehumanization	.38***	.42***	—	−.57***	.49***
4. Empathy	−.34***	−.39***	−.61***	—	−.68***
5. Anti-migrant policies	.43***	.45***	.57***	−.67***	—
Democrats M (SD)	10.91 (14.68) [a]	24.08 (26.26) [a]	−.29 (.78) [a]	80.01 (23.80) [a]	2.92 (1.21) [a]
Republicans M (SD)	21.02 (18.95) [b]	46.40 (30.27) [b]	.32 (.86) [b]	47.83 (31.23) [b]	4.39 (1.16) [b]

Note. For section B, above the horizontal line are Republican correlations, and below the horizontal line are Democrat correlations; a and b superscript comparisons are within variable; values that share the same superscript did not differ from each other (*t* test *p* > .05), and values with different superscripts differed from each other (*t* test *p* < .05).
***p < .001.

Anti-Migrant Policies

We assessed anti-migrant policy support as in Study 1 but with a slightly modified set of seven randomized items (e.g., "The United States should enforce a 'zero-tolerance' policy in which all unauthorized people crossing the border should be criminally prosecuted"; see Supplemental Materials; see Bruneau et al., 2018; Kteily et al., 2015). Responses were made on a 1 = *strongly disagree* to 7 = *strongly agree* Likert-type scale (α = .83).

Results

For means, standard deviations, and correlations, see Table 2.

As in Study 1, we found that participants overestimated illegal/immoral behavior by migrants. On average, participants believed that 15.76% (SD = 17.67%) of migrants crossing the southern border were gang-affiliated: Democrats estimated 10.91% (SD = 14.68%), and Republicans estimated 21.02% (SD = 18.95%). Democrats' and Republicans' estimates significantly differed from each other, $t(1,167)$ = 10.24, $p < .001$, d = .60, 95% CI [8.17, 12.05]), but both groups' mean estimates were greater than the $\sim$1% of undocumented migrants who are suspected of being associated in some way with a gang, Democrat: $t(606)$ = 16.63, $p < .001$, d = .68, 95% CI [8.74, 11.08]; Republican: $t(561)$ = 25.04, $p < .001$, d = 1.06, 95% CI [18.45, 21.59]; full sample: $t(1,178)$ = 28.67, $p < .001$, d = .68, 95% CI [13.75, 15.77]. Overall, 79% of participants numerically overestimated the

percentage of migrants associated with gangs (68% of Democrats and 92% of Republicans; see Figure 2).

Similar to Study 1, participants predicted, on average, that 34.77% (SD = 30.37%) of children crossing the southern border are being used as props to gain entry into the United States: Democrats estimated 24.08% (SD = 26.26%), and Republicans estimated 46.40% (SD = 30.27%). Although estimates by Democrats and Republicans significantly differed from each other, $t(1,167)$ = 13.49, $p < .001$, d = .79, 95% CI [19.07, 25.56], estimates by both groups were significantly greater than the <.1% of migrant children actually suspected by the DHS of being used by nonparents to gain entry into the U.S., Democrat: $t(606)$ = 22.50, $p < .001$, d = .91, 95% CI [21.89, 26.07]; Republican: $t(561)$ = 36.26, $p < .001$, d = 1.53, 95% CI [43.79, 48.80]; full sample: $t(1,178)$ = 39.19, $p < .001$, d = 1.14, 95% CI [32.94, 36.41]. Overall, 93% of participants overestimated the percentage of migrant children being trafficked (88% of Democrats and 98% of Republicans; see Figure 2).

Consistent with our predictions and Study 1, we found a significant indirect effect of the gang member estimate on anti-migrant policy support, this time in parallel through both dehumanization (indirect effect = .07, Boot SE = .01, 95% CI [.05, .10]) and empathy (indirect effect = .22, Boot SE = .02, 95% CI [.19, .26]) and also an indirect effect of estimates of children used as props on anti-migrant policies in parallel through dehumanization (indirect effect = .07, Boot SE = .01, 95% CI [.05, .10]) and empathy (indirect effect = .28, Boot SE = .02, 95% CI [.24, .32]; see Figure S10).
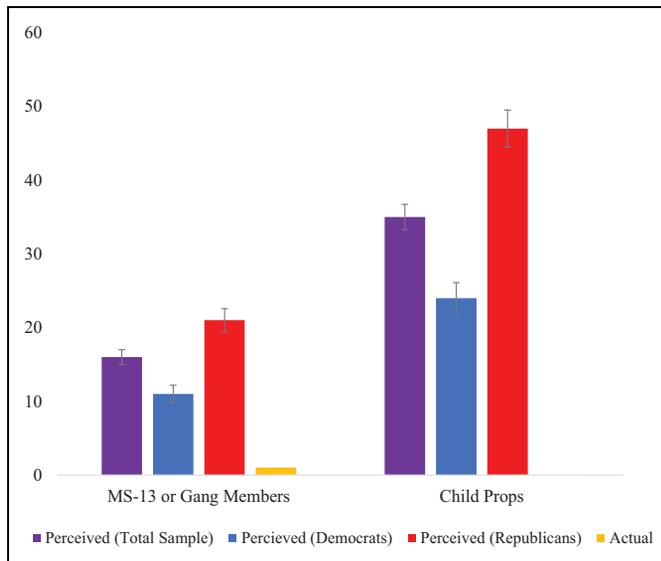
Figure 2. Study 2 mean estimates for the percentage of immigrants who are gang members and who use children as props to enter the U.S., shown for the total sample, Democrats, Republicans, and actual values. *Note.* Error bars represent 95% confidence intervals.

Furthermore, as shown in Table 2B, and consistent with Study 1, correlations between all variables were generally stronger among Democrats than Republicans, which was also reflected in the following analyses.

In particular, we examined whether these indirect effects were moderated by political affiliation. First, there was a significant moderated indirect effect of gang member estimates on anti-migrant policies through dehumanization (index = −.07, Boot SE = .03, 95% CI [−.14, −.01]); indirect effects were significant for Democrats (effect = .17, Boot SE = .03, 95% CI [.12, .23]) and Republicans, albeit descriptively weaker (effect = .10, Boot SE = .02, 95% CI [.06, .14]). However, moderated indirect effects of gang member estimates on anti-migrant policies through empathy were not significant (index = −.04, Boot SE = .02, 95% CI [−.08, .01]). Yet, the pattern of results for the indirect effects was similar—indirect effects were significant for Democrats (effect = .08, Boot SE = .02, 95% CI [.05, .12]) and Republicans, albeit descriptively weaker (effect = .04, Boot SE = .01, 95% CI [.02, .07]).

Likewise, there was a significant moderated indirect effect of child prop estimates on anti-migrant policies through dehumanization (index = −.05, Boot SE = .02, 95% CI [−.10, −.01]; indirect effects were significant for Democrats (effect = .09, Boot SE = .02, 95% CI [.05, .13]) and Republicans, albeit descriptively weaker (effect = .04, Boot SE = .01, 95% CI [.02, .06]). Again, moderated indirect effects of child prop estimates on anti-migrant policies through empathy were not significant (index = −.03, Boot SE = .03, 95% CI [−.09, .04]), with similar significant indirect effects for Democrats (effect = .19, Boot SE = .03, 95% CI [.14, .24]) and Republicans, albeit descriptively weaker (effect = .16, Boot SE = .02, 95% CI [.12, .20]). See Supplemental Materials for complete indirect effect analyses, moderated indirect effect analyses, and reverse indirect effect path models.

Discussion

As predicted, Studies 1 and 2 established the importance of dehumanization and empathy in anti-migrant policy support: together, empathy and dehumanization explained over 50% of the variance (R^2 = .60) in anti-migrant policy support. In addition, we found that the degree to which Americans, especially Democrats, considered migrants to be fully "evolved and civilized" and their willingness to empathize with migrants were contingent upon (over)estimates of the proportion of migrants thought to be gang members and the proportion of children thought to be trafficked to gain easier entry. We aimed to intervene on these relationships in Study 3.

Study 3

In Study 3, we explored the relationships between (over)estimates of migrants' illegal/immoral activity, empathy/dehumanization, and anti-migrant policy support using two interventions. Previous research demonstrates that if empathy is successfully mobilized for an out-group member, it can increase positive affect and attitudes toward the out-group as a whole (Batson et al., 1997, 2002; Shih et al., 2009); this may be particularly true if the narrative focuses on the mind of the target (i.e., their thoughts and emotions; Bruneau et al., 2015). To induce empathy, we used a 2-minute video (player.vimeo.com/video/288249520) depicting the emotional reunion of an undocumented mother and her child after they had been separately detained for months. Since the mother expresses a range of human-specific emotions (e.g., love, remorse, shame), we assumed that the video would also reduce dehumanization.

However, this strategy's effectiveness depends upon the target of the narrative being viewed as representative of the group (Brown & Hewstone, 2005). If a sympathetic out-group member is perceived to be an exception to a generally unsympathetic group, then positive responses to the individual may not immediately translate to positive responses toward the group they represent (Baston et al., 1997). Since Studies 1 and 2 showed that Americans consistently and dramatically overestimate undocumented migrants' illegal/immoral behavior, we hypothesized that any effects of an empathy-inducing media intervention may be enhanced by challenging beliefs about migrants that may render them unworthy of empathic concern. Thus, in addition to this more affective video intervention, we created a brief cognitive intervention that aimed to correct the (over)estimates of migrant criminality. In this intervention, participants made each of the two estimates, as in Studies 1 and 2, and immediately after each estimate, they were provided with the actual percentage of migrants suspected of being associated with a gang ($\sim$1%) or the actual percentage of children suspected of being used or trafficked by adults who were not their parents (<.1%) from DHS statistics. We tested these intervention

Table 3. Study 3 Correlations.

Measures	1	2	3
1. Dehumanization	—		
2. Empathy	−.61***	—	
3.Anti-migrant policies	.68***	−.71***	—

***p < .001.

strategies in an experimental paradigm with five conditions: video only, statistical correction only, video + statistical correction (two versions with order counterbalanced), and no intervention control.

Method

Participants

We recruited 994 participants from Amazon's Mechanical Turk to complete this study. We excluded 36 participants for failing the attention check ("Please answer 'strongly agree' for this question."), resulting in 958 participants (53% female; $M_{age} = 35.38$ years, $SD = 11.28$; 65% Democrat, 35% Republican; 67% White, 15% Black, 6% Latinx, 8% Asian, and 4% Other) in the final sample (see Supplemental Materials for condition demographics).

Measures and Procedure

After providing consent, participants were randomly assigned to one of five conditions: statistical correction only ($n = 198$), video only ($n = 189$), statistical correction + video (Order 1; $n = 190$), video + statistical correction (Order 2; $n = 187$), and control ($n = 194$). In the statistical correction condition, participants first provided the same gang member and children used as props estimates as in Studies 1 and 2, and immediately after providing their estimates, they were shown the actual DHS data as described above. In the video condition, participants watched a video, as described above, and then provided the two estimates about gang members and migrant children but did not receive the DHS data. In the control condition, participants made estimates but did not receive DHS data and were not shown the video. All participants then completed the same empathy ($\alpha = .90$), dehumanization (multi-item: $\alpha = .91$), and anti-migrant policies ($\alpha = .83$) measures as in Study 2.

Results

For correlations, see Table 3. We first conducted planned contrasts to determine the effect of each intervention condition versus the control on the outcome variables (see Figure 3). For the combined intervention, we found no significant differences for any of the outcome variables between the counterbalanced conditions (all ps > .239); we therefore combined them for all analyses.

For the combined video and statistical correction condition, participants demonstrated less dehumanization of migrants, $t(954) = −2.96$, $p = .003$, $d = .26$; greater empathy toward migrants, $t(954) = 2.46$, $p = .014$, $d = .22$; and less anti-
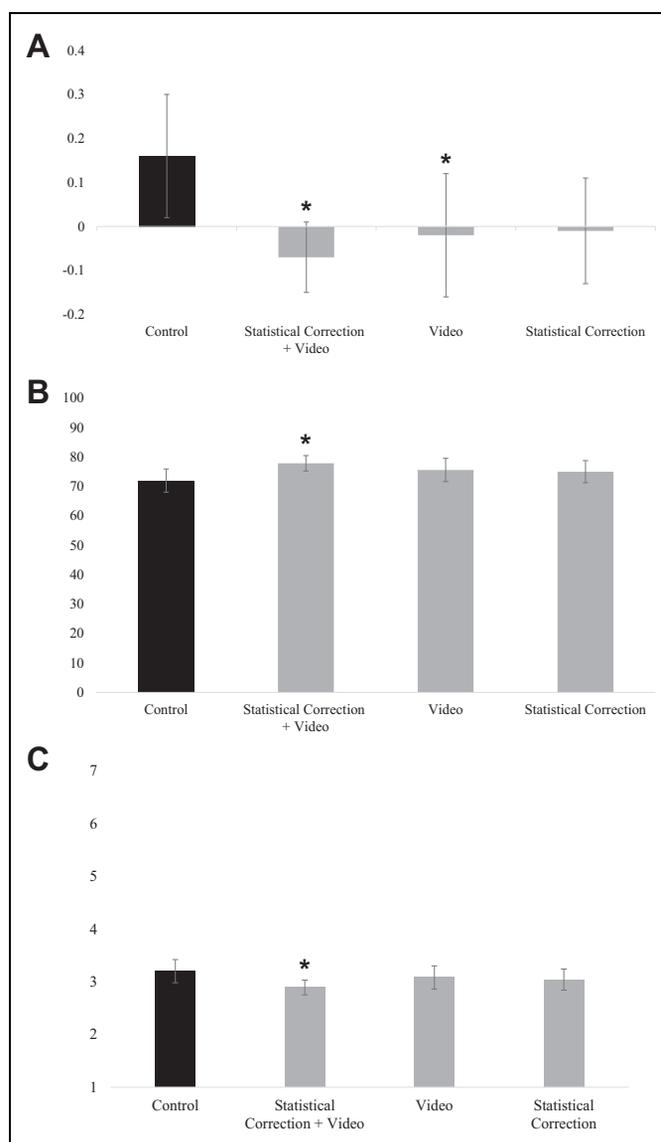

Figure 3. Study 3 means for dehumanization (A), empathy (B), and anti-migrant policies (C). *Note.* All comparisons are between each condition and the control (*p < .05). Error bars represent 95% CI.

migrant policy support, $t(954) = −2.38$, $p = .018$, $d = .21$, as compared to the control condition.

For the video-only condition, participants dehumanized migrants less than those in the control condition, $t(954) = −2.02$, $p = .044$, $d = .20$. However, there was no difference in empathy for migrants, $t(954) = 1.31$, $p = .191$, $d = .13$, or anti-migrant policy support, $t(954) = −.78$, $p = .437$, $d = .08$, as compared to the control.

For the statistical correction-only condition, compared to the control condition, there was no difference in dehumanization of migrants, $t(954) = −1.90$, $p = .057$, $d = .19$; empathy toward migrants, $t(954) = 1.11$, $p = .268$, $d = .11$; or anti-migrant policy support, $t(954) = −1.09$, $p = .276$, $d = .11$.

We then examined whether the successful intervention condition (statistical correction + video) versus the control affected anti-migrant policy support through empathy and
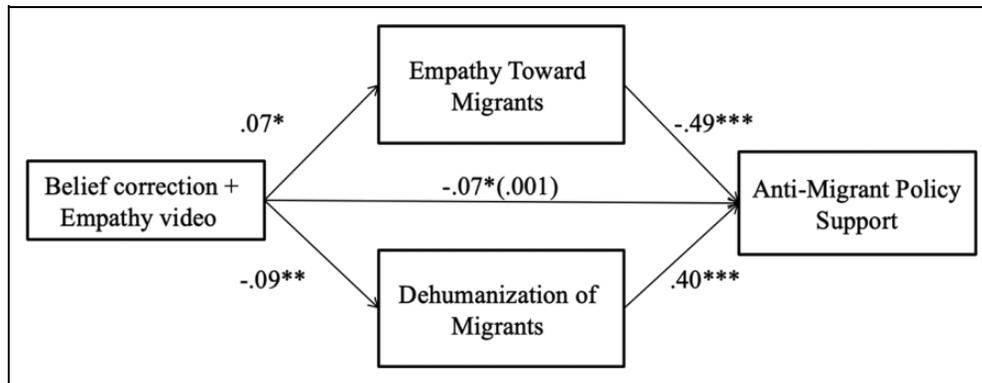
Figure 4. Study 3, standardized path model examining successful statistical correction + video intervention versus the control, showing that the successful intervention predicts anti-migrant policy support via empathy toward migrants and dehumanization of migrants. *p < .05. **p < .01. ***p < .001.

dehumanization using Hayes's (2018) PROCESS Version 3.5 (Model 4). We found parallel indirect effects of both empathy and dehumanization on the relationship between the video + statistical correction intervention versus the control on the policy outcome (dehumanization: indirect effect = −.03, Boot SE = .01, 95% CI [−.06, −.01]; empathy: indirect effect = −.04, Boot SE = .01, 95% CI [−.07, −.01]; see Figure 4). These indirect effects were not moderated by political affiliation (ps > .05; see Supplemental Materials). Since the statistical correction intervention provided the correct statistics after participants provided their own estimates, we could not determine the effect of the intervention on estimates.

Discussion

Study 3 was designed to experimentally examine the relationship between the estimated prevalence of immoral/illegal behavior among migrants, empathy toward/dehumanization of migrants, and anti-migrant policy support. These results demonstrate that providing Americans, regardless of political affiliation, with a narrative depicting the suffering of migrants can humanize and induce empathy toward migrants, thereby decreasing anti-migrant policy support. This is as long as the media intervention is accompanied by an intervention that provides corrective information about the general lack of migrant gang members and the paucity of children being used by adults to gain entry. We suggest that the correction of statistical information renders undocumented migrants more worthy of regard and empathetic engagement in the minds of participants and allows empathy for an undocumented mother and child to extend to other undocumented migrants.

General Discussion

Here we found that Americans estimated the percentage of migrants who are gang-affiliated to be 15 times greater than reported by the U.S. DHS and estimated the percentage of children being used by adults who are not their parents to be 250 times greater than reported by the DHS. These overestimations had serious implications, as they were associated with anti-

migrant policy support through their effects on empathy and dehumanization. These associations between the overestimations and the outcome measures, and correspondingly, the indirect effects, were not consistently significantly moderated by political affiliation (perhaps because the studies were not sufficiently powered to detect such interaction; Giner-Sorolla, 2018). However, these effects were consistently stronger for Democrats than for Republicans. Arguably, this could be because Republicans generally harbor more negative views toward migrants, including higher levels of dehumanization and lower levels of empathy (e.g., Bruneau et al., 2018), due to different psychological factors such as higher levels of hierarchy enforcing beliefs (i.e., social dominance orientation; Ho et al., 2015) and greater feelings of threat by migrants (e.g., Esses et al., 2013). Therefore, we argue that inaccurate estimates of migrant criminality are less consequential for Republicans than Democrats when predicting empathy, dehumanization, and anti-migrant policy support.

In Study 3, we sought to intervene on these attitudes by (1) presenting participants with DHS statistics about the types of migrants entering the U.S. southern border and (2) inducing empathy toward migrants by showing a video of a migrant mother and child being reunited after being separated at the U.S. southern border. Providing the combined intervention of correct DHS statistics and showing this video significantly increased empathy toward and decreased dehumanization of migrants and reduced anti-migrant policy support. Unlike in Studies 1 and 2, these effects were not moderated by political affiliation, suggesting that the manipulation affected the outcomes rather than previously held personal beliefs. Merely correcting statistical estimates or inducing empathy independently did not consistently affect any outcome measure—an effect consistent with previous research testing the efficacy of combined versus independent statistical and narrative interventions (e.g., Allen et al., 2000). The success of the combined intervention suggests that both cognitive and affective aspects of an intervention may be important for changing policy support in this context.

The current findings have several theoretical and practical implications. First, we demonstrate that both Democrats and

Republicans overestimate migrant criminality, suggesting that overestimating criminality is not a partisan issue but rather an issue that affects all Americans. This may stem from media portrayals; for example, the media often uses dehumanizing language to describe migrants (Cisneros, 2008; Esses et al., 2008, 2013) and often perpetuates the stereotype that migrants are linked to criminality (Figueroa-Caballero, & Mastro, 2019). Interestingly, our results also suggest that while these negative portrayals are prevalent in both liberal and conservative media outlets (e.g., Fernandez & Jordan, 2019; Lankford et al., 2019; Singman, 2019), the impact they have on Democrats, who tend to be exposed to and trust liberal media outlets (e.g., Pennycook & Rand, 2019), is likely to be more consequential on subsequent attitudes and policy support. Second, these misperceptions about migrant criminality can have downstream consequences for anti-migrant policy support, which can have broader social implications. For example, given that people can be easily influenced by inaccurate information (for a review, see Rapp, 2016; Rapp & Salovich, 2018), false narratives about migrants can lead to greater exclusion of and discrimination against migrants. However, our data show that inaccurate beliefs about migrant criminality are amenable to intervention equally for both Democrats and Republicans, suggesting that disseminating accurate information and continuing to share the stories of how policies affect migrants can change people's willingness to support anti-migrant policies.

ORCID iDs

Samantha L. Moore-Berg (iD) https://orcid.org/0000-0003-2972-2288
Boaz Hameiri (iD) https://orcid.org/0000-0002-0241-9839

Supplemental Material

The supplemental material is available in the online version of the article.

Notes

1. These data were collected from a larger data set (see Study 1; Moore-Berg et al., 2020) that focused specifically on partisan attitudes; therefore, recruitment was limited to Democrats and Republicans. The data reported here were not previously examined.
2. See Supplemental Materials for all power analyses.
3. We also analyzed all results by participant ideology. These results replicated the political affiliation results and are reported in the Supplemental Materials.

References

Allen, M., Bruflat, R., Fucilla, R., Kramer, M., McKellips, S., Ryan, D., & Spiegelhoff, M. (2000). Testing the persuasiveness of evidence: Combining narrative and statistical forms. *Communication Research Reports*, *17*(4), 331–336. https://doi.org/10.1080/08824090009388781

American Immigration Council. (2020, January 29). Policies affecting asylum seekers at the border. https://www.americanimmigrationcouncil.org/research/policies-affecting-asylum-seekers-border

Bandura, A. (2002). Selective moral disengagement in the exercise of moral agency. *Journal of Moral Education*, *31*(2), 101–119. https://doi.org/10.1080/0305724022014322

Batson, C. D. (2009). These things called empathy: Eight related but distinct phenomena. In J. Decety & W. J. Ickes (Eds.), *The social neuroscience of empathy* (pp. 3–15). The MIT Press.

Batson, C. D., & Ahmad, N. Y. (2009). Using empathy to improve intergroup attitudes and relations. *Social Issues and Policy Review*, *3*(1), 141–177. https://doi.org/10.1111/j.1751-2409.2009.01013.x

Batson, C. D., Chang, J., Orr, R., & Rowland, J. (2002). Empathy, attitudes, and action: Can feeling for a member of a stigmatized group motivate one to help the group? *Personality and Social Psychology Bulletin*, *28*(12), 1656–1666. https://doi.org/10.1177/014616702237647

Batson, C. D., Polycarpou, M. P., Harmon-Jones, E., Imhoff, H. J., Mitchener, E. C., Bednar, L. L., Klein, T. R., & Highberger, L. (1997). Empathy and attitudes: Can feeling for a member of a stigmatized group improve feelings toward the group? *Journal of Personality and Social Psychology*, *72*(1), 105–118. https://doi.org/10.1037/0022-3514.72.1.105

Brown, R., & Hewstone, H. (2005). An integrative theory of intergroup contact. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. *37*, pp. 255–343). Elsevier.

Bruneau, E. G., Cikara, M., & Saxe, R. (2015). Minding the gap: Narrative descriptions about mental states attenuate parochial empathy. *PLoS One*, *10*(10), e0140838. https://doi.org/10.1371/journal.pone.0140838

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

Bruneau, E. G., Kteily, N., & Laustsen, L. (2018). The unique effects of blatant dehumanization on attitudes and behavior towards Muslim refugees during the European "refugee crisis" across four countries. *European Journal of Social Psychology*, *48*(5), 645–662. https://doi.org/10.1002/ejsp.2357

Bump, P. (2018, June 18). How to mislead with statistics, DHS Secretary Nielsen edition. *The Washington Post*. https://www.washingtonpost.com/news/politics/wp/2018/06/18/how-to-mislead-with-statistics-dhs-secretary-nielsen-edition/

Chinoy, S., Ma, J., & Thompson, S. A. (2018, July 3). MS-13 is far from the "infestation" Trump describes. *The New York Times*.

https://www.nytimes.com/interactive/2018/06/27/opinion/trump-ms13-immigration.html

Cikara, M., Bruneau, E. G., & Saxe, R. R. (2011). Us and them: Intergroup failures of empathy. *Current Directions in Psychological Science*, *20*(3), 149–153. https://doi.org/10.1177/0963 721411408713

Cisneros, J. D. (2008). Contaminated communities: The metaphor of "immigrant as pollutant" in media representations of immigration. *Rhetoric and Public Affairs*, *11*(4), 569–601. https://doi.org/10.13 53/rap.0.0068

Dickerson, C. (2019, June 21). "There is a stench": Soiled clothes and no baths for migrant children at a Texas center. *The New York Times*. https://www.nytimes.com/2019/06/21/us/migrant-children-border-soap.html

Esses, V. M., Medianu, S., & Lawson, A. S. (2013). Uncertainty, threat, and the role of the media in promoting the dehumanization of immigrants and refugees. *Journal of Social Issues*, *69*(3), 518–536. https://doi.org/10.1111/josi.12027

Esses, V. M., Veenvliet, S., Hodson, G., & Mihic, L. (2008). Justice, morality, and the dehumanization of refugees. *Social Justice Research*, *21*(1), 4–25. https://doi.org/10.1007/s11211-007-0058-4

Fernandez, M., & Jordan, M. (2019, April 24). 3-Year-old found alone at border is one of the many "heartbreaking" migrant cases. *The New York Times*. https://www.nytimes.com/2019/04/24/us/tod dler-border-patrol-migrant-children.html

Figueroa-Caballero, A., & Mastro, D. (2019). Examining the effects of news coverage linking undocumented immigrants with criminality: Policy and punitive implications. *Communication Monographs*, *86*(1), 46–67. https://doi.org/10.1080/03637751.2018. 1505049

Giner-Sorolla, R. (2018, January 24). *Powering your interaction* [Blog post]. https://approachingblog.wordpress.com/2018/01/24/power ing-your-interaction-2

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

Haslam, N., Bastian, B., Laham, S., & Loughnan, S. (2012). Humanness, dehumanization, and moral psychology. In M. Mikulincer & P. R. Shaver (Eds.), *Herzliya series on personality and social psychology: The social psychology of morality: Exploring the causes of good and evil* (pp. 203–218). American Psychological Association. https://doi.org/10.1037/13091-011

Hasson, Y., Tamir, M., Brahms, K. S., Cohrs, J. C., & Halperin, E. (2018). Are liberals and conservatives equally motivated to feel empathy toward others? *Personality and Social Psychology Bulletin*, *44*(10), 1449–1459. https://doi.org/10.1177/0146167218769867

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

Ho, A. K., Sidanius, J., Kteily, N., Sheehy-Skeffington, J., Pratto, F., Henkel, K. E., Foels, R., & Stewart, A. L. (2015). The nature of social dominance orientation: Theorizing and measuring preferences for intergroup inequality using the new SDO_7 scale. *Journal of Personality and Social Psychology*, *109*(6), 1003–1028. https:// doi.org/10.1037/pspi0000033

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

Kteily, N., Hodson, G., & Bruneau, E. (2016). They see us as less than human: Metadehumanization predicts intergroup conflict via reciprocal dehumanization. *Journal of Personality and Social Psychology*, *110*(3), 343–370. https://doi.org/10.1037/ pspa0000044

Lankford, J., Ernst, J., & Cassidy, B. (2019, August 17). Senators: Abolishing ICE would worsen child smuggling and other US-Mexico border problems. *USA Today*. https://www.usatoday. com/story/opinion/2019/08/14/us-mexico-border-problems-child-smuggling-ice-needed-senators-column/1902206001/

Moore-Berg, S. L., Ankori-Karlinsky, L., Hameiri, B., & Bruneau, E. G. (2020). Exaggerated meta-perceptions predict intergroup hostility between American political partisans. *Proceedings of the National Academy of Sciences*. https://doi.org/10.1073/ pnas.2001263117

Opotow, S. (1990). Moral exclusion and injustice: An introduction. *Journal of Social Issues*, *46*(1), 1–20. https://doi.org/10.1111/j. 1540-4560.1990.tb00268.x

Pennycook, G., & Rand, D. G. (2019). Fighting misinformation on social media using crowdsourced judgments of news source quality. *Proceedings of the National Academy of Sciences*, *116*(7), 2521–2526. https://doi.org/10.1073/pnas.1806781116

Radford, J. (2019, June 17). Key findings about U.S. immigrants. *Pew Research*. https://www.pewresearch.org/fact-tank/2019/06/17/ key-findings-about-u-s-immigrants/

Rapp, D. N. (2016). The consequences of reading inaccurate information. *Current Directions in Psychological Science*, *25*(4), 281–285. https://doi.org/10.1177/0963721416649347

Rapp, D. N., & Salovich, N. A. (2018). Can't we just disregard fake news? The consequences of exposure to inaccurate information. *Policy Insights from the Behavioral and Brain Sciences*, *5*(2), 232–239. https://doi.org/10.1177/2372732218785193

Rowatt, W. C., Al-Kire, R. L., Dunn, H., & Leman, J. (2020). Attitudes toward separating immigrant families at the United States–Mexico border. *Analyses of Social Issues and Public Policy*, *20*, 118–142. https://doi.org/10.1111/asap.12198

Shih, M., Wang, E., Trahan Bucher, A., & Stotzer, R. (2009). Perspective taking: Reducing prejudice towards general outgroups and specific individuals. *Group Processes & Intergroup Relations*, *12*(5), 565–577. https://doi.org/10.1177/1368430209337463

Singman, B. (2019, June 20). Hundred of migrant caravan members found to have US criminal histories: DHS file. *Fox News*. https:// www.foxnews.com/politics/hundreds-of-migrant-caravan-found-to-have-criminal-histories-dhs-files

Stephan, W. G., & Finlay, K. (1999). The role of empathy in improving intergroup relations. *Journal of Social Issues*, *55*(4), 729–743. https://doi.org/10.1111/0022-4537.00144

Stürmer, S., Snyder, M., Kropp, A., & Siem, B. (2006). Empathy-motivated helping: The moderating role of group membership. *Personality and Social Psychology Bulletin*, *32*(7), 943–956. https://doi.org/10.1177/0146167206287363

Utych, S. M. (2018). How dehumanization influences attitudes toward immigrants. *Political Research Quarterly*, *71*(2), 440–452. https://doi.org/10.1177/1065912917744897

The White House. (2019, May 30). Statement from the president regarding emergency measures to address the border crisis. *The White House*. https://www.whitehouse.gov/briefings-statements/statement-president-regarding-emergency-measures-address-border-crisis/

Young, J. G. (2017). Making America 1920 again? Nativism and US immigration, past and present. *Journal on Migration and Human Security*, *5*(1), 217–235. https://doi.org/10.1177/233150241700500111

Zaki, J. (2014). Empathy: A motivated account. *Psychological Bulletin*, *140*(6), 1608–1647. https://doi.org/10.1037/a0037679

Author Biographies

Samantha L. Moore-Berg is a postdoctoral researcher at the University of Pennsylvania and Beyond Conflict. Her main research interests include isolating the social cognitive functions that contribute to or predict prejudice and discrimination, and designing and implementing prejudice and discrimination reduction interventions. Dr. Moore-Berg received her PhD and MA in social psychology at Temple University and her BA in psychology and sociology at Florida State University.

Boaz Hameiri is a senior lecturer in the Evens Program in Conflict Resolution and Mediation at Tel Aviv University. Previously, he was a postdoctoral research fellow at the University of Pennsylvania and Beyond Conflict. He focuses on the examination of different psychological barriers to attitude change and conflict resolution and the development of psychological interventions to address these barriers and promote better intergroup relations and conflict resolution in the lab and on a large scale in the field. Dr. Hameiri received his PhD and MA in social psychology and BA in psychology and communication at Tel Aviv University.

Emile Bruneau founded the Peace and Conflict Neuroscience Lab at the University of Pennsylvania. His research focused on better understanding the psychological and cognitive roots of biases driving intergroup conflicts and the effect of targeted interventions aimed at reducing these biases. Dr. Bruneau received his PhD in neuroscience at the University of Michigan and his BA in human biology at Stanford University.

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