

RUNNING HEAD: EGALITARIANISM & EMPATHY

(Anti-)Egalitarianism Differentially Predicts Empathy for Members of Advantaged Versus
Disadvantaged Groups

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Accepted for publication at the *Journal of Personality and Social Psychology*.

Abstract

We explore the relationship between group-based egalitarianism and empathy for members of advantaged groups (e.g., corporate executives; state officials) versus disadvantaged groups (e.g., blue-collar workers; schoolteachers) subjected to harmful actions, events, or policies. Whereas previous research suggests that anti-egalitarians (*vs.* egalitarians) dispositionally exhibit less empathy for others, we propose this relationship depends on the target's position in the social hierarchy. We examined this question across eight studies ($N = 3,154$) conducted in the U.S. and the U.K., including online and in-person experiments and examining attitudinal and behavioral outcomes. We observed that (anti-)egalitarianism negatively predicted empathy for members of disadvantaged groups subjected to harmful situations, but *positively* predicted empathy for members of advantaged groups. This pattern held regardless of perceivers' own membership in advantaged or disadvantaged groups (i.e., perceiver gender, race, or SES). (Anti-)egalitarianism's differential effects on empathy for advantaged versus disadvantaged targets were due in part to differences in perceived *degree* of harm incurred (beyond roles for perceived value conflict and perceived deservingness): Egalitarians perceived the same action as more harmful than anti-egalitarians when it occurred to a disadvantaged target but less harmful than anti-egalitarians when it occurred to an advantaged target. We also explored how these patterns informed individuals' downstream policy attitudes and policy-relevant behavior (e.g., willingness to sign a petition). Our findings enrich understanding of (anti-)egalitarianism by testing competing perspectives on the link between (anti-)egalitarianism and empathy, and by demonstrating when and why individuals' preferences for social equality (*vs.* hierarchy) lead them to extend versus withhold empathy.

Keywords: egalitarianism, social dominance orientation, empathy, harm, ideological conflict, intergroup relations, moral judgment

(Anti-)Egalitarianism Differentially Predicts Empathy for Members of Advantaged Versus Disadvantaged Groups

On September 17, 2011, supporters of the Occupy Wall Street movement convened in New York City to protest rising inequality in America. Seemingly driven by their strong commitment to social equality, they expressed concern for those at the bottom of the income distribution and condemned those at the top. Senator Bernie Sanders related, “We desperately need a coming together of working people to stand up to Wall Street. We need to rebuild the middle-class in this country and you guys [Wall Street] can’t have it all” (Sanders, 2011, September 29). Some protestors even went so far as to issue violent threats to corporate executives (Farnham, 2011). Conversely, Occupy’s opponents extended their concern to those at the top—who they considered unreasonably accused of wrongdoing—and cast Occupy’s supporters as un-American proponents of class warfare. Former presidential candidate Herman Cain remarked, “Don’t blame Wall Street, don’t blame the big banks, if you don’t have a job and you’re not rich, blame yourself” (Bingham, 2011; Hartman, 2011).

This example highlights an interesting tension: On the one hand, social egalitarians are traditionally considered to be dispositionally more empathic and caring than anti-egalitarians (Chiao, Mathur, Harada, & Lipke, 2009; Sidanius et al., 2013). And yet, the events that unfolded during the Occupy protests suggest a more complex reality, in which egalitarians and anti-egalitarians express differing levels of empathy and concern for others not primarily as a function of their *capacities* for empathy, but rather based on their willingness to care about the consequences of harmful actions affecting some targets but not others (Cameron & Rapier, 2017; Zaki, 2014). In particular, the example suggests that the level of empathy egalitarians and anti-egalitarians extend to others may depend critically on these others’ position in the social

hierarchy. Specifically, whereas egalitarians may show greater empathy than anti-egalitarians towards members of disadvantaged groups (i.e., those at the bottom of the social hierarchy), anti-egalitarians may, in contrast to prevailing thinking, be *more* likely than egalitarians to show empathy when harm affects members of advantaged groups (i.e., those at the top of the social hierarchy)¹.

In the present work, we test this idea of context-sensitivity in the link between (anti-)egalitarianism and empathy as a function of the target's position in the social hierarchy. We first detail the existing perspective on the link between (anti-)egalitarianism and empathy (the *dispositional* perspective). Subsequently, we argue that existing research on this question is limited in some important respects, proposing that the research on (anti-)egalitarianism and empathy needs to take features of the target (namely, the target's rank in the social hierarchy) into consideration (the *motivated* perspective). We then propose that the link between (anti-)egalitarianism and empathy is partially explained by differences in judgments about the extent to which a target is harmed (by the same event) as a function of the target's social rank. Across eight studies, we test these two perspectives' competing predictions as well as the mediating role of perceived harm. If individuals' ideological orientation towards social hierarchy predicts the level of empathy they feel towards advantaged compared to disadvantaged targets who face harm, this could have consequences for their support of important social policies that differentially impact those at the top versus the bottom of society. Thus, testing the real-world significance of the relationship between (anti-)egalitarianism and empathy, we examine its downstream attitudinal and behavioral consequences, exploring whether differential empathy

¹ We note that we make no claims about the appropriateness or virtuousness of extending empathy to targets at the top or bottom of the social hierarchy. Rather, we are solely interested in understanding how ideological beliefs about the desirability of hierarchy may shape the level of empathy perceivers actually extend targets depending on their social rank.

helps to explain individuals' support or opposition towards important social policies (e.g., university admissions policies that privilege legacy candidates versus those that favor historically disadvantaged group members).

Before outlining our theorizing about the link between (anti-)egalitarianism and empathy via harm perceptions, we clarify how we define each of these terms. We define empathy as feelings of sympathy and concern for the welfare of another person (Batson, 2011; Davis, 1983), with a focus on the empathic concern and compassion components of empathy (Cameron & Payne, 2012; DeSteno, 2015) rather than on experience sharing or empathic distress (Bloom, 2017; Decety & Cowell, 2014; Zaki, 2017). We define perceived harm as the extent to which an action, situation, or policy is perceived to cause a target suffering or hardship (Gray, Young, & Waytz, 2012). Finally, we note that although we have thus far discussed “egalitarians” and “anti-egalitarians” as dichotomous categories, we assess social egalitarianism on a continuum. We operationalize anti-egalitarianism here using two measures: (a) *social dominance orientation* (i.e., SDO; Ho et al., 2015; Pratto et al., 2014)— the most widely used measure of group-based (anti-)egalitarianism in psychological research— and (b) an (anti-)egalitarianism scale developed by Hatemi and colleagues (2014). Although for ease of presentation we sometimes refer to individuals at one standard deviation above and below the mean of anti-egalitarianism as “anti-egalitarians” and “egalitarians”, these are most correctly thought of as “relatively anti-egalitarian” and “relatively egalitarian” in recognition of the continuous nature of this construct and the fact that that these labels are in relation to mean levels of (anti-)egalitarianism rather than any objective cut-off level indicating egalitarianism or anti-egalitarianism.²

² At least as measured by SDO, most Americans today generally express support for group-based equality. For example, in a representative sample of White Americans, Ho et al. (2015; see Table 11) observed that the mean of SDO was 2.98 on a 7-point scale, with a standard deviation of 1.19. Importantly, despite the overall egalitarian

(Anti-)Egalitarianism & Dispositional Empathy

The prevailing perspective on the link between egalitarianism and empathy suggests that anti-egalitarians uniformly display less empathy for others than do egalitarians (Freeman, Aquino, & McFerran, 2009; Jackson & Gaertner, 2010; Kugler, Jost, & Noorbaloochi, 2014; Sidanius et al., 2013). There is indeed substantial evidence for the idea that anti-egalitarians are generally less concerned about the outcomes of others: Consistent with this individual differences perspective, prior research suggests that individuals higher on SDO (i.e., relative anti-egalitarians) are less empathetic, altruistic, and communal (Ho et al., 2012; Pratto, Sidanius, Stallworth, & Malle, 1994). Those higher (*vs.* lower) in SDO also show less neural activity in brain regions associated with empathy for others (Chiao et al., 2009), lower intuitions for fairness and harm avoidance (Milojev et al., 2014), and higher narcissism, psychopathy, and Machiavellianism (Ho et al., 2015)—‘dark triad’ traits associated with a ruthless disregard for the outcomes of others. Taken together, these findings suggest that anti-egalitarians will exhibit less empathy for others than egalitarians, and, importantly, imply that this relationship holds independent of target-specific features, such as position in the social hierarchy.

We propose, however, that existing literature on the link between (anti-)egalitarianism and empathy has some important limitations. In particular, because no research to date has varied the social rank of the targets to whom empathy might be extended, little is known about the

national norm, variation on this scale is still highly predictive of a range of consequential outcomes, with higher (lower) scores on SDO associated with more (less) support of outcomes like racism, sexism, and militarism (e.g., Ho et al., 2015; Kteily, Ho, & Sidanius, 2012). Because one standard deviation above the midpoint on SDO is around the midpoint of the scale (both nationally and in our samples), one could imagine calling those individuals “less egalitarian” rather than “relatively anti-egalitarian”. We retain the “relatively anti-egalitarian” terminology because we think that being substantially more opposed to equality than the social norm is meaningful in its own right, and because those around the midpoint of the SDO scale still score above the mean on other measures of anti-egalitarianism (see also Footnote 10). In our final study, we specifically sampled individuals who exhibited SDO scores above the scale midpoint of 4 in order to examine whether we obtained similar patterns using this select subgroup.

relationship between (anti-)egalitarianism and empathy for those belonging to positions atop the social hierarchy. Indeed, most studies linking group-based (anti-)egalitarianism to attitudes reflecting a lack of care for others ask participants to judge relatively disadvantaged groups, such as racial minorities or women. Relatedly, prior studies linking group-based egalitarianism to individual difference factors like greater empathy (e.g., Nicol & Rounding, 2013; Sidanius et al., 2013) have typically used scales with unspecified target social groups. For instance, Davis' (1983) empathy scale includes items like *Other people's misfortunes do not usually disturb me a great deal*. By their nature, these items cannot disentangle whether (anti-)egalitarians respond differently toward members of advantaged and disadvantaged groups.

But why should a target's rank in the social hierarchy influence the extent to which egalitarians versus anti-egalitarians extend them empathy?

(Anti-)Egalitarianism & Motivated Harm Perception

An alternative to the prevailing perspective is the possibility that (anti-)egalitarians' reactions toward a target will depend on the target's social rank. This perspective is consistent with theorizing about the distinct motivations of those higher and lower on group-based egalitarianism (Ho et al., 2015; Sidanius & Pratto, 1999). In general, individuals higher on SDO (i.e., relative anti-egalitarians) show a greater motivation to maintain and enhance the hierarchical differentiation between groups in society, whereas those lower on SDO (i.e., relative egalitarians) are more motivated to bring about group equality. This manifests in a wide array of beliefs consistent with these individuals' hierarchy-related motives. For example, whereas anti-egalitarians exhibit greater endorsement of ideologies such as the protestant work ethic or karma that lend legitimacy to the relative ranking of groups in society and mitigate the likelihood of system challenge, social egalitarians tend to endorse ideologies that problematize hierarchy, such

as socialism or the belief in universal human rights (Cotterill, Sidanius, Bhardwaj, & Kumar, 2014; Pratto, Sidanius, & Levin, 2006; Rothmund, Becker, & Jost, 2016).

Beyond the different ideologies individuals endorse as a function of their hierarchy-relative motives, research also suggests that individuals' beliefs about the desirability (or undesirability) of group-based hierarchy act as a filter through which they perceive the world around them. For instance, individuals' motives for or against hierarchy appear to influence their perceptions of the amount of inequality present in a social system, even when provided with the same information about that system: Whereas egalitarians perceive larger power differentials between groups at the top and at the bottom, leading them to prioritize egalitarian social change, anti-egalitarians tend to perceive smaller discrepancies between groups, leading them to feel that no intervention is needed (Kteily, Sheehy-Skeffington, & Ho, 2017; see also Eibach & Keegan, 2006; Kahn, Ho, & Sidanius, 2009). Other work has shown that social dominance motives predict how individuals perceive biracial targets, with whites higher (vs. lower) in SDO more likely to perceive a Black-White biracial as black (Ho, Sidanius, Cuddy, & Banaji, 2013; Ho, Sidanius, Levin, & Banaji, 2011; Krosch, Berntsen, Amodio, Jost, & Van Bavel, 2013), particularly when that target is framed as low (vs. high) status and thus threatens to 'contaminate' the standing of the advantaged group and affect the stability of the hierarchical order (Kteily, Cotterill, Sidanius, Sheehy-Skeffington, & Bergh, 2014).

In the current research, we apply similar theorizing to harm perception, a fundamental social judgment, suggesting that individuals' hierarchy motives are associated with the extent to which they judge a target as having been harmed. Indeed, previous work in moral psychology (outside the domain of social hierarchy) finds evidence that people's motivations can influence harm perceptions. In one study, participants were asked to recall details about a transgression

committed by a target. Participants who believed the target to be particularly immoral recalled the target's transgression as more harmful than perceivers who believed the target to be more benevolent (Pizarro, Laney, Morris, & Loftus, 2006). Similarly, people who morally disapprove of a policy position (e.g., disagreeing that teens should be educated about condom use) come to perceive that position as producing greater harms (e.g., as causing more promiscuous sex) compared to people who approve of the policy position (Liu & Ditto, 2013).

Similarly, we propose that individuals' hierarchy motives will predict how harmful they perceive actions or events that affect advantaged versus disadvantaged targets to be. Perceiving different levels of harm to a target as a function of their position in the hierarchy is compatible with promoting the social order that egalitarians and anti-egalitarians are respectively more likely to favor. Because anti-egalitarians are more favorable to maintaining social hierarchy (despite the costs it imposes on those at the bottom), they may be more motivated to overlook, underweight, or discount harm faced by disadvantaged group members relative to egalitarians, who should, by virtue of their desire to lift the standing of groups at the bottom, be more sensitive to their plight. By the same token, because egalitarians' desire to flatten the hierarchy involves taking away privileges that those at the top enjoy, they may generally be more motivated to disregard or minimize the harm faced by advantaged targets than are anti-egalitarians. Individuals' hierarchy-related motives could lead them to discount harm to those at the top (egalitarians) or bottom (anti-egalitarians) through a number of possible mechanisms, such as by affecting how much attention they pay to the suffering of the respective targets (Bakshy, Messing, & Adamic, 2015; Ditto & Lopez, 1992) or the extent to which they focus on mitigating factors—like material or psychological resources available to targets—that help buffer the adverse consequences of the event.

Given our theorizing that (anti-)egalitarianism influences harm perceptions and seeing as perceiving harm to a target is critical for feeling concerned on their behalf (Bandura, 1999; Gray et al., 2012), we expect that the link between (anti-)egalitarianism and empathy, too, will be target-dependent. Thus, whereas the prevailing perspective predicts that anti-egalitarians are dispositionally less empathic than egalitarians, we predict that (anti-)egalitarianism will interact with target-rank to predict harm perceptions, which, in turn, should predict levels of empathy.

Predictions

The central prediction of the prevailing perspective on the link between (anti-)egalitarianism and empathy is a negative effect of anti-egalitarianism on empathy, with egalitarians generally showing greater empathy for others irrespective of the targets' attributes. On the other hand, the central prediction of the motivated perspective we propose here is that the relationship between (anti-)egalitarianism and empathy will be significantly moderated by a target's position in the hierarchy, with egalitarians showing more empathy than anti-egalitarians in response to actions or events that harm those at the bottom but *not* for those at the top. A stronger version of this moderation hypothesis would propose not only that the link between egalitarianism and greater empathy will be significantly weakened for targets at the top, but further that anti-egalitarians will show *more* empathy in response to harm to those at the top than egalitarians will. Finally, the strongest version of this hypothesis would further add that the positive link between anti-egalitarianism and empathy for targets at the top will be not only opposite in direction to the (negative) link between anti-egalitarianism and empathy for targets at the bottom, but also equal in magnitude. Our central focus is on contrasting the dispositional to the motivated perspective (i.e., testing whether target rank significantly moderates the link

between (anti-)egalitarianism and empathy). Nevertheless, we also examine support for the various versions of the motivated perspective.

Overview of Studies

We tested our predictions across eight studies. In each, we measured participants' group-based (anti-)egalitarianism and their reactions to scenarios involving harm to individuals from advantaged or disadvantaged groups. Across four different harm scenarios, Study 1 provided an initial test of the relationship between egalitarianism and empathy for targets from advantaged versus disadvantaged groups. Study 2 tested these findings in a second national context (i.e., the U.K.) with a different, open-ended measure of empathy. Study 3 tested the relationship between (anti-)egalitarianism and harm perception (our proposed mediator) for advantaged versus disadvantaged targets. Study 4 tested our prediction that differences in the extent to which egalitarians and anti-egalitarians extend empathy to advantaged versus disadvantaged targets is partially explained by differences in the extent to which they perceive harm to the target. Study 5 extended the range of scenarios we examined, testing our predictions with vignettes involving harms (e.g., losing your only photograph of a deceased relative) that could not be rectified with privileges associated with high rank (e.g., money, power, or status). Studies 6-7 extended our predictions into consequential real-world contexts: Study 6 tested whether differential empathy extended to an advantaged versus disadvantaged target harmed by the implementation of a social policy change (i.e., ending preferential university admission programs) helps explain relatively egalitarian and anti-egalitarian individuals' opposition toward that policy decision. Study 7 was rooted in the real-world context of Illinois' ongoing budget crisis, assessing the link between (anti-)egalitarianism and individuals' willingness to actually sign a petition to block a policy that would harm members of an advantaged or disadvantaged group. Finally, in Study 8 we tested our

predictions with a sample of individuals who were particularly anti-egalitarian (i.e., reported $SDO \geq 4$), expressing objectively (*vs.* relatively) high levels of opposition to intergroup equality.

Study 1

In Study 1, participants read one of four vignettes about an incident that harmed a target belonging to either an advantaged or disadvantaged social group. We measured individuals' SDO and examined how it was differentially associated with empathy for targets as a function of these targets' social standing. This study, as well as all subsequent studies, were conducted with Institutional Review Board approval from Northwestern University or the University of Chicago.

Method

Across studies, our recruitment goal was based on a heuristic of at least 100 participants per analysis condition and we heuristically increased the recruitment goal in increments of 50-100 when using new paradigms or testing for indirect effects. We note that although our sample sizes met or exceeded sample size recommendations at the time the studies were conducted (e.g., Gervais, Jewell, Najle, & Ng, 2015; Simmons, Nelson, & Simonson, 2013) more current thinking has since pushed sample size recommendations upwards (e.g., Simmons, 2014). The basic recruitment heuristic of 100 participants per analysis condition (i.e., 200 participants in a two-cell design) provides 80% power to detect the hypothesized (anti-)egalitarianism x target-rank interaction on empathy when the effect size is $d = .40$ or larger. Across our studies, our observed average effect size for this interaction was $d = .63$, and our observed median effect size was $d = .62$. These exceed the smallest observable effect size and suggests our studies were adequately powered (see supplemental online materials Table S1 for further details). We further note that our internal meta-analysis (described later) provided 80% power to detect an effect size of $d = .13$ or larger.

Participants. Eight hundred and three participants were recruited from Amazon's Mechanical Turk (MTurk), an online labor market more diverse than (and as reliable as) traditional subject pools (Buhrmester, Kwang, & Gosling, 2011). Participants were recruited to participate in one of four surveys, each of which included a different vignette. To ensure high data quality, we excluded participants who failed either of two attention checks (described below). One hundred and thirty-three participants failed at least one attention check and were excluded, leaving 670 for analysis (394 males, 276 females, $M_{age} = 36.36$ years, $SD = 12.13$); 81% of participants were White, 8% Asian, 4% Black, 4% Hispanic, 2% mixed race, and 1% other. In this study and across studies, including the excluded participants does not change the interpretation of the results.

Procedure. First participants completed the SDO-7 scale, a 16-item measure of individuals' group-based (anti-)egalitarianism, $\alpha = .86$ (Ho et al., 2015). Next they read one of four vignettes (*benefits cuts*, *bad investment*, *lawsuit*, and *robbery*) about an action that harmed a target individual who belonged to either an advantaged or disadvantaged social group.

Target-Rank Manipulation. Across vignettes, we kept the content of the harmful action that participants read about constant, only manipulating (as a between-participants factor) whether the target belonged to an advantaged (*advantaged target condition*) or disadvantaged (*disadvantaged target condition*) group. Each vignette described the situation and included a quote from the target to convey the sense that the target had been harmed, providing the opportunity for participants to empathize with the target. In the *benefits cuts* vignette, participants read about a decision to cut salary and benefits at a company in order to balance the budget. Participants were randomly assigned to read that the cuts were focused only on upper level managers (advantaged target condition) or only on factory floor workers (disadvantaged

target condition) and they read about the effects of this decision on a specific executive or floor worker, respectively. The *bad investment* vignette described an individual who was misled into buying a bad investment property and lost a significant amount of money. The victim was either a senior executive (advantaged target condition) or an electrician (disadvantaged target condition). The *robbery* vignette described a wealthy executive (advantaged target condition) or a schoolteacher (disadvantaged target condition) whose house had been robbed. The fourth vignette, *lawsuit*, described an incident where a police officer shot and killed a young Black man, which led to a lawsuit by the victim's family against the police officer and a countersuit from the officer. The vignette emphasized either the emotional trauma caused to the police officer and his family (advantaged target condition) or to the family of the Black man killed (disadvantaged target condition)³. The full text of each vignette is available in Appendix A (supplemental online materials).

Measures. To measure empathy, participants indicated how much they felt *compassion, sympathy, empathy, sadness, and concern* for the target (1=not at all, 7=extremely; $\alpha = .96$, α 's across vignettes ranged from .95 – .97).⁴

Attention checks. Vignette-specific attention checks appeared directly after the vignette. In two vignettes, participants were asked to recall the issue discussed in the vignette, and in the other two, participants were asked to select the target's profession. In all cases, participants

³ It is worth noting that the harmfulness of emotional trauma involved with feeling unfairly accused of wrongful killing is unlikely to be exactly equivalent to that of the feeling that one's family member was wrongfully killed. Nevertheless, most critical to testing our central interaction hypothesis is not exact equivalence of harm across conditions, but rather the extent to which (anti-)egalitarianism predicts empathy for targets within condition (i.e., whether egalitarians feel more empathy relative to anti-egalitarians for the Black man's family but less empathy relative to anti-egalitarians for the police officer's family).

⁴ In Studies 1 and 4, participants also reported moral outrage at the situation (e.g., *anger, disgust*) and moral judgments (e.g., *How unethical was the situation?*). Whereas we focus on empathy as our primary outcome of interest for theoretical reasons, we note that these measures are associated with empathy and reveal a similar pattern of results.

selected from a multiple-choice list. A general attention check appeared toward the end of the survey and asked participants to type the number 4 into a textbox to indicate they were paying attention.

Results

Across all studies, we mean centered (anti-)egalitarianism prior to analysis and coded the advantaged target condition as +1 and the disadvantaged target condition as -1. For regression analyses, we report confidence intervals referring to the unstandardized beta coefficient throughout. See Table S2 in the supplemental online materials for correlations between study variables across all studies.

A target-rank manipulation check confirmed that the advantaged target was seen as occupying a higher social rank than the disadvantaged target in each of the vignettes (d 's > .66, p 's < .001).⁵ Although there was some heterogeneity across vignette, the predicted SDO x target-rank interaction was significant across all four vignettes (Results for each vignette examined alone are included in the supplemental online materials, Table S3). For our main analyses, we collapsed across vignette to examine the overall patterns. We controlled for vignette (and its interactions with SDO and target-rank) and we note that conclusions are the same without these covariates.

We tested our predictions using multiple regression. Results appear in Table 1. Analyses revealed a significant main effect of SDO, and a significant main effect of target-rank condition, such that, on average, people empathized more with disadvantaged targets (e.g., school teacher) compared to advantaged targets (e.g., corporate executive). These effects were, however,

⁵ Studies 1, 2, and 7 did not include manipulation checks within the main study (all remaining studies did). Reported manipulation check results for these studies are from a separate manipulation check survey. See details in supplemental online materials, Appendix B.

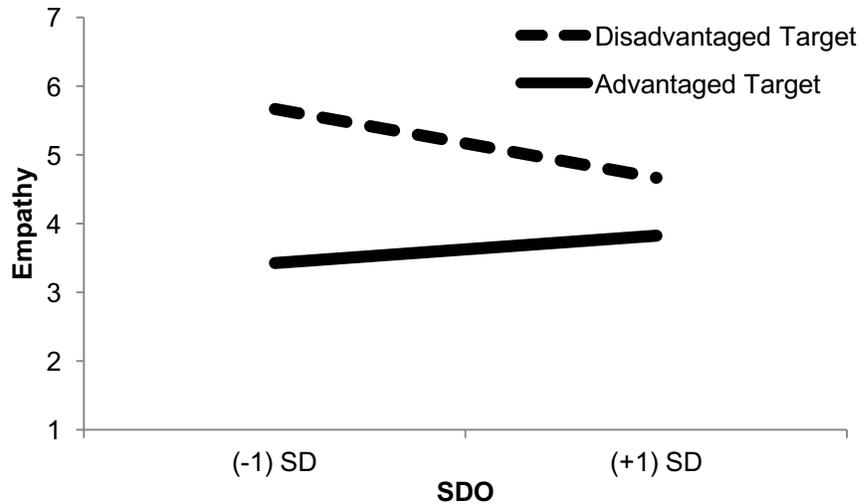
qualified by the significant SDO x target-rank interaction central to the motivated empathy perspective. As depicted in Figure 1, SDO was a significant negative predictor of empathy when the disadvantaged target was harmed (consistent with the dispositional perspective), but was a significant *positive* predictor when the advantaged target was harmed, providing support for the motivated perspective and the idea that the relationship between egalitarianism and empathy depends on target social rank.

Table 1. The effects of SDO, target-rank condition, and their interaction on empathy, Study 1.

	β	Empathy	
		<i>b</i>	CI _{95%}
SDO	-.09**	-.14	[-.24, -.05]
Target-rank	-.49***	-.94	[-1.05, -.83]
SDO*Target-rank	.23***	.37	[.27, .46]
SDO Simple Slopes:			
Disadvantaged Target	-.32***	-.51	[-.63, -.38]
Advantaged Target	.14***	.22	[.09, .36]

Note. The advantaged target condition was coded (+1) and the disadvantaged target condition was coded (-1). SDO was mean centered. The analysis controlled for vignette and its interactions with SDO and target-rank. Confidence intervals refer to the unstandardized beta. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Figure 1. The SDO by target-rank interaction on empathy, Study 1.



Discussion

Study 1 revealed a significant (anti-)egalitarianism by target-rank interaction, consistent with the moderation hypothesis central to the motivated perspective. Specifically, as predicted, anti-egalitarianism negatively predicted empathy for targets belonging to disadvantaged groups (e.g., an electrician), but *positively* predicted empathy for targets belonging to advantaged groups (e.g., an executive). Thus, Study 1 revealed strong initial evidence in favor of the motivated perspective. Indeed, not only was the effect of (anti-)egalitarianism on empathy significantly moderated by target rank, we found evidence for an even stronger version of the motivated perspective, with anti-egalitarians *more* likely than egalitarians to show empathy towards advantaged targets. At the same time, we did not find evidence for the strongest version of the motivated perspective. That is, the positive effect of anti-egalitarianism on empathy for advantaged targets was significantly weaker than the corresponding (positive) effect of egalitarianism on empathy for disadvantaged targets. We formally tested this by re-running the main analysis with the low target-rank condition reverse coded, aligning the direction of the simple slopes and leaving only the *magnitude* of the simple slopes to differ, allowing a direct comparison of the strength of the advantaged and disadvantaged target condition simple slopes.

Results for this magnitude of simple slopes analysis appears in supplemental online materials, Table S4 (for Study 1 and across studies).

Another result worth commenting on is the main effect for target rank. On average, individuals expressed more empathy for the disadvantaged than the advantaged target, and this was also true (albeit to a significantly lesser degree) for those higher in SDO (see Figure 1 and Table S5⁶). Thus, despite the fact that those higher in SDO expressed more empathy than those lower in SDO for advantaged targets and less empathy than those lower in SDO for disadvantaged targets (consistent with the motivated perspective), they did not express *more* empathy for the advantaged than the disadvantaged target. This pattern may well be due to objective reality constraints: that is, even if those higher in SDO are less likely than those lower in SDO to discount the harm an advantaged target incurs (with implications for their respective levels of empathy), it is unlikely that they will entirely dismiss the objective reality that individuals at the top (*vs.* bottom) of society have access to many more resources (e.g., financial resources, legal resources, etc.) which could serve to better buffer them from injurious actions. Although this pattern is noteworthy, it is secondary to our main aim of examining the interaction prediction central to the motivated perspective; we later re-examine it in an internal meta-analysis of all our studies and consider its theoretical relevance in the general discussion.

Study 2

Study 2 tested our hypotheses in a different national context, examining our predictions among a sample of British participants. Study 2 also used a different operationalization of empathy to examine the generalizability of our effects across measures. Rather than asking participants to rate their levels of empathy on a scale, we asked them to provide open-ended

⁶ For all studies, we report the simple effects of target-rank at +/- 1SD the mean of anti-egalitarianism in the supplemental online materials, Table S5.

written reactions to a situation that negatively affected an advantaged or disadvantaged target. We then coded their responses for levels of empathy they independently expressed.

Method

Participants. We recruited 199 British participants from Prolific Academic, an online labor market based in the United Kingdom. We excluded four participants who failed a general attention check (described in Study 1), leaving 195 for analysis. Participants were 91% White, 5% Asian, 2% Black, 1% mixed race, and 1% other (72 males, 123 females, $M_{\text{age}} = 34.27$ years, $SD = 13.13$).

Procedure. First participants completed the SDO-7 scale ($\alpha = .86$). Next they read a vignette similar to the *benefits cuts* vignette used in Study 1. Participants read about a British employee named Ben who worked for a financial company in London. The vignette described how, in order to cut costs, the company recently reduced Ben's bonus and vacation time, stating that "his annual year-end bonus was reduced by half and his vacation time was reduced by 25%." The vignette also included a quote from Ben describing the impact the cuts would have on a planned family trip, "My family and I have been saving our money for a nice family vacation which we've really been looking forward to for a while... that may not happen now."

Target-Rank Manipulation. Participants were randomly assigned to read that the employee was an executive president with a compensation of £450,000 (advantaged target condition) or a receptionist with a compensation of £19,000 (disadvantaged target condition) (full vignette text is available in Appendix A).

Measures. We measured empathy by asking participants to write their "thoughts and feelings about Ben's situation" in an open-ended text box. We purposefully did not include language in the instructions relating to empathy so as to capture unprompted expressions of

empathic concern. Two coders, blind to hypotheses and condition, rated participants' responses for expressed empathy toward Ben (1 = *not at all*, 4 = *moderately*, 7 = *extremely*). Coders were instructed, "*Empathy can include statements that directly or indirectly indicate feelings of compassion, sympathy, and empathy for Ben's welfare.*" Inter-rater reliability was strong, $r(195) = .85$, and the coders' ratings were averaged into an empathy composite.

Results

The target-rank manipulation check (described in Footnote 6) confirmed that the advantaged target ($M = 5.59$, $SD = 1.14$) was seen as occupying a higher social rank than the disadvantaged target ($M = 3.28$, $SD = 1.21$), $t(190) = 13.58$, $p < .001$, $d = 1.96$, $CI_{mean\ diff, 95\%}[-2.64, -1.97]$.

Results appear in Table 2 (graph in Figure S1). Regression analyses on empathy revealed a non-significant main effect of SDO, and a significant main effect of target-rank, such that, on average, people condemned the benefits cuts more when it harmed the disadvantaged target compared to the advantaged target. Consistent with the motivated empathy perspective, however, these effects were qualified by the predicted SDO x target-rank condition interaction. For the disadvantaged target, SDO was a significant negative predictor of empathy. In contrast, for the advantaged target, SDO was a non-significant predictor of empathy. The difference in magnitude between these slopes was significant (see Table S4).

Table 2. The SDO by target-rank interactions on empathy, Study 2.

	β	Empathy b	$CI_{95\%}$
SDO	-.08	-.13	[-.30, .04]
Target-rank	-.71***	-1.28	[-1.46, -1.10]
SDO*Target-rank	.11*	.19	[.02, .35]

SDO Simple Effects:			
Disadvantaged Target	-.19**	-.32	[-.54, -.09]
Advantaged Target	.03	.05	[-.19, .30]

Note. The advantaged target condition was coded (+1) and the disadvantaged target condition was coded (-1). SDO was mean centered. Confidence intervals refer to the unstandardized betas. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Discussion

Study 2 tested our predictions in a different national context and using a different operationalization of empathy. We again found support for the motivated empathy perspective: the relationship between (anti-)egalitarianism and empathy was significantly moderated by the targets' membership in a socially advantaged versus disadvantaged group. As in Study 1, the negative relationship between (anti-)egalitarianism and empathy for the disadvantaged target was significant. We again observed a positive relationship between (anti-)egalitarianism and empathy for the advantaged target, but this relationship was non-significant here. As in Study 1, the link between (anti-)egalitarianism and less empathy for the disadvantaged target was significantly stronger than that between (anti-)egalitarianism and more empathy for the advantaged target. In sum, results were most consistent with the basic version of the motivated perspective.

Study 3

Studies 1 and 2 provide evidence for our main prediction that the relationship between (anti-)egalitarianism and empathy will depend on target-rank. In Study 3, we begin to examine the role of perceived harm in this process. We reasoned that individuals' (anti-)egalitarianism would lead them to judge the amount of harm differently as a function of the target's rank, a pattern we propose underlies the link between (anti-)egalitarianism and differential empathy.

In Study 3 we test the link between (anti-)egalitarianism and harm perceptions. We presented participants a scenario in which an advantaged or disadvantaged target's workplace

benefits would be reduced by increasingly higher amounts (e.g., 2%, then 4%, then 6%, etc.) and asked participants to indicate the percentage at which they thought the target would experience the benefits cut as harmful. We predicted that anti-egalitarianism and target-rank would interact to predict participants' perceived harm threshold.

Method

Participants. We recruited 402 participants from Mturk and excluded 30 participants who failed a general attention check (described in Study 1), leaving 372 for analysis. Participants were 78% White, 4% Asian, 7% Black, 5% Latino, 3% mixed race, and 3% other (176 males, 194 females, two other; $M_{\text{age}} = 37.43$ years, $SD = 12.11$).

Procedure. Participants read a modified version of the *benefits cuts* vignette used in Study 1. Participants read about John, who was either an executive with a salary of \$410k (*advantaged target condition*) or a floor worker with a salary of \$41k (*disadvantaged target condition*). Participants further learned that, “*In order to cut costs, John’s company is planning to reduce John’s worker benefits, which will include cuts to his year-end bonus, vacation time, and healthcare package*” (see full text in Appendix A).

Measures. To obtain our measure of perceived harm threshold, participants were first asked to imagine that John’s benefits would be cut by 2%. Participants were asked, “*Do you think John would be meaningfully harmed by this cut?*” and responded either “yes” or “no”. We defined meaningfully harmed by saying that “*the benefits cut would have a tangible negative effect on John’s daily life*”. If a participant responded “yes”, then their perceived harm threshold was recorded at 2%. If the participant responded “no”, then the percentage increased by 2% and the harm question was asked again. This procedure repeated until participants switched to “yes” or until they reached 100%. The percentage at which participants switched to “yes” was recorded

as their perceived harm threshold. Next participants completed two measures of anti-egalitarianism (presentation order was counterbalanced): the SDO-7 scale ($\alpha = .86$) and Hatemi et al.'s (2014) five-item measure of anti-egalitarianism (Sample items: “We have gone too far in pushing equality in this country”; “This country would be better off if we worried less about how equal people are”; $\alpha = .94$). We included both measures to test for convergence across them (i.e., to ensure that any effects we observe were due not merely to any idiosyncratic features of either individual measure but rather to levels of the underlying construct— anti-egalitarianism— they are intended to assess).

Results

The target-rank manipulation check confirmed that the advantaged target ($M = 6.01$, $SD = 1.18$) was seen as occupying a higher social rank than the disadvantaged target ($M = 2.99$, $SD = 1.18$), $t(370) = 24.65$, $p < .001$, $d = 2.56$, $CI_{mean\ diff.\ 95\%}[-3.26, -2.78]$.

Importantly, results using both anti-egalitarianism measures yielded the same conclusions (supporting the idea that our results are due to the underlying constructs rather than a specific scale). Given that the scales were highly correlated, $r(372) = .82$, $p < .001$, we therefore combined them into a single measure of anti-egalitarianism ($\alpha = .96$) for ease of presentation. Scale presentation order did not moderate any analyses ($ps > .50$) and we thus collapsed across this factor.

Although most participants perceived harm at relatively low benefit cut percentages, the perceived harm threshold ranged from 2% to 100% across participants, with 106 participants perceiving harm at the initial 2% threshold and two participants maxing out at the 100% threshold (conclusions remain the same when removing these two extreme responses). Regression analysis results appear in Table 3 and are depicted in Figure 2. Analyses revealed a

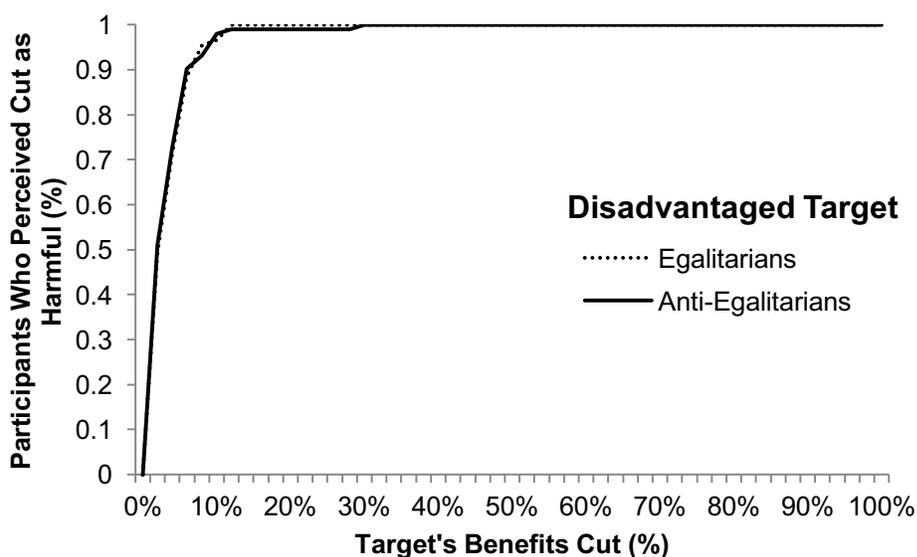
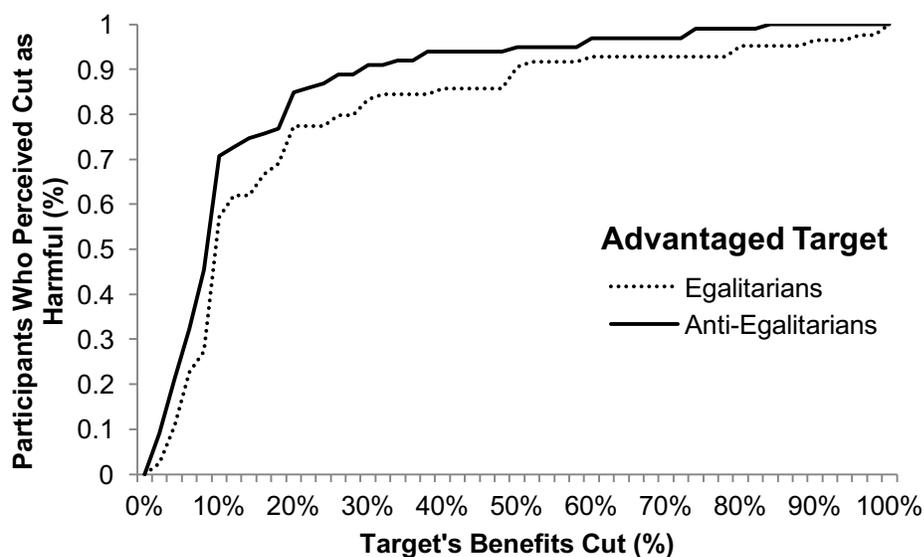
significant main effect of anti-egalitarianism, and a significant main effect of harm condition, such that, on average, people had a higher harm threshold for the advantaged target compared to the disadvantaged target. Critically, these effects were qualified by the predicted (anti-)egalitarianism x target-rank condition interaction. Simple slopes analyses revealed that (anti-)egalitarianism was a significant negative predictor of harm threshold for the advantaged target and that (anti-)egalitarianism was a non-significant predictor for the disadvantaged target.

Table 3. The (Anti)-Egalitarianism (AE) by target-rank interactions on perceived harm threshold, Study 3.

	Perceived Harm Threshold		
	β	b	CI _{95%}
AE	-.10*	-1.30	[-2.42, -.18]
Target-rank	.42***	6.47	[5.05, 7.91]
AE*Target-rank	-.12*	-1.41	[-2.53, -.29]
AE Simple Effects:			
Disadvantaged Target	.01	.11	[-1.44, 1.67]
Advantaged Target	-.22***	-2.70	[-4.32, -1.09]

Note. The advantaged target condition was coded (+1) and the disadvantaged target condition was coded (-1). Anti-egalitarianism was mean centered. Confidence intervals refer to the unstandardized betas. † $p \leq .10$, * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Figure 2. The percentage of egalitarians and anti-egalitarians who perceived the benefit cut as harmful for the advantaged (top) and disadvantaged (bottom) target, Study 3.



Note. For the purposes of this figure, we categorized those below the (anti-)egalitarianism median as “Egalitarians” and those above the median as “Anti-egalitarians”. Main analyses reported in text used the continuous (anti-)egalitarianism measure.

Discussion

Study 3 found that the relationship between egalitarianism and perceived harm was moderated by target rank (consistent with the motivated perspective). For advantaged targets, anti-egalitarians had a lower threshold than egalitarians when it came to perceiving meaningful harm as the percentage of cuts increased. For instance, when asked about a 6% benefit cut to the

advantaged target, 33% of anti-egalitarians perceived meaningful harm compared to only 24% of egalitarians; it required a 10% benefit cut to the advantaged target before 33% of egalitarians perceived harm.

Using this paradigm, we observed no evidence that egalitarians had a lower harm perception threshold than anti-egalitarians for disadvantaged targets, although this may well have to do with the fact that the range of judgments were generally constrained near the lower end of the scale (see bottom panel of Figure 2). That is, most individuals (those more egalitarian and anti-egalitarian alike) judged the disadvantaged target to have been meaningfully harmed even at very low percentage cuts. For example, when the disadvantaged target had a 2% benefit cut, large (and statistically equivalent) percentages of relative egalitarians (49%) and anti-egalitarians (52%) perceived that target to have been meaningfully harmed.

Nevertheless, and although the floor effect in the disadvantaged target condition means that the results in that condition should be interpreted with some caution, the results of Study 3 provided evidence supporting the central premise of the motivated perspective (though not its stronger versions), suggesting that anti-egalitarianism and target-rank interact to predict perceived harm, inconsistent with the dispositional perspective. In Study 4, we sought to replicate this pattern and test whether, as we propose, differences in perceived harm help to explain the target rank-dependent relationship between (anti-)egalitarianism and empathy.

Study 4

Study 4 tested our full theoretical model in which we predicted that anti-egalitarianism would interact with target-rank condition to predict harm perceptions, which would, in turn, predict empathy for the target. Thus, we expected a moderated mediation pattern in which perceived harm mediated the interaction of SDO and target-rank on empathy for the target.

In examining the role of differences in perceived harm as a mediator of the link between (anti-)egalitarianism and levels of empathy for advantaged versus disadvantaged targets, we also considered the role of other potential explanations, namely judgments about values conflict and target deservingness. Focusing on perceivers' political liberalism versus conservatism (rather than their levels of anti-egalitarianism *per se*) and their affective prejudice towards groups as a whole (rather than empathy extended individual group members in the face of injurious events), research on values conflict shows that individuals' social judgments are influenced by their perception of whether targets' values conflict with their own. In particular, this work finds that liberals and conservatives express equal and opposite levels of prejudice towards targets whose ideology conflicts with their own (e.g., planned parenthood for conservatives; NRA for liberals; (Brandt, 2017; Brandt, Reyna, Chambers, Crawford, & Wetherell, 2014; Chambers, Schlenker, & Collisson, 2012; Wetherell, Brandt, & Reyna, 2013). One novel aspect of our theorizing is our prediction that egalitarians and anti-egalitarians' levels of empathy towards a given target will be predicted by differing perceptions they have about how much harm is experienced by a given target as a function of that target's rank in the social hierarchy. Still, beyond the role of any differential judgments of harm as a function of targets' rank, egalitarians and anti-egalitarians might well come to express different levels of empathy towards targets occupying high versus low social rank as a function of the extent to which they feel they share these targets' worldview. We consider that possibility here.

We also examined the role of deservingness judgments, or the extent to which a target's own actions are perceived to be the cause of an outcome (Feather, 1999). For example, beyond any role for differences in the degree of perceived harm, it is possible that the lower levels of empathy expressed by egalitarians versus anti-egalitarians towards advantaged targets (and by

anti-egalitarians versus egalitarians towards disadvantaged targets) subjected to harmful actions is affected by the perception that advantaged and disadvantaged targets differentially *deserve* their injurious situations. Given research showing (a) the important role of deservingness judgments in predicting punishment decisions (Feather, 1996) and reactions to the downfall of high achieving others (Feather, 1994) and (b) work suggesting that individuals' ideological orientation can influence deservingness judgments, we considered the potential role of perceived deservingness as a mediator of (anti-)egalitarianism's effects in our models.

Method

Participants. We recruited three hundred participants from MTurk. Forty-two participants failed the general attention check (described in Study 1) and were excluded, leaving 258 for analysis (142 male, 115 female, 1 unidentified; $M_{\text{age}} = 34.31$ years, $SD = 10.58$); 76% of participants identified as White, 8% Asian, 9% Black, 2% Hispanic, and 5% other.

Procedure. First participants completed Hatemi et al.'s (2014) five-item measure of anti-egalitarianism used in Study 3. Next they read the Study 1 version of the benefits cuts vignette, in which we manipulated target-rank by introducing the target as either an executive with a \$410k salary (*advantaged target condition*) or a factory worker with a \$41k salary (*disadvantaged target condition*).

Measures. As a measure of harm, participants indicated, using two items, how much they thought the target in the scenario was *negatively affected* and *harmed* (1 = *not at all*, 7 = *extremely*; $r(258) = .81, p < .001$). As a measure of deservingness, participants indicated how much they thought the target *deserved what happened to him* and *had it coming to him* (1 = *not at all*, 7 = *extremely*; $r(258) = .89, p < .001$). As a measure of values conflict, participants indicated how much they thought the target held *political beliefs*, *social beliefs*, and *values* that were

different from their own (1 = *not at all different from me*, 7 = *very different from me*; $\alpha = .93$). Empathy was measured with the same items as in Study 1 ($\alpha = .97$). As a manipulation check participants indicated how much they thought the target occupied a privileged position in society (1 = *not at all*, 7 = *extremely*).

We also manipulated the presentation order of the proposed mediators (harm, deservingness, values conflict) and the dependent variable (empathy). Presentation order did not moderate any analyses ($ps > .17$); thus, we collapsed across this factor.

Results

The target-rank manipulation check confirmed that the target was perceived as significantly more advantaged in the advantaged target condition ($M = 5.69$, $SD = 1.45$) compared to the disadvantaged target condition ($M = 2.73$, $SD = 1.27$), $t(256) = 17.46$, $p < .001$, $d = 2.17$, $CI_{mean\ diff, 95\%}[-3.30, -2.63]$.

Results appear in Table 4 (see also Figure S1). First we tested for the anti-egalitarianism x target-rank condition interaction on empathy. There was a marginally significant main effect of anti-egalitarianism, and a significant main effect of target-rank, such that the disadvantaged target was shown more empathy than the advantaged target. The main effects were significantly qualified by the predicted anti-egalitarianism x target-rank condition interaction. Anti-egalitarianism was a significant negative predictor of empathy for the disadvantaged target and a significant positive predictor of empathy for the advantaged target (with the former effect again of larger magnitude than the latter; see Table S4).

Table 4. The effects of anti-egalitarianism (AE), target-rank condition, and their interaction on empathy, Study 4.

	β	Empathy	
		<i>b</i>	$CI_{95\%}$
AE	-.09 [†]	-.11	[-.24, .01]
Target-Rank	-.61***	-1.24	[-1.43, -1.05]

AE*Target-Rank	.24***	.32	[.19, .44]
SDO Simple Effects:			
Disadvantaged Target	-.33***	-.43	[-.61, -.25]
Advantaged Target	.15*	.20	[.04, .37]

Note. The advantaged target condition was coded (+1) and the disadvantaged target condition was coded (-1). Anti-egalitarianism was mean centered. Confidence intervals refer to the unstandardized betas. † $p \leq .10$, * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

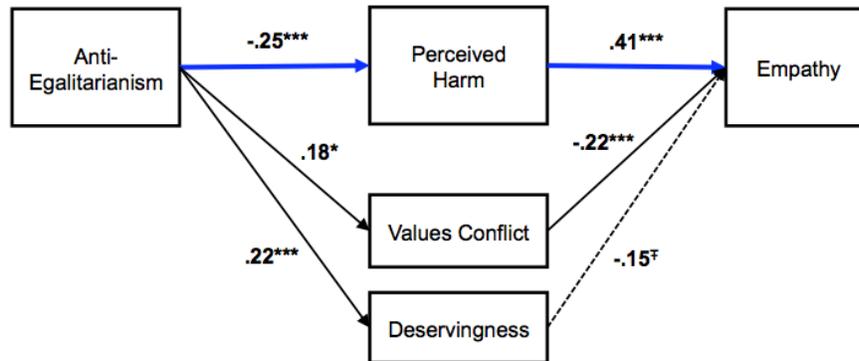
Mediation analysis. Next we used a moderated mediation model to test whether perceived harm accounted for the relationship between anti-egalitarianism, target-rank, and empathy. We used Model 7 of the PROCESS macro (Hayes, 2013) with bias-corrected bootstrapping and 5,000 resamples. We entered anti-egalitarianism as the IV, perceived harm as the mediator (while also including deservingness and values conflict as potential mediators, thereby testing perceived harm's *unique* contribution), and empathy as the DV, with target-rank condition as a moderator of the path from anti-egalitarianism to each of perceived harm, deservingness, and values conflict.

First, and as predicted, the model revealed a significant index of moderated mediation for perceived harm, $b = .35$, $SE = .09$, $CI_{95\%} [.19, .53]$, indicating that the path from egalitarianism to empathy via perceived harm depended on target-rank condition (the same was independently true for deservingness, $b = .05$, $SE = .02$, $CI_{95\%} [.01, .11]$, and values conflict, $b = .13$, $SE = .04$, $CI_{95\%} [.06, .23]$). Next we looked at this pathway separately in each target-rank condition (see Figure 3). In the disadvantaged target condition, the indirect effect of anti-egalitarianism on empathy via perceived harm was significant, $b = -.13$, $SE = .05$, $CI_{95\%} [-.24, -.05]$. This effect was unique from the significant indirect effects of both deservingness, $b = -.04$, $SE = .02$, $CI_{95\%} [-.10, -.01]$, and values conflict, $b = -.05$, $SE = .03$, $CI_{95\%} [-.12, -.01]$. In the advantaged target condition, the indirect effect of perceived harm was also significant (in the opposite direction), $b = .16$, $SE =$

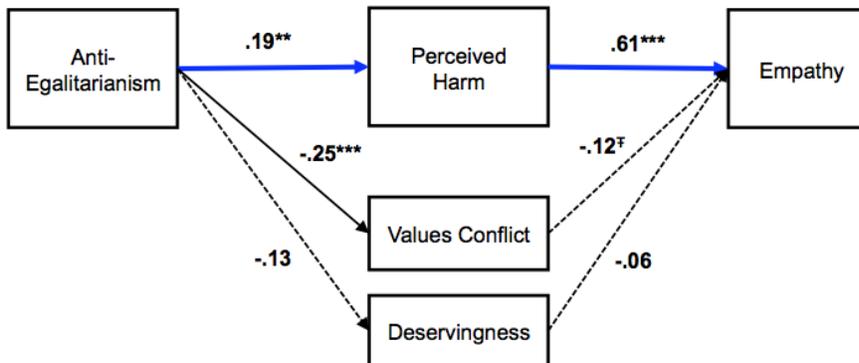
.06, $CI_{95\%}$ [.05, .28]. Here, we observed non-significant indirect effects for both values conflict, $b = .04$, $SE = .03$, $CI_{95\%}$ [-.001, .11], and deservingness, $b = .01$, $SE = .01$, $CI_{95\%}$ [-.003, .05].

Figure 3. Perceived harm mediates the relationship between (anti-)egalitarianism and empathy, in Study 4.

Disadvantaged Target



Advantaged Target



Note. Values are standardized beta coefficients. The indirect effects most central to our hypotheses are highlighted in blue. $^{\ddagger}p \leq .10$, $*p \leq .05$, $**p \leq .01$, $***p \leq .001$.

Discussion

Consistent with the predictions of the motivated empathy perspective, Study 4 found that the egalitarianism by target-rank interaction significantly predicted perceived harm, which in turn, predicted empathy. Of note, we found here that whereas egalitarianism was significantly

associated with greater perceived harm to disadvantaged targets, anti-egalitarianism significantly predicted greater perceived harm to advantaged targets (although the former effect was of greater magnitude). Perceived harm significantly accounted for the relationship between (anti-)egalitarianism and empathy above and beyond other constructs— a sense of value conflict and perceived deservingness— that we reasoned, based on prior work, might be associated with empathy judgments. This study thus moves beyond Studies 1 and 2 (which showed that the link between levels of egalitarianism and empathy depend on target-rank) and Study 3 (which showed that levels of egalitarianism predict a differential threshold for perceiving harm depending on target-rank) to suggest that differential harm perception as a function of target-rank helps to explain the link between (anti-)egalitarianism and empathy. In Study 5, we tested this pathway in a different harm context, seeking to provide still more evidence for the generalizability of these patterns.

Study 5

Studies 1-4 established consistent evidence for the motivated perspective. One possible boundary of our findings is that the contexts we examined mainly (though not exclusively) involved cases in which the harm incurred represented losses of a “replaceable” nature and for which advantaged targets’ greater material assets might have helped buffer the loss. That is, compared to those at the bottom, people at the top tend to have more money and greater access to connections and other resources that can help them replace losses after events such as having one’s home burgled or one’s benefits cut. Although it is interesting and theoretically informative that egalitarians have a higher harm threshold and express less empathy for the same advantaged targets on the receiving end of injurious events than do anti-egalitarians, it would also be important to know whether the dependency of the link between egalitarianism and empathy on

target-rank extends to harms of a less material nature and for which the losses cannot be as easily recuperated over time. In Study 5, we thus presented participants with vignettes involving “non-replaceable” losses, such as, for example, losing your only photograph of a deceased relative.

Method

Participants. Study 5 consisted of two separate surveys that each contained one of the vignettes. Participants were randomly assigned to complete one of the two surveys. Between the surveys, we recruited 601 participants from Mturk. We excluded 76 participants who failed the general attention check (described in Study 1), leaving 525 for analysis ($n = 256$ for survey 1; $n = 269$ for survey 2). Participants were 75% White, 9% Asian, 7% Black, 5% Hispanic, 2% mixed race, and 2% other (238 males, 286 females, 1 other; $M_{\text{age}} = 36.52$ years, $SD = 15.20$).

Procedure. First participants completed the SDO-7 scale ($\alpha = .95$) and Hatemi et al.’s (2014) 5-item anti-egalitarianism scale ($\alpha = .92$) used in Studies 3-4. Analyses with each scale yielded the same conclusions, and we therefore combined the scales into an anti-egalitarianism composite ($\alpha = .96$). Next, they read one of two vignettes describing harms of a ‘non-replaceable’ nature. The *missed birthday* vignette described a father who missed his son’s fifth birthday party because his flight was delayed and he could not make it home in time. The *damaged photo* vignette described a man who took his only photograph of his great grandfather to a photography store to have it restored and a mistake by the storeowner caused the photo to be damaged beyond repair (see full text in Appendix A).

Target-Rank Manipulation. Participants were randomly assigned to read that the target was an executive with a \$410k salary (advantaged target condition) or a floor worker with a \$41k salary (disadvantaged target condition).

Measures. We measured perceived harm ($r = .46, p < .001$), deservingness ($r = .84, p < .001$), values conflict ($\alpha = .90$), and empathy ($\alpha = .91$), using the same measures as in Study 4.

Results

The target-rank manipulation check confirmed that the advantaged target ($M = 5.53, SD = 1.42$) was seen as occupying a higher social rank than the disadvantaged target ($M = 2.71, SD = 1.22$), $t(523) = 24.50, p < .001, d = 2.14, CI_{mean\ diff, 95\%} [-3.05, -2.59]$.

For our main analysis we control for the main effect of vignette and its interactions with anti-egalitarianism and target-rank, and note that conclusions are the same without these covariates (for analyses by vignette, see Supplemental online materials, Table S6).

Regression analyses on empathy revealed a significant main effect of anti-egalitarianism and a significant main effect of target-rank condition, such that, on average, people felt more empathy on behalf of the disadvantaged target compared to the advantaged target. These effects were qualified by the predicted (anti-)egalitarianism x target-rank condition interaction. Simple slope analyses revealed that (anti-)egalitarianism was a significant negative predictor of empathy when the disadvantaged target was harmed and a positive (but non-significant) predictor of empathy when the advantaged target was harmed. As in prior studies, analyses revealed the magnitude of the effect in the disadvantaged target condition to be stronger than the opposite effect in the advantaged target condition (see Table S4).

Table 5. The anti-egalitarianism (AE) by target-rank interaction on empathy, Study 5.

	β	<u>Empathy</u> b	$CI_{95\%}$
AE	-.09*	-.10	[-.18, -.01]
Target-rank	-.27***	-.37	[-.48, -.26]
AE*Target-rank	.15***	.16	[.07, .24]
SDO Simple Effects:			
Disadvantaged Target	-.24***	-.25	[-.37, -.14]
Advantaged Target	.06	.06	[-.06, .18]

Note. The advantaged target condition was coded (+1) and the disadvantaged target condition was coded (-1). Anti-egalitarianism was mean centered. The model controlled for vignette and its interactions with AE and target-rank. Confidence intervals refer to the unstandardized betas. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Next we tested for moderated mediation using the same model as in Study 4, examining the indirect effects of the egalitarianism by target-rank interaction on empathy via each of perceived harm, value conflict, and deservingness. The model revealed a significant index of moderated mediation for perceived harm, $b = .14$, $SE = .05$, $CI_{95\%} [.04, .25]$. This was also true for values conflict, $b = .07$, $SE = .02$, $CI_{95\%} [.03, .12]$, but not for deservingness, $b = .003$, $SE = .01$, $CI_{95\%} [-.03, .03]$. For the disadvantaged target condition, the indirect effect of anti-egalitarianism on lower empathy through less perceived harm was significant, $b = -.10$, $SE = .04$, $CI_{95\%} [-.17, -.03]$. In parallel, we also observed a significant indirect effect via deservingness, $b = -.03$, $SE = .01$, $CI_{95\%} [-.05, -.01]$, but a non-significant indirect effect via values conflict, $b = -.01$, $SE = .01$, $CI_{95\%} [-.04, .001]$. For the advantaged target condition (in which anti-egalitarianism positively but non-significantly predicted empathy), there was no significant indirect effect via perceived harm, $b = .04$, $SE = .03$, $CI_{95\%} [-.02, .10]$. We observed significant indirect effects via perceived values conflict, $b = .04$, $SE = .02$, $CI_{95\%} [.01, .08]$, and deservingness, $b = -.03$, $SE = .01$, $CI_{95\%} [-.07, -.01]$.

Discussion

In Study 5, we tested whether the dependency of the link between (anti-)egalitarianism and empathy on target-rank would extend to harms of a less material and less ‘replaceable’ nature. Supporting the motivated perspective, and extending the generalizability of our findings from Studies 1-4, the extent to which (anti-)egalitarianism was associated with empathy for a target who missed his son’s fifth birthday or lost the only remaining photograph of his great

grandfather depended significantly on whether that target was high or low ranking. Indeed, whereas egalitarians were more likely than anti-egalitarians to express empathy for the disadvantaged target, this relationship was reversed (albeit non-significantly) when the target was advantaged. Moreover, as in Study 4, and in parallel to the mediating role of value conflict, we found further support for the novel mechanism we propose here: specifically, we found evidence supporting the idea that the effects of anti-egalitarianism on empathy, moderated by target rank, were mediated by differences in perceived harm.

Study 6

In Studies 1-5, we primarily examined harm to an individual member of an advantaged or disadvantaged group arising from an isolated action or event without larger social implications affecting other members of that group as a whole. In Studies 6-7, we examined whether our findings extend to harm to individuals deriving from consequential real-world policies that affect advantaged versus disadvantaged social groups more broadly. In Study 6 we examined the extent to which individuals' (anti-)egalitarianism might predict differential perceptions of harm to individuals affected by the implementation of structurally similar policy changes that negatively impact advantaged targets (i.e., ending legacy admission policies favoring candidates with family members who had previously attended the university) versus disadvantaged targets (i.e., ending affirmative action admission policies favoring members of historically disadvantaged groups). We expected that differential harm perceptions would predict levels of empathy experienced for the target individual, with implications for perceivers' overall support for (or opposition to) the implementation of that policy change. That is, we proposed that part of the reason that egalitarians and anti-egalitarians might come to support or oppose different social policies is

because of the differential levels of harm they perceive and empathy they extend to those adversely affected by the policy in question.

Method

Participants. Four hundred and three participants were recruited from MTurk. Forty-four participants failed a general attention check or vignette-specific attention check (similar to Study 1) and were excluded, leaving 359 for analysis (130 male, 229 female, $M_{\text{age}} = 37.35$ years, $SD = 12.29$); 77% of participants identified as White, 6% Asian, 6% Black, 4% Hispanic, 5% mixed race, and 2% other.

Procedure. Participants first completed the SDO-7 scale ($\alpha = .91$). Then they read a vignette about a high school student applying to college. The vignette described a student who is excited to attend a specific college that has traditionally had an admissions policy increasing his chances of getting in. However, the student learns, to his dismay, that because of outside pressure to end targeted admissions policies, the school has decided to abolish the policy that would have otherwise helped him gain admission (see full vignette text in Appendix A).

Target-Rank Manipulation. We manipulated target-rank by presenting the target as being a student applicant from a historically disadvantaged versus advantaged group. As a between-participants factor, participants were randomly assigned to read that the student had qualified for the school's legacy admission policy (*advantaged target condition*) or that the student had qualified for the school's affirmative action policy (*disadvantaged target condition*), and then learned that the school had recently decided to end this policy. In both conditions, the applicant expresses a sense of dejection at his chance of acceptance having been negatively affected by the policy change. Specifically, participants read, "I'm very disappointed. [Everyone in my family has gone here / Members of my family have been denied educational opportunities]"

going back several generations, and I've grown up excited to [go here, too / attend college here]. Now, I'm not so sure that's going to happen".

Measures. We measured perceived harm, $r(359) = .78, p < .001$, deservingness, $r(359) = .69, p < .001$, values conflict ($\alpha = .92$), and empathy ($\alpha = .96$) with the same items used in previous studies. We measured opposition to the policy change with a seven-point scale item (1 = strongly oppose, 7 = strongly support; reverse-scored).

Results

Participants perceived the advantaged target ($M = 5.39, SD = 1.48$) as occupying a significantly higher social rank than the disadvantaged target ($M = 2.48, SD = 1.38$), $t(357) = 19.22, p < .001, d = 2.03, CI_{mean\ diff, 95\%}[-3.21, -2.61]$.

We posited a moderated serial mediation, with (a) (anti-)egalitarianism predicting opposition to the policy change via perceived harm and expressed empathy towards the target affected by the policy proposal; and (b) with this indirect pathway (i.e., SDO \rightarrow perceived harm \rightarrow empathy \rightarrow policy change opposition) itself dependent on whether the policy change affected targets belonging to an advantaged or disadvantaged group. We tested this prediction using multi-group path modeling in Mplus (Muthén & Muthén, 2012), examining the relationship between our variables in each of the disadvantaged and advantaged target conditions. As in Study 4, we included perceived values conflict and deservingness as potential additional mediators of the link between SDO and empathy (see Figure 4 for full model and results).

The model was fully saturated ($\chi^2 = 0.00, df = 0, p = 1.00, RMSEA = .000, CFI = 1.00$). Most important for our purposes was examining the predicted indirect effect pathway and testing whether it differed across target condition. Beginning with the disadvantaged target condition (i.e., ending affirmative action), we observed that lower levels of SDO were associated with

perceiving greater levels of harm. Perceived harm itself predicted more empathic responses to the target, which predicted greater opposition to the policy proposal to end affirmative action. The predicted indirect effect from SDO → perceived harm → empathy → policy change opposition was significant (indirect effect $b = -.10$, $CI_{95\%}[-.15, -.04]$).

We also observed results consistent with our predictions in the advantaged target (i.e., ending legacy admissions) condition. Here, higher levels of SDO were associated with perceiving greater levels of harm to the target. Perceived harm was again uniquely associated with more empathy for the target, which itself uniquely predicted opposition to changing the legacy admission policy. As predicted, the indirect effect from SDO → perceived harm → empathy → policy change opposition was significant, and opposite in sign to that in the disadvantaged target condition (indirect effect $b = .05$, $CI_{95\%} [.01, .08]$).⁷

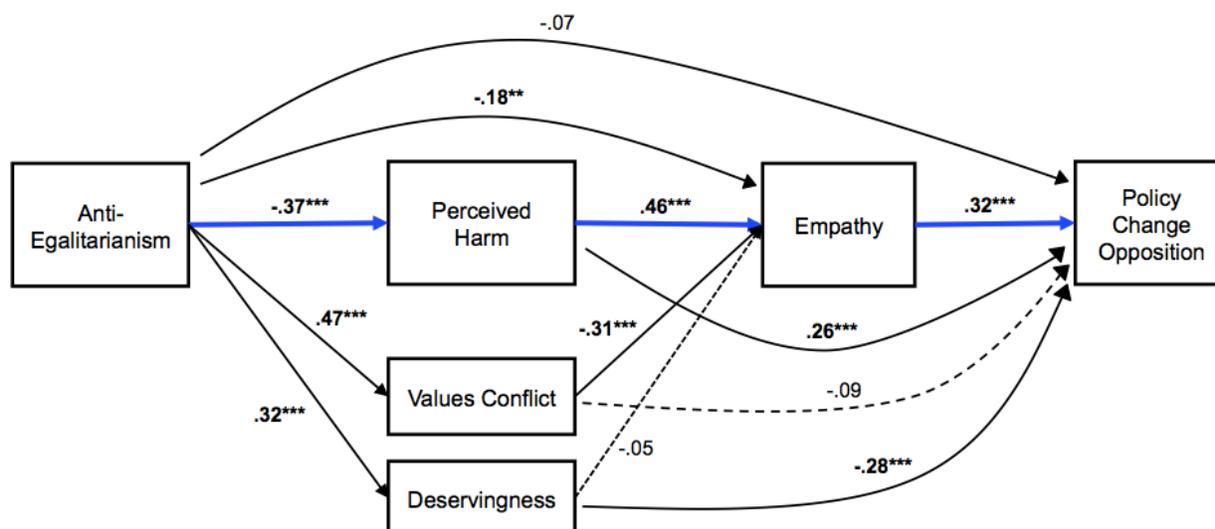
In order to test whether the overall path model differed as a function of experimental condition, we constrained all paths across the two experimental conditions to equality and examined deterioration of model fit. Consistent with moderation as a function of condition, the constrained model ($\chi^2 = 128.00$, $df = 15$, $p < .001$, $RMSEA = .21$, $CFI = .85$) demonstrated significantly worse fit than the unconstrained model ($\Delta\chi^2 = 128.00$, $df = 15$, $p < .001$). To test more specifically whether there was evidence of significant moderated mediation via our proposed pathway as a function of experimental condition, we constrained only the predicted indirect effect pathways (SDO → perceived harm → empathy → policy change opposition) in each condition to equality and investigated whether we observed significant deterioration of

⁷ For the disadvantaged target condition, the indirect effect from SDO → deservingness → empathy → policy change opposition was non-significant (indirect effect = $-.01$, $95\% CI[-.03, .01]$); the indirect effect from SDO → values conflict → empathy → policy change opposition was significant (indirect effect = $-.08$, $95\% CI[-.13, -.03]$). For the advantaged target condition, the indirect effect from SDO → deservingness → empathy → policy opposition was significant (indirect effect = $.03$, $95\% CI [.003, .05]$); the indirect effect from SDO → values conflict → empathy → policy opposition was significant (indirect effect = $.05$, $95\% CI [.02, .09]$).

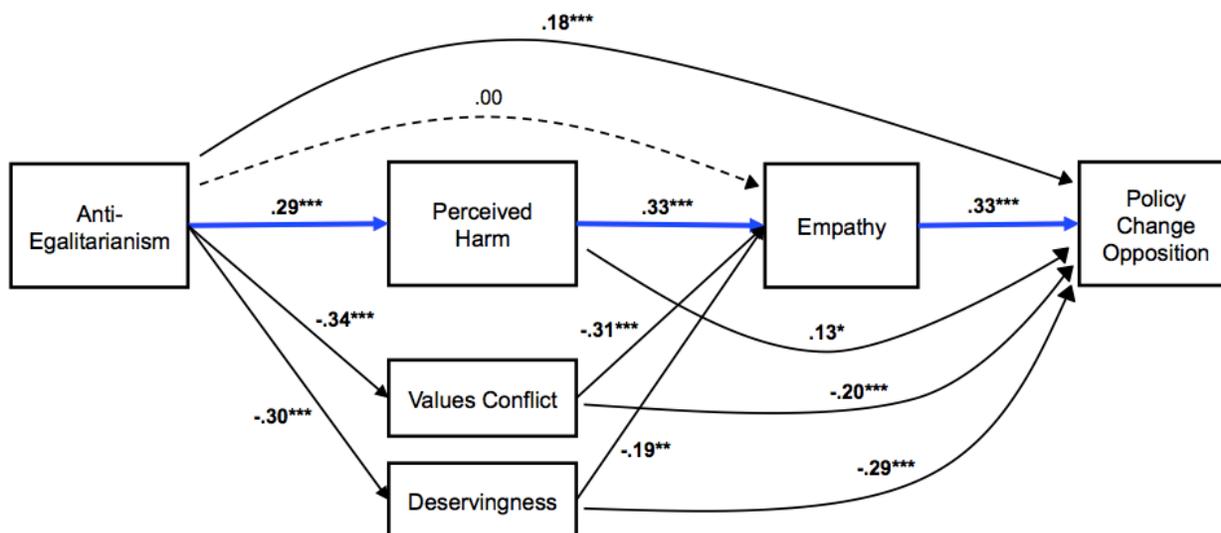
model fit relative to the unconstrained model. Indeed, constraining the predicted indirect effect pathways to equality across condition resulted in a model with significantly worse fit than the unconstrained model ($\Delta\chi^2=44.62$, $df=3$, $p < .001$), suggesting that the link between (anti-)egalitarianism and opposition to the policy change via perceived harm and expressed empathy depended importantly on whether the target affected by the policy change was advantaged or disadvantaged.

Figure 4. The indirect effects of perceived harm, deservingness, and values conflict on the relationship between (anti-)egalitarianism and empathy, as moderated by target-rank, Study 6.

Disadvantaged Target



Advantaged Target



Note: The indirect effect most central to our hypotheses appears in blue. The reported coefficients are standardized betas. Note that for both the disadvantaged and advantaged target conditions, the policy change being opposed would, if implemented, harm the target in question.

Discussion

Study 6 extended our investigation to policy attitudes. We replicated the pattern we observed in prior studies, whereby the relationship between (anti-)egalitarianism and empathy via differential perceptions of harm depended on target-rank. That is, when the harm imposed by an admissions policy change negatively impacted a disadvantaged target (i.e., ending affirmative action), egalitarianism was associated with greater perceived harm to the target and more empathy. In direct contrast, when the admissions policy change negatively impacted an advantaged target (i.e., ending legacy admissions), egalitarianism was associated with *less* perceived harm and less empathy for the target (although this effect was again weaker than the opposite relationship in the disadvantaged condition; see Table S4). Importantly, we showed in this study that this differential perception of harm and empathy to the target as a function of

target-rank helped to explain the well-established link between (anti-)egalitarianism and hierarchy-enhancing versus hierarchy-attenuating social policies (Ho et al., 2015; Kteily, Ho, & Sidanius, 2012; Sidanius & Pratto, 1999).

In Study 7, we re-examine the influence of hierarchy-related motives on policy outcomes, here investigating participants' behavior: specifically, their willingness to sign a petition to oppose a policy negatively impacting advantaged versus disadvantaged targets.

Study 7

For Study 7, we tested our hypotheses in a context with high ecological validity, examining responses to a real-world policy issue directly relevant to participants' lives. Participants assessed proposed state legislation that would address a severe budget deficit by imposing costs on an advantaged or disadvantaged group. They then completed attitudinal measures assessing their reactions to the proposal. Finally, in order to assess behavior, participants were given the opportunity to actually sign a petition to oppose the proposal.

Method

Participants. Participants were 291 people in the city of Chicago. We recruited participants in two ways: 151 participants were approached in public areas around the city and 140 were recruited from a participant pool of community members maintained by a university laboratory. Both samples showed highly similar patterns of results, and controlling for recruitment method did not alter the interpretation of any analyses. We sought to recruit over 100 participants per condition, and we recruited as many participants as possible before the end of the academic period. Three participants did not complete the survey, and we excluded one participant who gave the same response to all questions, leaving 287 for analysis (136 females, 149 males, 2 not specified, $M_{\text{age}} = 30.13$ years, $SD = 13.09$, range = 18-85 years); 45% of

participants identified as White, 28% Black, 12% Asian, 9% Hispanic, 4% mixed race, and 2% other or not specified.

Procedure. Participants were told the study was a public opinion survey about “Illinois’ benefits policy” and that they would assess proposed state legislation. The survey first described the state of Illinois’ current budget deficit and credit crisis, “The state faces a \$9 billion annual budget deficit that is currently expected to grow to \$14 billion by FY 2026”—an ongoing issue that was receiving considerable news coverage at the time the study was conducted (in October of 2015), and which directly impacted the lives of Illinois residents. The survey also included the summary of a policy proposal to reduce the deficit by scaling back a range of state employee benefits such as healthcare subsidies and cost-of-living adjustments (full text in Appendix A, supplemental online materials). Although we constructed the proposal for our research purposes, it was based on actual proposals being considered by the state government. Informal pretesting with colleagues residing in Illinois suggested the proposal was realistic and believable. No participants reported questioning the authenticity of the proposal.

Target-Rank Manipulation. Participants were randomly assigned to read that the benefits cuts were targeted toward Illinois government leaders (advantaged target condition) or Illinois schoolteachers (disadvantaged target condition). The schoolteachers’ starting median salary was reported (accurately) as \$36,927; we set the government leaders’ salary of \$129,245 by multiplying the school teacher’ salary by 3.5 (informal pretesting suggested this was the highest salary that would be believable). Both conditions stated that the cuts were projected to have “*a significant impact on the [target group’s] quality of life and long-term security*”.

Measures. After reading the proposal, participants responded to the SDO-7_(s) scale, the validated 8-item version of the SDO-7 scale ($\alpha = .79$; Ho et al., 2015). Study 7 did not include a

measure of empathy (or of perceived harm), but it did include a related attitudinal construct: moral outrage on behalf of those affected by the benefit cuts. Participants reported how much the proposal made them feel *angry*, *upset*, *outraged*, *disgusted*, *indignant*, and *annoyed* on behalf of the target group (1 = *not at all*, 7 = *extremely*) (Tetlock, Kristel, Elson, Green, & Lerner, 2000). Feeling outraged on behalf of a target shares conceptual overlap with feeling empathic concern in response to actions that harm them.⁸

Participants indicated their (attitudinal) opposition to the proposal on a seven-point scale (1=strongly opposed, 7=strongly in favor). As a behavioral measure of policy opposition, participants were given the opportunity to sign a petition that would advocate to “*prevent the state of Illinois from cutting benefits for its [state government leaders/school teachers]*” Participants were asked to provide their name and email address to indicate a signature. Those who signed the petition were coded as “1” and those who left it blank were coded as “0”. After completing the survey participants were compensated and debriefed⁹.

Results

The target-rank manipulation check (described in Footnote 6) confirmed that the advantaged target ($M = 5.22$, $SD = 1.17$) was seen as occupying a higher social rank than the disadvantaged target ($M = 3.66$, $SD = 1.06$), $t(190) = 9.73$, $p < .001$, $d = 1.40$, $CI_{mean\ diff, 95\%}[-1.88, -1.25]$.

⁸ Consistent with this, empathy for a victim and moral outrage on their behalf were significantly correlated in our prior studies that included both measures: in Study 1, $r = .64$, $p < .001$, and in Study 4, $r = .74$, $p < .001$.

⁹ We also asked participants whether they wanted their responses included in an opinion poll, which, they were told, might impact public opinion. Unlike petition signing, this did not require individuals to include their name or email address. We included this measure as a milder behavioral measure to hedge against a possible floor effect of petition signing. However, this was not the case in our sample, and nearly all participants included their responses in the poll (95%). Given the lack of variance, we did not analyze this variable.

First we tested for the predicted SDO x target-rank condition interaction on moral outrage. Results appear in Table 7. Regression analyses revealed a marginally significant main effect of SDO and a significant main effect of target-rank condition, such that people expressed more moral outrage on behalf of the target when the proposal harmed the disadvantaged group (i.e., schoolteachers) compared to the advantaged group (i.e., government leaders). These effects were qualified by the predicted significant SDO x target-rank condition interaction: as expected, SDO was a significant negative predictor of moral outrage on behalf of the target when the proposal harmed the disadvantaged group, but a significant positive predictor when the proposal harmed the advantaged group. Regression analyses on policy opposition revealed the same pattern of results as for moral outrage (see Table 6).

Next we examined petition signing. Overall 133 participants (46%) signed the petition: 99 of 144 participants (69%) in the disadvantaged target condition and 34 of 143 participants (24%) in the advantaged target condition. Logistic regression analyses revealed a significant main effect of SDO and a significant main effect of target-rank condition, such that participants were, on average, more likely to sign the petition when the proposal harmed the disadvantaged group (i.e., school teachers) rather than the advantaged group (i.e., government leaders). These main effects were, however, qualified by the predicted significant SDO x target-rank condition interaction. Specifically, SDO was a significant negative predictor of petition signing when the policy harmed the disadvantaged group, but was positively (though non-significantly) associated with petition signing when the policy harmed the advantaged group ($p = .18$).

Table 6. The effects of SDO, target-rank condition, and their interaction on moral outrage, proposal opposition, and petition signing, in Study 7.

	Moral Outrage			Proposal Opposition			OR	Petition Signing	
	β	<i>b</i>	CI _{95%}	β	<i>b</i>	CI _{95%}		<i>b</i>	CI _{95%}
SDO	-.08 [†]	-.16	[-.34, .02]	-.08 [†]	-.15	[-.31, .01]	.77*	-.27	[-.53, -.003]

Target-Rank	-.52***	-1.03	[-1.22, -.84]	-.68***	-1.42	[-1.58, -1.25]	.37***	-1.00	[-1.27, -.73]
SDO*Target-Rank	.23***	.44	[.26, .62]	.26***	.52	[.36, .67]	1.66***	.51	[.24, .77]
SDO Simple Effects:									
Disadvantaged Target	-.32***	-.60	[-.85, -.34]	-.34***	-.67	[-.88, -.45]	.86***	-.15	[-.21, -.09]
Advantaged Target	.15*	.28	[.04, .55]	.19***	.37	[.14, .59]	1.04	.04	[-.02, .10]

Note. The advantaged target condition was coded (+1) and the disadvantaged target condition was coded (-1). SDO was mean centered. Confidence intervals refer to the unstandardized betas. ^F $p < .10$, $*p < .05$, $**p < .01$, $***p \leq .001$.

Moderated mediation. We tested whether moral outrage on behalf of the target (our proxy here for empathy) mediated the relationship between SDO and each of policy opposition and petition signing, and whether this link was moderated by target-rank. We first examined attitudinal policy opposition. The index of moderated mediation was significant, $b = .59$, $SE = .14$, $CI_{95\%} [.33, .87]$: The negative indirect effect of SDO on policy opposition through moral outrage was significant in the disadvantaged target condition, $b = -.40$, $CI_{95\%} [-.59, -.23]$, as was the positive indirect effect in the advantaged target condition, $b = .19$, $CI_{95\%} [.02, .38]$. Our second model examined petition signing as the dependent variable. The index of moderated mediation was again significant, $b = .68$, $SE = .18$, $CI_{95\%} [.37, 1.07]$: the negative indirect effect of SDO on petition signing through moral outrage was significant in the disadvantaged target condition, $b = -.46$, $CI_{95\%} [-.71, -.26]$, as was the positive indirect effect in the advantaged target condition, $b = .22$, $CI_{95\%} [.01, .47]$.

Discussion

Study 7 tested our hypotheses in a meaningful setting with high ecological validity, and included both a self-report and a behavioral measure of policy opposition (as well as a proxy, in moral outrage, for empathy on behalf of a target affected by the policy). Again, we found support

for the motivated perspective: Egalitarians were more likely than anti-egalitarians to feel outraged on behalf of a relatively disadvantaged target (i.e., school teachers) affected by a policy proposal to cut salaries to balance the Illinois budget and thus more likely to oppose the proposal in word and deed. The reverse was true (albeit to a weaker degree) when the affected target was relatively advantaged (i.e., state officials).

Study 8

In Studies 1-7 the average levels of SDO were below the scale midpoint (i.e., 4), ranging from 2.4 to 2.7 (see Table S7 for SDO descriptives across studies). This is consistent with the prevalence of egalitarian norms in the U.S. and U.K. where our samples were drawn (Ho et al., 2015; Katz & Hass, 1988)—indeed the distribution of SDO levels we observe here is broadly comparable to levels observed in nationally representative samples (e.g., Ho et al., 2015). Individuals higher on SDO relative to the mean might reasonably be deemed anti-egalitarian by the standards of the context examined even if one standard deviation above the mean on SDO corresponds to the scale midpoint (i.e., 4) rather than an outright *opposition* to equality.¹⁰ Nevertheless, we thought it would be informative to test our theorizing among a sample including substantial numbers of individuals scoring above the midpoint on SDO (i.e., ‘objective’ vs. relative anti-egalitarians).

Indeed, we earlier highlighted one noteworthy pattern worth reconsidering here. Across all studies, we find that the link between (anti-)egalitarianism and empathy for a target is

¹⁰ Notably, it is also the case that SDO is very highly correlated with and functions very similarly to Hatemi et al.’s (2014) measure of anti-egalitarianism ($r(1,207) = .85$ across our studies), despite the fact that individuals tend to show greater average endorsement of the latter (see also Kteily et al., 2017). Indeed, in Studies 3, 5, and 8 (where both SDO and Hatemi et al.’s scale were collected) the 235 participants who scored around the SDO scale midpoint (i.e., between 3.5 and 4.5) had an average SDO score of 4.01 and an average score of 4.46 on Hatemi et al.’s scale (i.e., closer to the anti-egalitarian end of the scale). Additionally the 214 participants in these studies who scored at or above +1 SD of mean SDO had an average SDO score of 5.08 and an average Hatemi et al. score of 5.71.

significantly moderated by target rank, consistent with the central premise of the motivated perspective. At the same time, whereas we find that relative egalitarians show more empathy than relative anti-egalitarians towards disadvantaged targets across all studies, the proclivity of relative anti-egalitarians to show more empathy towards *advantaged* targets than egalitarians has been somewhat less consistent and typically less marked (see Table S4). This is inconsistent with the strongest version of the motivated perspective, in which the link between (anti-)egalitarianism and empathy is not only (a) significantly moderated by or even (b) reversed in direction depending on target-rank, but further, (c) exhibits effects opposite in direction *and* equal in magnitude for advantaged as compared to disadvantaged targets.

On the one hand, this could reflect something fundamental about (anti-)egalitarianism: perhaps anti-egalitarians are more likely than egalitarians to express empathy for advantaged targets but nevertheless exhibit lower ‘peak’ levels of empathy for their favored targets (or higher ‘floor’ levels for their disfavored targets) than is respectively true for egalitarians. An alternative explanation for this pattern, however, is that, given the overall norm of egalitarianism in our samples (and more generally, in the national contexts we examine), the relative egalitarians we consider (i.e., those -1 SD below the mean on SDO) were simply more committed in their support for equality than the relative anti-egalitarians (i.e., those +1 SD above the mean) were in their respective opposition to equality.

In order to examine these possibilities and ensure that our results are not dependent on any restricted range in our sample’s levels of (anti-)egalitarianism, in Study 8, we oversampled individuals who were objectively high in SDO— that is, exhibiting an SDO score higher than 4— and asked them to respond to two vignettes used in prior studies. We then combined this ‘booster sample’ of new, ‘objectively’ high SDO individuals with a subset of the data that we

had earlier collected using these same vignettes (from the same data collection source). This allowed us to re-conduct our analyses among an overall sample with an average SDO mean around the scale midpoint, such that +1 SD above the mean captured the responses of objectively (rather than relatively) anti-egalitarian individuals.

Method

Participants. We recruited high SDO Mturk workers by targeting people known to be high in SDO based on their participation in prior unrelated projects and by using Mturk's inclusion criteria to target individuals with right-leaning ideological beliefs (who tend to also be higher in SDO). We retained only participants whose SDO scores were at the scale midpoint (i.e., 4) or higher. This provided us with 155 high-SDO participants ($M_{\text{SDO}} = 4.84$, $SD = .77$). Participants were 88% White, 3% Asian, 5% Black, 3% Hispanic, 1% mixed race or other (82 males, 73 females; $M_{\text{age}} = 42.09$ years, $SD = 13.29$).

Procedure. First participants completed the SDO-7 scale. Next they read and responded to the benefit cuts vignette (Study 1) and the college admission vignette (Study 6); vignette presentation order was counterbalanced. Participants were randomly assigned to read either the advantaged target condition version of both vignettes or the disadvantaged target condition version of both vignettes. This gave us 155 new high-SDO participants for each of the benefit cuts and college admission vignettes. Next, we combined these responses (i.e., the data from this 'booster' high-SDO sample) with the sample from our previous studies that had used the same vignettes. For benefit cuts, the high-SDO sample was combined with the Study 1 sample ($n = 188$) that had also responded to the benefit cuts vignette. This provided a total sample of 343, of which 183 (53%) scored at or above the SDO scale midpoint. Mean SDO was 3.58 with a standard deviation of 1.52 (i.e., +1 SD above the mean = 5.10).

For the college admissions analysis, responses from the high-SDO ‘booster’ sample were combined with responses from the Study 6 sample ($n = 359$) that had also responded to the college admissions vignette. This provided a total sample of 514. However, because there were 122 more participants below 4 on SDO ($n = 318$) compared to those equal to or above 4 ($n = 196$), we randomly selected 122 participants below the SDO scale midpoint to discard from the sample (in doing so, we drew equally from participants in the advantaged and disadvantaged conditions).¹¹ In the final sample of 392 participants, 50% (i.e., 196) scored at or above the SDO scale midpoint and mean SDO was 3.43 with a standard deviation of 1.59 (i.e., +1 SD above the mean = 5.02).

Our primary measure of interest was empathy, which participants reported separately in response to each vignette (our empathy measure was again reliable among this combined sample; $\alpha_{benefit\ cut} = .97$; $\alpha_{college\ admission} = .96$).¹²

Results

The target-rank manipulation check confirmed that in both vignettes the advantaged target ($M_{benefit\ cut} = 5.36$, $SD = 1.27$; $M_{college\ admission} = 4.64$, $SD = 1.40$) was seen as occupying a higher social rank than the disadvantaged target ($M_{benefit\ cut} = 2.68$, $SD = 1.36$; $M_{college\ admission} = 2.83$, $SD = 1.50$), $t_{benefit\ cut}(153) = 12.70$, $p < .001$, $d = 2.01$, $CI_{mean\ diff, 95\%}[-3.10, -2.27]$; $t_{benefit\ cut}(153) = 7.78$, $p < .001$, $d = 1.23$, $CI_{mean\ diff, 95\%}[-2.27, -1.35]$.

¹¹ As a robustness check we re-ran our analysis while dropping a different group of 122 randomly selected participants below the SDO midpoint. Mean SDO was 3.46 ($SD = 1.57$) and results yielded the same conclusions as the main analysis reported in text.

¹² The new participants completed Hatemi et al.’s (2014) 5-item anti-egalitarianism measure ($M = 5.46$, $SD = 1.20$). This measure was not collected in Studies 1 or 6 and so was not analyzed. New participants also reported perceived harm, deservingness, and values conflict. These measures were not collected in Study 1 but were collected in Study 6 so we conducted process analyses for the college admissions vignette. Analyses using the new combined sample replicated the patterns found in the Study 6 process analyses (omitting the path for policy change opposition, which was not measured in Study 8’s booster sample).

We analyzed the vignettes separately and they both revealed similar overall patterns (see Table 7). For both vignettes there was a significant main effect of SDO and a significant main effect of target-rank, such that the disadvantaged target received more empathy on average than the advantaged target. There was also a significant SDO x target-rank interaction. Consistent with our general pattern of findings across studies, SDO was a significant negative predictor of empathy for the disadvantaged target but a significant positive predictor for the advantaged target.

Table 7. The effects of SDO, target-rank condition, and their interaction on empathy in the benefit cuts and college admission vignettes, Study 8.

	β	Benefit Cuts		β	College Admission	
		<i>b</i>	<i>CI</i> _{95%}		<i>b</i>	<i>CI</i> _{95%}
SDO	-.13**	-.17	[-.27, -.06]	-.26***	-.30	[-.40, -.20]
Target-Rank	-.57***	-1.10	[-1.26, -.94]	-.21***	-.38	[-.54, -.22]
SDO*Target-Rank	.27***	.34	[.23, .44]	.43***	.50	[.40, .59]
SDO Simple Effects: Disadvantaged Target	-.40***	-.51	[-.66, -.36]	-.70***	-.79	[-.94, -.66]
Advantaged Target	.14*	.17	[.03, .32]	.15**	.19	[.06, .33]

Note. The advantaged target condition was coded (+1) and the disadvantaged target condition was coded (-1). Confidence intervals refer to the unstandardized betas. [†] $p \leq .10$, * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

As noted earlier, our results thus far appeared to indicate that the negative link between anti-egalitarianism and empathy in the disadvantaged condition was greater in magnitude than the corresponding positive link in the advantaged condition. Importantly, despite the higher mean SDO level and greater prevalence of ‘objective’ anti-egalitarians in this combined sample, we observed the same pattern here across both vignettes: the effect of SDO on empathy for the disadvantaged target was significantly larger than the effect for the advantaged target (both p 's < .001, see Table S4).

Discussion

Study 8 recruited a ‘booster’ sample of high SDO individuals to re-examine the results of some of our earlier studies using a broader range of anti-egalitarianism and a better representation of ‘objectively’ (*vs.* relatively) anti-egalitarian individuals. Although we had substantially higher average levels of SDO in our samples, and despite the fact those one SD above the mean were objectively (*vs.* relatively anti-egalitarian), our findings were very similar to those we had observed previously. Consistent with the motivated perspective, target-rank moderated the effect of (anti-)egalitarianism on empathy across both the benefit cuts and college admissions vignettes. (Anti-)egalitarianism negatively predicted empathy for disadvantaged targets and positively predicted empathy for advantaged targets. We further observed—again in line with earlier patterns—that the magnitude of the negative link between anti-egalitarianism and empathy in the disadvantaged target condition was greater than the respective positive link between anti-egalitarianism and empathy in the advantaged target condition (see also Table S4). We return to the theoretical implications of this pattern below.

Internal Meta-Analysis

We compiled our data across studies to conduct an especially high-powered test of the interactive effect of anti-egalitarianism and target-rank on empathy ($N = 2,162$; total nested observations = 2,317). We used a multilevel regression model and conducted analyses in STATA using the *xtmixed* command. We included random effects for participant (to account for Study 8’s repeated measures) and study, and we controlled for each of study’s interactions with anti-egalitarianism and target-rank. Results appear in Table 8 (see Model 1); we report unstandardized betas as recommended for multi-level models. Descriptives and correlations appear in Table 9. The analysis revealed a significant main effect of anti-egalitarianism ($p <$

.001) and a significant main effect of target-rank condition ($p < .001$), such that, on average, people exhibited more empathy for harm to disadvantaged than advantaged targets. These effects were qualified by the significant anti-egalitarianism x target-rank condition interaction ($p < .001$). Anti-egalitarianism was a significant negative predictor of empathy when the disadvantaged target was harmed ($p < .001$), but a significant positive predictor when the advantaged target was harmed ($p < .001$). Comparing the magnitude of simple slopes, we confirmed that the slope for the disadvantaged target was significantly stronger than the (opposite) slope for the advantaged target ($p < .001$) (see Table S4).

Table 8. Unstandardized betas of the effect of (anti-)egalitarianism (AE), target-rank, and their interaction on empathy in the internal meta-analysis.

	Model 1		Model 2: <i>Demographic =</i> Social Class		Model 3: <i>Demographic =</i> Gender		Model 4: <i>Demographic =</i> Race		Model 5: <i>Demographic =</i> Conservatism	
	<i>b</i>	<i>CI</i>	<i>b</i>	<i>CI</i>	<i>b</i>	<i>CI</i>	<i>b</i>	<i>CI</i>	<i>b</i>	<i>CI</i>
AE	-.15***	-.20, -.10	-.16***	-.21, -.11	-.12***	-.19, -.06	-.13*	-.24, -.01	-.16*	-.28, -.04
Target-Rank	-.86***	-1.13, -.60	-.87***	-1.13, -.60	-.93***	-1.20, -.65	-.86***	-1.16, -.56	-.95***	-1.26, -.63
AE*Target-Rank	.33***	.28, .38	.33***	.28, .38	.33***	.26, .39	.39***	.27, .50	.30***	.18, .42
<i>Demographic</i>			.07 [†]	-.00, .15	-.40***	-.53, -.28	.02	-.20, .24	.01	-.06, .08
AE* <i>Demographic</i>			.03	-.01, .08	-.03	-.12, .06	-.04	-.16, .09	-.00	-.03, .02
Target-Rank* <i>Demographic</i>			.01	-.06, .07	.15*	.02, .28	.00	-.16, .16	.02	-.02, .07
AE* Target-Rank* <i>Demographic</i>			.02	-.03, .06	-.03	-.11, .06	-.07	-.19, .05	-.00	-.02, .03
AE simp. slope: Disadv. Target	-.48***	-.55, -.41	-.49***	-.56, -.42	-.45***	-.52, -.38	-.49***	-.56, -.41	-.48***	-.57, -.40
Adv. Target	.17***	.10, .25	.16***	.09, .24	.18***	.11, .25	.18***	.10, .25	.13**	.05, .22

Note: $N = 2,162$. All analyses included random effects for participant and study, and controlled for each of study's interactions with AE, target-rank, and (for models 2-5) the included demographic variable. These terms were not included in the table for ease of presentation. Studies 3 and 7 were excluded because they did not include an empathy measure. Each study used the primary anti-egalitarianism measure used in that study: SDO for Studies 1, 2, 6, and 8,

Hatemi et al.'s (2014) measure for Study 4, and the composite for Study 5. The advantaged target condition was coded (+1) and the disadvantaged target condition was coded (-1). Gender was coded (+1) for Male, (0) for Female (two participants who indicated 'other' were excluded from the gender analysis). Race was coded (+1) for White and (0) for Non-White. (Anti-)egalitarianism was mean centered. $^{\ddagger}p \leq .10$, $*p \leq .05$, $**p \leq .01$, $***p \leq .001$.

Table 9. Descriptive statistics and correlations among variables tested in the meta-analysis.

	Mean	SD	1	2	3	4	5	6
1. AE	2.94	1.46						
2. Target-Rank	-.01	1	.00					
3. Empathy	4.04	1.89	-.18***	-.40***				
4. Social Class	0.00	1.00	.11***	-.02	.03			
5. Gender	.49	.50	.09***	.02	-.12***	-.01		
6. Race	.80	.40	.09***	-.02	-.03	-.00	-.04 [†]	
7. Conservatism	3.60	1.76	.65***	-.02	-.11***	.06**	.02	.11***

Note: $N = 2,317$. Study 8 participants are entered twice to account for their responses to the two different vignettes. The advantaged target condition was coded (+1) and the disadvantaged target condition was coded (-1). Social class is a standardized composite of three measures with different scales, see footnote 15. Gender was coded (1) for Male, (0) for Female. Race was coded (1) for White and (0) for Non-White.

Differentiation from accounts rooted in group membership. We next conducted supplemental analyses testing the extent to which our effects could be accounted for (or moderated by) four constructs that we collected across studies: social class, gender, race, and conservatism.¹³ We begin by considering social class, gender, and race. Being high in SES, being a male, or being white all reflect membership in an advantaged social group; by contrast, being low in SES, being female, or being non-white reflect membership in a disadvantaged social group. Individuals are well-known to express ingroup favoritism (e.g., Tajfel & Turner, 1979) and several theories suggests that individuals regularly behave in a group-interested fashion (e.g.,

¹³ Social class was measured with three questions: income (1=*less than \$10k*, 9=*above \$500k*), family social class (1=*poor*, 5=*upper class*), and education (1=*no formal education*, 8=*graduate or professional degree*). Gender was coded as 1 = *male* ($n = 976$), 2 = *female* ($n = 1,029$), and *other* ($n = 2$) (we included only males and females in our analyses). Race was coded as 0 = *non-white* ($n = 415$), 1 = *white* ($n = 1,592$). Conservatism was measured with three questions (1 = *extremely liberal*, 7 = *extremely conservative*): general political orientation, political orientation on economic issues, and political orientation on social issues.

Blumer, 1958; Bobo, 1993). Most importantly for our purposes, evidence suggests that individuals tend to show greater empathy for ingroup relative to outgroup members (Cikara, Bruneau, Van Bavel, & Saxe, 2014; Cikara, Bruneau, & Saxe, 2011). From these perspectives, it could be that our findings are being driven more by shared group membership than— as we posit— individuals’ preferences for social hierarchy versus equality. For example, it could be that the best predictor of the level of empathy a lower class individual feels for a target who faces a pay cut would be whether that target belonged to an ingroup (i.e., had a lower social class) or an outgroup (i.e., a higher social class).

In contrast, our account focuses specifically on individuals’ beliefs about the desirability of hierarchy rather than group membership. Indeed, although members of advantaged groups tend, on average, to endorse social hierarchy to a greater extent than disadvantaged group members (e.g., Ho et al., 2015; Sidanius & Pratto, 1999; see also correlations between anti-egalitarianism and demographics in Table 9) group members vary in their ideological support for group-based inequality (with some advantaged group members rejecting hierarchy and some disadvantaged groups members supporting it). Our work posits that the latter plays a more important (or proximal) role in predicting empathy towards advantaged and disadvantaged targets than group membership.

To test this group membership account, we ran three additional models, each examining moderation by one of the demographic variables indexing membership in an advantaged (high social class, male, or white) versus disadvantaged (low social class, female, or non-white) social group. We first examined models including the interaction of each of these variables with target-rank on empathy (without including anti-egalitarianism), and subsequently tested the models again after including (anti-)egalitarianism (and its interaction with target-rank condition). First,

in models without (anti-)egalitarianism, none of social class, age, or gender significantly interacted with target-rank to predict empathy (all p 's > .13). Next, in models including (anti-)egalitarianism and its interaction with target-rank, we observed no evidence that any of these demographic variables significantly moderated our results or altered the interpretation of the main findings (see Table 8; Models 2-4). Thus, consistent with theoretical perspectives emphasizing the important role of ideological beliefs in predicting intergroup behavior (e.g., Jost & Banaji, 1994; Sidanius & Pratto, 1999) and prior research showing that social dominance motives operate similarly across levels of individual social standing (e.g., Kteily et al., 2017), the link between levels of egalitarianism and empathy as a function of target-rank was statistically equivalent among men and women, ethnic majority and minority members, and those high and low in social class. Indeed, we observed that our key anti-egalitarianism x target-rank interaction was statistically significant for each of these categories (see supplemental online materials, Table S8). We even observed that the anti-egalitarianism x target-rank interaction was significant, $b = .65$, $CI_{95\%} [.00, 1.29]$, among the 108 low SES minority females in our sample (i.e., individuals belonging to the disadvantaged category for all three demographics considered; the interaction was also significant among the 403 high SES majority males, $b = .37$, $CI_{95\%} [.16, .58]$).

Differentiation from accounts rooted in political conservatism. Another possibility is that our findings might simply be accounted for by political conservatism, a construct key to the important research on ideological conflict, which highlights that liberals and conservatives express equal and opposite levels of affective prejudice towards target groups to the extent that they see these groups as ideologically opposed to their own beliefs (Brandt, 2017; Brandt et al., 2014; Chambers et al., 2012; Wetherell et al., 2013). Although our work shares some conceptual similarities with research on ideological conflict, it is also different in important ways (including

in our specific focus on perceived harm and empathy as outcomes). Specifically, although political conservatism is associated with opposition to inequality (e.g., Jost et al., 2003), it is also characterized by other features (e.g., resistance to change). Being politically liberal or conservative has also taken on the quality of a valued (some might even say ‘tribal’) social identity (Malka & Lelkes, 2010), invoking an ingroup/outgroup psychology that is less central to ideological beliefs about the desirability of social inequality. In our work, we focus explicitly on (anti-)egalitarianism, from which we derive specific predictions about how individuals might perceive harm (and extend empathy) to targets as a function of their social rank, beyond perceptions of value conflict. Consistent with this, we observed in Studies 4-6 that anti-egalitarianism predicted empathy differently across target-rank condition via perceived harm above and beyond the role of value conflict.

Nevertheless, we conducted here supplemental analyses with conservatism to further highlight the specific role of hierarchy motives and distinguish our findings from existing work on ideological conflict. As with our examination of the role of membership in advantaged versus disadvantaged social groups, we first examined a model with just conservatism and its interaction with target-rank as predictors, and then examined a model that included (anti-)egalitarianism and anti-egalitarianism x target-rank. Looking at conservatism without including (anti-)egalitarianism, we found the conservatism x target-rank interaction on empathy was significant ($p < .001$), such that conservatism positively predicted empathy for the high ranking target ($p < .001$) but negatively predicted empathy for the low ranking target ($p < .001$). However, when conservatism and the conservatism x target-rank interaction were entered into a model alongside (anti-)egalitarianism and its interaction with target-rank, conservatism and the conservatism x target-rank effects became non-significant (see Table 8, Model 5). Importantly,

our key egalitarianism x target-rank relationship remained significant (and, further, was not moderated by levels of conservatism, see supplementary online materials, Table S8). Taken together, this set of findings is highly consistent with the fact that because political conservatism is *partially* defined by opposition to inequality, it should, in isolation, generally show similar patterns to an anti-egalitarianism measure; but, by virtue of being less *specifically* about opposition to inequality, these effects should tend to become weaker when controlling for a measure specific to anti-egalitarianism. This pattern of results supports the distinct role we posit for anti-egalitarianism, and may help to explain why— in contrast to the present findings— previous work examining the link between political conservatism and prejudice (related to though different from empathy) towards ideologically opposed outgroups found little evidence that this link depended on target-group status (Brandt, 2017).

General Discussion

Across eight studies, we investigated the nature of the relationship between (anti-)egalitarianism and empathy for those who encounter harm, and whether this link depends on targets' membership in advantaged or disadvantaged groups. We sought to compare two competing views in the literature. The prevailing view holds that greater levels of anti-egalitarianism are associated with lower levels of empathy as a matter of disposition (e.g., Chiao et al., 2009; Sidanius et al., 2013). In contrast, a motivated perspective suggests that the hierarchy-relevant motivations of egalitarians and anti-egalitarians affect the levels of empathy they express towards a target depending on that target's rank in the social hierarchy. By systematically varying targets' position in the social hierarchy, our studies represent the first systematic test of these two competing perspectives. We examined this question among a large sample of participants (total $N=3,154$) in two countries (i.e., U.S. and the U.K.), using multiple

measures of (anti-)egalitarianism, a variety of targets, types of harm, methodological designs, and examining both attitudinal and behavioral outcomes.

Our results provide consistent support for the central tenet of the motivated perspective. Each of our studies (and our internal meta-analysis) revealed a significant (anti-)egalitarianism by target-rank interaction, such that the negative link between (anti-)egalitarianism and empathy observed for disadvantaged targets (e.g., floor workers, school teachers) subjected to harm was significantly attenuated when the target was advantaged (e.g., executives, government leaders). This was true whether we examined empathy by simply asking people to report how empathic they felt on behalf of a target; had outside coders determine the level of empathy expressed in free-response text that participants wrote in response to an incident in which a target was harmed; or assessed participants' actual willingness to sign a petition on behalf of a target harmed by the implementation of a local government policy. Furthermore, the patterns we observed held not only when the harm to targets was material in nature (e.g., benefits cut; home robbery), but even when the scenario involved irreparable harm which no amount of financial resources could undo (e.g., losing one's only memento of a deceased family member). Moreover, consistent with a still stronger version of the motivated perspective, the relationship between (anti-)egalitarianism and empathy was not only attenuated by the target's social rank, but was frequently *reversed*. Across our studies, (anti-)egalitarianism positively and significantly predicted empathy for advantaged targets in seven of ten tests (including the internal meta-analysis).

We also investigated mechanisms underlying our effects, proposing that egalitarian and anti-egalitarian perceivers come to express different levels of empathy to advantaged versus disadvantaged targets in part because of differences in how much harm they perceive the same

given action to have caused the target in question. Indeed, in Study 3 we found evidence that a target's rank colors the extent to which egalitarians and anti-egalitarians view the same event as harmful. For example, we observed that the same pay cut to a corporate executive (e.g., 10%) was perceived as meaningfully harmful by a smaller proportion of egalitarians (57%) than anti-egalitarians (71%). Studies 4-6 further found that the differential harm threshold applied by egalitarians and anti-egalitarians to advantaged versus disadvantaged targets helped to explain their empathy towards these targets (with the relevant indirect effect significant in 5 of 6 cases), even after taking into account the extent to which they perceived the targets to deserve the harm and the extent to which they felt that these targets' worldviews conflicted with their own, factors previously demonstrated to be important determinants of outcomes like prejudice and concern for others (Brandt et al., 2014; Feather, 1994).

Our findings make several key theoretical contributions. Most centrally, we importantly qualify existing perspectives by highlighting situations in which anti-egalitarians may express just as much or more empathy for others than egalitarians, and provide insight into the underlying reasons. In doing so, our results suggest that egalitarians and anti-egalitarians' empathy is not simply a fixed function of their personality, but rather, flexibly allocated depending on their motivations (Cameron & Ravier, 2017; Zaki, 2014). These findings make related contributions to the harm perception and morality literatures, which generally view support for equality as a positive contributor to moral behavior and the moral treatment of individuals (Graham et al., 2013; Turiel, 1983). Our results demonstrate that under certain

conditions, equality motives can be associated with *dampen* harm perception (at least towards specific targets) leading individuals to withhold concern for certain others.¹⁴

We also distinguished our findings from alternative theoretical perspectives, further highlighting unique contributions of our work in the process. In particular, our work both speaks to and extends research on ideological conflict (Brandt et al., 2014; Skitka, Mullen, Griffin, Hutchinson, & Chamberlin, 2002). This important work finds that individuals across the political spectrum (i.e., liberals and conservatives) express similar levels of prejudice towards groups who oppose their ideological value (e.g., guns-rights groups for liberals; pro-abortion groups for conservatives). One recent study found little evidence for the importance of target-group status to these effects (Brandt, 2017). Although our work shares this research's attention to target-specific features as moderators of the link between ideological beliefs and negative attitudes, we focus here specifically on hierarchy-related motives as a predictor (rather than liberalism/conservatism) and on empathy (rather than prejudice) as an outcome. Consistent with ideological conflict research, we do find evidence in Studies 4-6 in line with the idea that individuals high and low in (anti-)egalitarianism express differential levels of empathy towards advantaged and disadvantaged targets in part as a result of perceiving value conflict. Nevertheless, beyond value conflict, our work highlights a new and important mechanism. Specifically, we show that those high and low in egalitarianism differ in their judgments about the *degree* of harm experienced by the same target depending on whether that target is socially advantaged or disadvantaged, with perceived harm predicting their differential levels of empathy even after controlling for perceived value conflict. Our internal meta-analysis also suggested that the moderated link between (anti-)egalitarianism and empathy as a function of target-rank is *specific* to anti-

¹⁴ We re-iterate that this is a descriptive claim rather than a normative one. That is, we do not seek here to make claims about the relative *appropriateness* of perceiving high levels of harm to advantaged or disadvantaged targets.

egalitarianism: although political conservatism did interact with target-rank to predict empathy when considered in isolation, it became non-significant when (anti-)egalitarianism and its interaction with target-rank were entered into the model. Most importantly, the (anti-)egalitarianism x target-rank interaction was highly robust even after controlling for conservatism (and its interaction with target-rank).¹⁵

It will be interesting for future work to further consider the similarities and differences between the existing work on ideological conflict and prejudice and our own work on (anti-)egalitarianism and empathy as a function of target-rank. It may be, for example, that target-rank mattered more in our work than in Brandt's (2017) work on ideological conflict specifically because (anti-)egalitarianism is highly sensitive to status considerations (e.g., Ho et al., 2013; Kteily et al., 2014). It would also be important to consider differences between empathy and prejudice, and between attitudes about an entire outgroup as compared to expressions of empathy towards a given target individual. For example, it may be that patterns differ when expressing dislike of an ideologically-opposed target group in the abstract than when responding by withholding empathy to an identifiable victim harmed by an injurious act. If social egalitarians are more likely to express some empathy for identifiable victims from groups they dislike, this could help explain our finding of asymmetric slopes for the link between (anti-)egalitarianism and empathy in the advantaged versus disadvantaged conditions (a pattern we discuss further

¹⁵ We also considered whether belief in a just world (BJW)— associated with SDO (e.g., Bizer, Hart, & Jekogian, 2012)—could account for our results. For example, it is possible that individuals high in BJW would be especially likely to express lower empathy for harms to disadvantaged (*vs.* advantaged) targets, because they are more likely to believe that disadvantaged targets deserve their place in society (and therefore don't deserve empathy for harms that befall them). In a pre-registered study, we found that the (anti-)egalitarianism x target-rank interaction remained significant ($p < .001$) while accounting for the main effect of BJW and its interaction with target-rank. For more study details see the supplemental online materials, Appendix C.

below), in contrast to the equal and opposite (i.e., symmetrical) patterns for prejudice typically observed in the research on ideological conflict.

Beyond ideological conflict, we also distinguished our findings from research on parochial empathy rooted in group membership. Given theories of group-interested behavior (Blumer, 1958; Bobo, 1993), ingroup favoritism (Tajfel & Turner, 1979), and, especially, prior work finding that people show greater empathy to ingroups versus outgroups (Cikara, Bruneau, Van Bavel, & Saxe, 2014; Cikara, Bruneau, & Saxe, 2011), individuals' membership in advantaged or disadvantaged groups might matter more in predicting their differential empathy toward advantaged and disadvantaged targets than their levels of (anti-)egalitarianism. However, the results of our meta-analysis did not support this account. We found little evidence that perceivers membership in advantaged (e.g., whites, men, high SES) versus disadvantaged groups (non-whites, women, low SES) interacted with the target-rank to predict empathy. Most importantly, not only did the (anti-)egalitarianism x target-rank interaction we posit remain significant when controlling for group membership, it was significant (and to a statistically equivalent extent) among *each* of men and women, whites and non-whites, and high and low social class individuals. This finding aligns with recent work showing that equality motives operate similarly across membership in advantaged and disadvantaged groups (e.g., Kteily et al., 2017), and suggests that beliefs about the desirability of hierarchy are more important (or at least more proximal) in predicting differential empathy towards advantaged versus disadvantaged targets than is oneself belonging to an advantaged versus disadvantaged group. Importantly, this is not to diminish the well-established relevance of parochial considerations in expressions of empathy (e.g., Bloom, 2017; Cikara et al., 2011, 2014): When targets do not differ in rank—or when outgroup membership is a more salient basis for encoding the target than their relative

rank— we would expect ingroup/outgroup psychology to play a bigger role than observed here (even when anti-egalitarianism is taken into account).

Our work is also notable in the contributions it makes in advancing work by social dominance theorists showing a link between levels of anti-egalitarianism and social policy attitudes (e.g., Kteily et al., 2012; Sidanius & Pratto, 1999). Indeed, Studies 6 and 7 demonstrated that levels of perceived harm to— and empathy for— advantaged and disadvantaged targets negatively affected by social policies mediate perceivers' support or opposition to those policies. For example, egalitarians felt greater empathy than anti-egalitarians for individuals historically denied access to educational opportunities and were thereby more likely to oppose a hierarchy-maintaining policy proposal to cancel affirmative action at a university. Conversely, anti-egalitarians, who felt greater empathy than egalitarians, for individuals who historically *had* privileged access to educational opportunities were more likely to oppose a structurally-identical hierarchy-attenuating policy that proposed to cancel legacy admissions. Thus, our research proposes differential empathy as another possible route— in addition to other established factors such as the endorsement of ideologies such as meritocracy or the protestant work ethic (e.g., Cotterill et al., 2014; Pratto et al., 2006), or motivated perceptions of the degree of inequality in society (Kahn et al., 2009; Kteily et al., 2017)— by which social dominance motives could come to influence support for hierarchy-enhancing or attenuating social policy.

Future Directions & Limitations

In addition to the advances it makes, our work also raises new and intriguing questions worth investigating in more detail. Indeed, further decomposing the interaction we observe reveals a nuanced pattern. First, the strongest version of the motivated perspective would hold

not only (a) that target-rank significantly moderates the link between (anti-)egalitarianism and empathy or even (b) that it causes the direction of the relationship to reverse (both of which our results clearly support); but (c) further that the (positive) link between anti-egalitarianism and empathy for advantaged targets would be opposite in direction *and* equal in magnitude to the (negative) link between anti-egalitarianism and empathy for disadvantaged targets. Whereas we find clear evidence for the first two stipulations, we do not observe support for the third element central to the strongest version of the motivated perspective. Indeed, our internal meta-analysis confirmed that the link between anti-egalitarianism and lower empathy in the disadvantaged condition was significantly stronger across studies than the link between anti-egalitarianism and more empathy in the advantaged condition.

This overall interaction pattern can be interpreted in several (non-exclusive) ways. One interpretation for the relative weakness of the positive slope between anti-egalitarianism and empathy in the advantaged target condition could center on a relatively high empathy *floor* among egalitarians. That is, if egalitarians are reluctant to completely withhold empathy from others (even those they are otherwise not generally as inclined to empathize with, like advantaged targets), this would act against the likelihood of a strong positive slope between anti-egalitarianism and empathy in the advantaged condition. Another interpretation could center on a relatively low *ceiling* among anti-egalitarians. That is, even if anti-egalitarians do express higher empathy than egalitarians for advantaged targets, there could be an ‘upper limit’ on the levels of empathy they are willing or able to express for a given harm— a limit potentially lower than the comparable ceiling among egalitarians considering harm to disadvantaged targets.

Although this question needs to be investigated further, our results appear to be more consistent with the idea that anti-egalitarians have a ‘low ceiling’ than the idea that egalitarians

have a ‘high floor’ (see Table S4 and Figure S1). For example, in Study 8 (in which “objective” anti-egalitarians were well-represented in the sample) egalitarians exhibited quite low levels of empathy towards the advantaged target ($M_{\text{benefits cuts}} = 2.26$, $M_{\text{college admission}} = 2.60$), indicating that they are in fact willing to withhold empathy from certain targets to a substantial degree. At the same time, the ‘ceiling’ among egalitarians for disadvantaged targets ($M_{\text{benefits cuts}} = 5.50$, $M_{\text{college admissions}} = 4.78$) appeared to be higher than the comparable ceiling among anti-egalitarians for advantaged targets ($M_{\text{benefits cuts}} = 2.79$, $M_{\text{college admission}} = 3.23$). We found that this relatively low ‘ceiling’ level of empathy generally persisted even at higher levels of anti-egalitarianism: those whose anti-egalitarianism scores were 5 or higher ($M_{\text{benefits cuts}} = 2.50$, $M_{\text{college admission}} = 3.25$; n 's = 35 and 39, respectively).

The fact that we observed this pattern not only among relative anti-egalitarians but also among a sample of people ‘objectively’ high in anti-egalitarianism speaks against one more mundane explanation— namely, that we observe a relatively low ceiling in empathy among anti-egalitarians simply because those +1SD in anti-egalitarianism in our samples are still around the midpoint on the SDO scale and are thus merely ‘moderate egalitarians’ rather than ‘actually’ anti-egalitarian. Still, before definitively drawing conclusions about egalitarians’ and anti-egalitarians’ willingness or ability to express empathy, it would be important to use still larger samples of ‘objective’ anti-egalitarians, and in particular, to ensure better representation of individuals at the very highest levels of SDO.¹⁶

¹⁶ We note that, although those one standard deviation above the mean in Study 8 were ‘objectively’ anti-egalitarian (in so far as they were over the SDO scale midpoint; $M = 5.01$), they were still less far above the midpoint than the objective egalitarians (i.e., those one standard deviation below the mean; $M = 1.91$) were below it. It would be interesting to test in future work our effects in a sample where SDO is normally distributed around a mean of 4 and whereby those higher and lower in SDO are precisely equidistant from the midpoint.

It will also be important for future research to further investigate causal order. We theorized that individuals' level of (anti-)egalitarianism would predict their perception of harm to a given target (depending on that target's rank) and subsequently predict their level of empathy. We posited this causal order based on the idea that one important determinant of empathy extended to someone for a given event is the perception that the target was harmed in the first place (Bandura, 1999; Latane & Darley, 1970). We similarly posited, in Study 6, that feeling empathic for a target affected by a proposed policy would predict levels of support or opposition to that policy. At the same time, we acknowledge that our data are correlational, and although the models we proposed reveal significant indirect effects in line with our reasoning, we cannot definitively rule out other causal orders (see also Fiedler, Schott, & Meiser, 2011; Thoemmes, 2015). Indeed, in some cases, it is possible that there would be reciprocal causal relationships. For example, individuals who oppose a given policy might engage in self-regulatory strategies that lead them to withhold empathy when hearing a story about someone negatively affected by it such as deliberately shifting their attention away from the target (Zaki, 2014). Disentangling the precise causal pathways underlying our effects is an important direction for future research.

Future research could also consider an even broader range of vignettes than we considered here before making firm conclusions about upper or lower limits in empathy among egalitarians and anti-egalitarians. Indeed, it may be that different types of scenarios will evoke even higher levels of empathy among anti-egalitarians towards advantaged targets than the ones we considered here. Examining the effect of target-advantage condition at levels of (anti-)egalitarianism (rather than the effect of anti-egalitarianism across the target-advantage conditions) in our studies, we observed that whereas egalitarians exhibited very high levels of empathy for disadvantaged targets but low levels of empathy for advantaged targets, anti-

egalitarians showed more moderate (and comparable) levels of empathy for both targets (see Table S5).¹⁷

Although they still showed higher levels of empathy for advantaged targets than egalitarians, the fact that anti-egalitarians did not show clearly higher levels of empathy for the advantaged than the disadvantaged target is worth considering (see Table S5). For one, this highlights the fact that, even among avowed anti-egalitarians, there may be certain contexts in which reality constraints limit the ability to empathize *more* with those at the top than those at the bottom. That is, although egalitarians might be particularly likely to focus on the resources (e.g., financial resources, legal resources, social resources, etc.) that could help to buffer individuals belonging to advantaged groups from injurious harm, that reality is likely difficult to entirely discount for anti-egalitarians, too. In addition to their buffering effects, the resources held by those at the top may be seen as affording those people greater agency, freedom, and independence, attributes which may reduce the ability among both egalitarians and anti-egalitarians to perceive those at the top as moral patients that can suffer and be harmed (Gray & Wegner, 2009; Gray et al., 2012) and thereby constrain anti-egalitarians' peak levels of empathy for the advantaged. At the same time, however, and although we considered a wide range of contexts, there may be certain scenarios especially likely to bring out empathy towards advantaged targets in anti-egalitarians. For example, most of the harms we considered were not particularly severe in nature. It would be interesting to consider, for example, whether anti-egalitarians would express very high levels of empathy to a CEO if they learned that he had been

¹⁷ Interestingly, this could be interpreted either as anti-egalitarians (vs. egalitarians) being 'rigid' or 'insensitive to context' in their allocation of empathy to others, or as anti-egalitarians being 'moderate' and 'even-handed' in the empathy they extend to all. Seeing as these adjectives reflect value judgments and interpretations more than they do empirical facts, we refrain from applying them here.

diagnosed with cancer or that his son had been killed (and to see how this would compare to levels they—and egalitarians— would express towards a janitor facing the same situations).¹⁸

On a separate but related note, it is worth recognizing that the transgressions we considered were primarily based on harm and fairness violations (e.g., a home robbery, an affirmative action policy). Future work could sample the broader range of transgressions proposed by Moral Foundations Theory (Graham et al., 2013; Graham, Haidt, & Nosek, 2009), such as loyalty, authority, and purity violations. For instance, future work could examine empathy for an advantaged versus disadvantaged target that is the victim of an extramarital affair (loyalty violation) or who is publicly disrespected by their child (authority violation).

Future work should also test potential strategic roots of the link between (anti-)egalitarianism and the empathy extended or withheld. One reason, for example, for the relative lack of empathy egalitarians show to advantaged targets may be because the process of fulfilling their motive of creating equality is likely to require imposing costs on those at the top, which might be impeded by feeling strong empathy for advantaged targets. It would be interesting to test this account by, for example, examining whether egalitarians would continue to express less empathy for the advantaged targets of an injurious policy *after* irreversible steps were taken towards its implementation. If egalitarians' levels of empathy for advantaged targets increase after they are assured of changes towards equality, it would provide strong evidence in favor of the idea that dampened empathy fulfills a strategic function in service of egalitarians' goals.

Finally, although we made an effort to test and increase the generalizability of our findings, future work could examine our hypotheses using still more diverse samples. Here, we

¹⁸ Interestingly, if future work confirms that anti-egalitarians show more empathy than egalitarians for advantaged targets but still tend to exhibit lower 'peak' levels of empathy than egalitarians, this would be compatible with an integrated version of the dispositional and motivated perspectives.

sampled across different locations – British adults (Study 2), community members in downtown Chicago (Study 7), and American adults (all other studies) – and we tested in our internal meta-analysis whether important demographic variables (i.e., race, gender, and social class) moderated our predictions. Future work should consider recruiting participants from non-Western cultures or further targeting specific non-White minority groups.

Conclusion

The current research found that, contrary to the prevailing view of egalitarians as dispositionally more empathic, (anti-)egalitarianism interacts with target-specific features to predict when empathy is expressed *and* withheld from others. In part because of the different levels of harm they perceive, egalitarians express more empathy than anti-egalitarians for those at the bottom of the social hierarchy, but *less* empathy than anti-egalitarians for those at the top. This pattern of empathy for others helps shape intergroup dynamics by affecting attitudinal and behavioral support toward certain individuals in the hierarchy and toward hierarchy-enhancing or hierarchy-attenuating policies.

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Appendix A: Vignettes for Studies 1-8

Study 1: Four Vignettes

Benefit Cuts: (also used in Studies 4 and 8)

John is a *floor worker [an executive]* at a manufacturing company. John's annual salary is \$41,000 [*\$410,000*]. In order to cut costs, John's company recently reduced John's worker benefits. His annual year-end bonus was cut in half, his vacation time was reduced by 20%, and his healthcare package now provides fewer subsidies and requires higher co-pays. The reductions will have a tangible impact on John's spending power. John stated, "My family and I have been saving our money for a nice family vacation which we've really been looking forward to for a while... that may not happen now." The company considered reducing worker benefits for *executives [floor workers]* in the company but determined it would not be necessary.

Bad investment:

On the advice of a real estate investment manager, who told him it was a sure bet, Robert invested in the purchase of a \$225,000 unit in an apartment building in the Lower District of Montgomery, Michigan. The small town of Montgomery had experienced significant growth on account of a large pharmaceutical company, which opened a major plant there seven years ago, and Robert hoped that the town's trajectory would continue upwards. Robert works as an *electrician [senior executive in corporate finance]*, and purchased the investment home with *savings he had spent the last 20 years accumulating [his winter bonus check he received a few months ago]*. Robert had great hopes that this property's value would flourish and that he would be able to save the money he made from its eventual sale. One year after he made his purchase, however, the plant moved to Davenport, Iowa, which had offered the plant significant tax relief to relocate. Without the stimulus of the plant and its large workforce, confidence in Montgomery's economic future declined significantly, and the value of Robert's investment quickly plummeted. As a result, Robert has decided he has no option but to sell his investment now, even though he stands to lose a significant amount of his money. It was later discovered that the real estate investment manager's wife was on the board of the pharmaceutical, and he had insider knowledge of their secret plans to move the plant. Knowing that the value of property in the area would drop soon, he quickly sold the remaining properties in his Montgomery portfolio, convincing Robert and seven other investors that buying was a solid decision.

Lawsuit:

Last month police officer Josh Ryan investigated a call about a Black male, DeShaun Williams, carrying a weapon in a public parking lot. Soon after arriving, officer Ryan noticed Williams, a Black teenager, walking around with a baseball bat. Williams, who appeared intoxicated in CCTV footage, swore at officer Ryan, telling him, "Leave me the [expletive] alone. I'm not doing anything wrong". When the teenager advanced in officer Ryan's direction, still carrying the bat, officer Ryan opened fire, killing the teenager. The teenager's family has filed a wrongful death lawsuit against officer Ryan, claiming that the officer acted improperly and disproportionately. Ryan has countersued, citing "extreme emotional trauma" as a result of the event. Speaking to the press, *Williams' mother said "DeShaun was a good kid. I raised that boy for 16 years, and now, because a police officer decided to shoot instead of talk, we've lost him forever. Nothing can describe the pain I'm feeling today."* [Ryan's wife said that the ordeal had taken a severe toll on the officer. "It's been really hard on Josh. He was just doing his job, a job that puts him in danger every single day. It's not his fault that the kid didn't listen. And now he has to defend his name and his reputation in court? Nothing can describe the stress he's feeling today."]

Robbery:

Last Friday a burglar broke into **[one of]** the home[s] of John Thomas, an *elementary school teacher [a senior executive in corporate finance]* in Long Island, New York. It is reported that a number of items were robbed from the home, a \$75,000 house where Thomas lives with his family [*\$2.5 million summer mansion in Miami that Thomas and his family use seasonally – one of the 5 houses Thomas owns in cities across the U.S. including Miami, Los Angeles, and the Hamptons*]. Among the valuables stolen, were a television, a laptop computer, and some jewelry. John commented, "Fortunately my family wasn't there at the time and everyone is safe, but this incident will set us back financially."

Study 2: Benefit Cuts (U.K.)

Ben Cooper is a receptionist [an executive president] at a finance company in London. Ben's annual compensation is £19,000 [£450,000]. In order to cut costs, Ben's company recently reduced Ben's compensation and benefits. Specifically, his annual year-end bonus was reduced by half and his vacation time was reduced by 25%. The reductions will have a tangible impact on Ben's spending power. Ben stated, "My family and I have been saving our money for a nice family vacation which we've really been looking forward to for a while... that may not happen now."

Study 3: Modified Benefit Cuts

John is a floor worker [an executive] at a manufacturing company. John's annual salary is \$41,000 [\$410,000]. In order to cut costs, John's company is planning to reduce John's worker benefits, which will include cuts to his year-end bonus, vacation time, and healthcare package.

Study 5: Two Vignettes

Missed Birthday:

John is an executive [a floor worker] at a manufacturing company. John's annual salary is \$410,000 [\$41,000]. Last Friday John's flight was cancelled and he was forced to stay overnight at the airport and take a flight the next day. Unfortunately the next day was his son's fifth birthday. By the time John arrived home, after his 14-hour flight, his son was asleep and John had completely missed his son's birthday party.

Damaged Photo:

John is an executive [a floor worker] at a manufacturing company. John's annual salary is \$410,000 [\$41,000]. Last week John took an old photograph of his late great grandfather to a photo shop to have it restored – the only photo John has of his great grandfather. When he returned to pick up the photograph the store owner told him there had been an accident and the photo was damaged beyond repair.

Study 6: College Admissions (also used in Study 8)

Advantaged target condition:

John is a junior in high school. Next year John will graduate high school and attend college. He is particularly interested in attending a prestigious university near his hometown. His grandfather, father, and older brother are alumni of this university.

This university is known for practicing legacy admission when deciding which applicants to accept. Legacy admission policies seek out and prioritize applicants with alumni backgrounds. That is, applicants with one or more family members who attended the school previously. However, after being pressured by opponents of legacy admission, the university has announced that, starting next year, it will abolish its legacy admissions policy. John remarked, "I'm very disappointed. Everyone in my family has gone here going back several generations, and I've grown up excited to go here, too. Now, I'm not so sure that's going to happen".

Disadvantaged target condition:

John is a junior in high school. Next year John will graduate high school and attend college. He is particularly interested in attending a prestigious university near his hometown. John would be the first member of his family to attend college.

This university is known for practicing affirmative action when deciding which applicants to accept. Affirmative action policies seek out and prioritize applicants from impoverished backgrounds. That is, applicants with one or more family members from historically disadvantaged social groups. However, after being pressured by opponents of affirmative action, the university has announced that, starting next year, it will abolish its affirmative action policy. John remarked, "I'm very disappointed. Members of my family have been denied educational opportunities going back several generations and I've grown up excited to attend college here. Now, I'm not so sure that's going to happen".

Study 7: Illinois Benefits Policy

Illinois is currently facing a significant budget deficit. The state faces a \$9 billion annual budget deficit that is currently expected to grow to \$14 billion by FY 2026.

The state government has been considering different proposals to reduce the deficit. Most of these proposals involve cutting services or benefits. Several different proposals are currently under consideration and the state is expected to adopt some of the current proposals, but not others.

The median yearly salary of an *Illinois school teacher with a Bachelor's degree* [a member of the *Illinois state government leadership*] is currently around \$36,927 [\$129,245].

House Bill 372, currently under consideration, involves significantly scaling back benefits programs for *school teachers* [members of the *Illinois state government leadership*]. Under the proposed bill, *school teachers* [members of the *Illinois state government leadership*] will face the following:

- A reduction in their cost of living adjustment (COLA) benefits
- Any future salary increases will not be included in their pension benefit calculations
- A reduction in healthcare subsidies
- A limit on matched 401k retirement plan contributions to a maximum of 1% annual salary

Proponents of this bill have argued that it is necessary to balance the state's budget.

Representatives of [the members of] the school teachers [*Illinois state government leadership*] have argued that these cuts will have a significant impact on their memberships' quality of life and long-term security. One representative said, "Bill 372 is unfair because it only impacts school teachers [*those in high-ranking leadership positions*] and doesn't consider cuts for *higher-salary groups, like high-ranking government leaders* [*other groups of state employees*], that could help balance the books."

Appendix B: Manipulation check survey results for Studies 1, 2, and 7

Studies 1, 2, and 7 did not include manipulation checks within the main study (all remaining studies did). We randomly assigned 192 Mturk workers (97 males, 95 females; $M_{age} = 37.10$, $SD = 12.43$) to read either all the advantaged target condition vignettes or all the disadvantaged target condition vignettes from these studies. After each vignette participants answered the question, “Where do you think people like [target] rank in the social hierarchy?” (1 = the very bottom of society, 7 = the very top of society). We report the results of each vignette in their appropriate study. As in all studies, for Study 1, the targets in the advantaged condition were rated as significantly higher in rank than the targets in the disadvantaged condition: *benefits cuts* ($M_{advantaged} = 5.45$, $SD = 1.24$ vs. $M_{disadvantaged} = 3.55$, $SD = .94$; $t(190) = 11.96$, $p < .001$, $d = 1.73$, $CI_{mean\ diff, 95\%}[-2.22, -1.59]$); *bad investment* ($M = 5.18$, $SD = 1.15$ vs. $M = 4.42$, $SD = 1.15$; $t(190) = 4.59$, $p < .001$, $d = .66$, $CI_{mean\ diff, 95\%}[-1.09, -.43]$); *robbery* ($M = 6.24$, $SD = 1.19$ vs. $M = 3.80$, $SD = 1.14$; $t(190) = 14.56$, $p < .001$, $d = 2.10$, $CI_{mean\ diff, 95\%}[-2.78, -2.12]$); and *lawsuit* ($M = 4.03$, $SD = 1.12$ vs. $M = 2.38$, $SD = 1.15$; $t(190) = 10.09$, $p < .001$, $d = 1.46$, $CI_{mean\ diff, 95\%}[-1.98, -1.33]$).

Appendix C: Pre-registered replication study

This study had two goals. The first was to conduct a pre-registered test of our hypotheses. The study is pre-registered on AsPredicted.org and the pre-registration document can be accessed at <http://aspredicted.org/blind.php?x=424uf3>. The second goal was to measure belief in a just world (BJW) to test its effects on empathy (as moderated by target-rank) relative to (anti-)egalitarianism and to test whether we find effects of (anti-)egalitarianism above and beyond BJW. From one theoretical perspective, one might expect that people high in BJW would simply feel less empathy than others for all targets (irrespective of these targets' rank) because they might be more likely than others to feel that harm was deserved. If this were the case, then would expect a main effect of BJW on empathy but no interaction with target-rank. From another perspective, it is possible that individuals high in BJW would be especially likely than others to express lower empathy for harms to disadvantaged (*vs.* advantaged) targets, because they are more likely to believe that disadvantaged targets deserve their place in society (and perhaps therefore also do not deserve empathy for harms that befall them).

To test these predictions we recruited 453 participants from Mturk and excluded one that failed the attention check, leaving 452 for analysis. Participants were 77% White, 7% Asian, 9% Black, 4% Indian, 2% mixed race, and 1% other (224 males, 226 females, 1 other, $M_{\text{age}} = 34.79$ years, $SD = 10.14$).

First participants completed the SDO-7 scale ($\alpha = .95$). Next they read the college admissions vignette used in Studies 7 and 8, which utilized the same target-rank manipulation as in those studies. Then participants reported empathy for the target using the same scale as in those previous studies ($\alpha = .96$).

The target-rank manipulation check confirmed that the advantaged target ($M = 5.13$, $SD = 1.59$) was seen as occupying a higher social rank than the disadvantaged target ($M = 2.63$, $SD = 1.36$), $t(452) = 18.03$, $p < .001$, $CI_{\text{mean diff, 95\%}}[-2.78, -2.23]$. Next we tested the effect of SDO, target-rank condition, BJW, and all higher order interactions on empathy. The SDO x target-rank interaction remained significant, $b = .75$, $SE = .13$, $t = 5.92$, $p < .001$, $CI_{95\%} [.50, 1.00]$. SDO again significantly predicted lower empathy for the low ranking, $b = -.61$, $SE = .09$, $t = -6.96$, $p < .001$, $CI_{95\%} [-.78, -.43]$, but not the high ranking target, $b = .14$, $SE = .09$, $t = 1.56$, $p = .120$, $CI_{95\%} [-.04, .32]$. The BJW x target-rank interaction was significant, $b = .43$, $SE = .14$, $t = 3.10$, $p = .002$, $CI_{95\%} [.16, .70]$ and followed a similar pattern as SDO. BJW non-significantly predicted lower empathy for the low ranking target, $b = -.04$, $SE = .10$, $t = -.41$, $p = .682$, $CI_{95\%} [-.23, .15]$ and significantly predicted higher empathy for the high ranking target, $b = .39$, $SE = .10$, $t = 3.97$, $p < .001$, $CI_{95\%} [.20, .58]$.

Table S1. Power analyses for the (anti-)egalitarianism x target-rank interactions across studies.

<u>Study</u>	<u>N</u>	<u>DV</u>	<u>Smallest observable effect at 80% power</u>		<u>Observed effect</u>	
			<i>f</i>	<i>d</i>	<i>f</i>	<i>d</i>
1	670	Empathy	.110	.220	.304	.608
2	195	Empathy	.202	.404	.158	.316
3	372	Harm Threshold	.148	.296	.129	.258
4	258	Empathy	.176	.352	.318	.636
5	525	Empathy	.126	.252	.160	.320
6	359	Empathy	.148	.296	.427	.854
6	359	Opposition	.148	.296	.512	1.02
7	287	Moral Outrage	.167	.334	.285	.570
7	287	Opposition	.167	.334	.390	.780
7	287	Petition Signing	.167	.334	.249	.498
8	343	Empathy	.155	.310	.345	.690
8	392	Empathy	.145	.290	.505	1.01
Meta-analysis	2,162	Empathy	.063	.126	.298	.596

Note: Only the analyses with empathy as the DV were included in the average and the median observed effect size analysis reported in Study 1.

Table S2. Correlations between study variables across all studies; in Study 7 social class and conservatism were not collected; Study 8 correlations are with only the 155 new participants; the advantaged target condition was coded (+1) and the disadvantaged target condition was coded (-1). Gender was coded (+1) for Male, (0) for Female (two participants who indicated ‘other’ were excluded). Race was coded (+1) for White and (0) for Non-White; [†] $p \leq .10$, * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

	1	2	3	4	5	6	7	8	9	10
<u>Study 1</u>										
1. AE										
2. social class	.08*									
3. gender	.06	-.10*								
4. race	.05	-.06	-.03							
5. conservatism	.57***	.06	.00	.07 [†]						
6. empathy	-.10**	.12**	-.16***	.04	-.00					
<u>Study 2</u>										
1. AE										
2. social class	.12 [†]									
3. gender	.09	.11								
4. race	-.01	-.07	-.06							
5. conservatism	.50***	.27***	.03	.02						
6. empathy	-.05	.04	-.08	.01	.02					
<u>Study 3</u>										
1. AE										
2. social class	.17***									
3. gender	.13**	-.01								
4. race	.13*	.11*	.02							
5. conservatism	.64***	.11*	.02	.08						
6. harm threshold	-.12*	-.15**	.04	.02	-.12*					
<u>Study 4</u>										
1. AE										
2. social class	.16*									
3. gender	.14*	.01								
4. race	.03	-.03	-.01							
5. conservatism	.67***	.09	.12 [†]	.00						
6. empathy	-.14*	.03	-.04	.02	-.11 [†]					
7. perceived harm	-.08	-.02	.11 [†]	-.10	-.01	.76***				
8. deservingness	.08	.18**	.06	-.09	.04	-.43***	-.33			
9. values conflict	.01	.01	-.10	-.01	-.03	-.59***	-.50***	.52***		
<u>Study 5</u>										
1. AE										
2. social class	.16***									
3. gender	.17***	-.01								
4. race	.11*	.02	-.03							
5. conservatism	.60***	.05	.08 [†]	.12**						
6. empathy	-.12**	.02	-.21***	.01	.00					
7. perceived harm	-.06	-.05	-.02	-.14**	-.03	.50***				
8. deservingness	.19***	-.06	.20***	-.13**	.07 [†]	-.23***	-.05			

9. values conflict	-.09*	-.14**	.05	-.08 [†]	-.15***	-.24***	-.07 [†]	.26***
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Study 6

1. AE								
2. social class	.14**							
3. gender	.11*	.09						
4. race	.08	.08	.00					
5. conservatism	.54***	.06	-.03	.13*				
6. empathy	-.11*	-.07	-.13*	-.11*	-.14**			
7. perceived harm	-.05	-.08	-.03	-.16	-.05	.59***		
8. deservingness	-.03	-.01	.06	.02	-.05	-.42***	-.24***	
9. values conflict	.02	-.02	.05	.01	.07	-.59***	-.38***	.47***
10. opposition	-.02	-.08	-.08	-.11	-.05	.71***	.56***	-.58***
								-.60***

Study 7

1. AE								
2. social class								
3. gender	.11 [‡]							
4. race	.06		.01					
5. conservatism								
6. empathy (i.e., moral outrage)								
7. perceived harm								
8. deservingness								
9. values conflict								
10. opposition	-.16**		-.02	-.06				
11. petition sign	-.18**		.11 [†]	-.20***				.52***

Study 8 (benefits)

1. AE								
2. social class	.11							
3. gender	-.04	-.03						
4. race	.03	.01	-.04					
5. conservatism	.28***	-.07	-.09	.14 [‡]				
6. empathy	-.12	.14 [‡]	-.17*	.07	.08			

Study 8 (college)

1. AE								
2. social class	.11							
3. gender	-.04	-.03						
4. race	.03	.01	-.04					
5. conservatism	.28***	-.07	-.09	.14 [‡]				
6. empathy	-.20*	-.11	-.08	-.10	-.05			

Table S3. Standardized betas of the effect of SDO, target-rank, and their interaction on empathy by vignette, Study 1.

	Composite	Benefit Cut	Bad Investment	Lawsuit	Robbery
SDO	-.10**	.01	-.26***	-.11 [†]	-.06
Target-Rank	-.49***	-.74***	-.31***	-.29***	-.63***
SDO*Target-Rank	.23***	.19***	.16*	.44***	.15*
Vignette					
Bad Investment	.26***				
Lawsuit	.06				
Robbery	.09*				
Vignette*Target-Rank					
Bad Investment	.06				
Lawsuit	.22***				
Robbery	.21***				
SDO Simple Slopes:					
Disadvantaged Target	-.33***	-.19**	-.41***	-.55***	-.21*
Advantaged Target	.14**	.20**	-.10	.33**	.09

Note: The composite analysis controlled for vignette and all its higher order interactions. Analyses by vignette did not include any control variables. [†] $p \leq .10$, * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Table S4. Comparison of the effect of (anti-)egalitarianism on empathy in the disadvantaged and advantaged target conditions (i.e., magnitude of simple slopes analysis), across studies.

Study	Vignette	Disadvantaged Target		Advantaged Target		<i>b</i> diff
		<i>b</i>	<i>CI</i> _{95%}	<i>b</i>	<i>CI</i> _{95%}	
1	Composite	-.51	-.63, -.38	-.22	-.36, -.09	-.29***
2	Benefits cuts (U.K.)	-.32	-.54, -.09	-.05	-.30, .19	-.27*
4	Benefits cuts	-.43	-.61, -.25	-.20	-.37, -.04	-.23*
5	Composite	-.25	-.37, -.14	-.06	-.18, .06	-.19*
6	College admissions	-.78	-.97, -.59	-.35	-.55, -.15	-.43***
7	Illinois Benefits Policy	-.60	-.85, -.34	-.28	-.55, -.04	-.32*
8	Benefits cut	-.51	-.66, -.36	-.17	-.32, -.03	-.34***
8	College admission	-.80	-.96, -.67	-.19	-.34, -.06	-.61***
	Meta-analysis	-.49	-.61, -.37	-.18	-.30, -.06	-.31***

Note: Reported betas are unstandardized. (Anti-)egalitarianism in the advantaged target condition was reverse-coded to align the direction of the simple slope for direct comparison with the disadvantaged target condition. A negative beta coefficient for the disadvantaged target condition indicates that egalitarians displayed more empathy than anti-egalitarians, whereas— given the recoding— a negative beta coefficient for the advantaged target condition indicates that anti-egalitarians displayed more empathy than egalitarians. A negative difference score indicates that the simple effect of (anti-)egalitarianism was larger in the disadvantaged target compared to the advantaged target condition. Study 7 analysis is for the moral outrage DV. † $p \leq .10$, * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Table S5. The simple main effects of target-rank at (+1)*SD* and (-1)*SD* of the mean of (anti-)egalitarianism on empathy, across studies.

Study	Vignette	(-1) SD AE		(+1) SD AE	
		<i>b</i>	<i>CI</i> _{95%}	<i>b</i>	<i>CI</i> _{95%}
1	Composite	-1.40***	-1.56, -1.24	-.50***	-.66, -.34
2	Benefits cuts (U.K.)	-1.48***	-1.73, -1.23	-1.08***	-1.33, -.83
4	Benefits cuts	-1.73***	-2.00, -1.46	-.75***	-1.02, -.48
5	Composite	-.58***	-.74, -.42	-.14 [†]	-.30, .02
6	College admissions	-1.44***	-1.67, -1.21	-.12	-.35, .11
7	Illinois Benefits Policy	-1.49***	-1.76, -1.22	-.56***	-.83, -.29
8	Benefits cut	-1.61***	-1.84, -1.39	-.58***	-.81, -.36
8	College admission	-1.13***	-1.35, -.92	.37***	.16, .58
	Meta-analysis	-1.29***	-1.44, -1.15	-.32***	-.42, -.22

Note: Target-rank is coded (-1) for the disadvantaged target and (1) for the advantaged target. A negative beta coefficient indicates that the disadvantaged target received more empathy than the advantaged target. [†] $p \leq .10$, * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Table S6. Standardized betas of the effect of anti-egalitarianism (AE), target-rank, and their interaction on empathy by vignette, Study 5. The advantaged target condition was coded (+1) and the disadvantaged target condition was coded (-1). Anti-egalitarianism was mean centered.
[†] $p \leq .10$, * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

	Missed Birthday	Damaged Photo
AE	-.20***	.00
Target-Rank	-.23***	-.32***
AE*Target-Rank	.14**	.17**
AE Simple Slopes:		
Disadvantaged Target	-.34***	-.16*
Advantaged Target	-.06	.18*

Table S7. Descriptives for social dominance orientation (SDO), Hatemi's (anti-)egalitarianism measure (HT), and the (anti-)egalitarianism composite across studies.

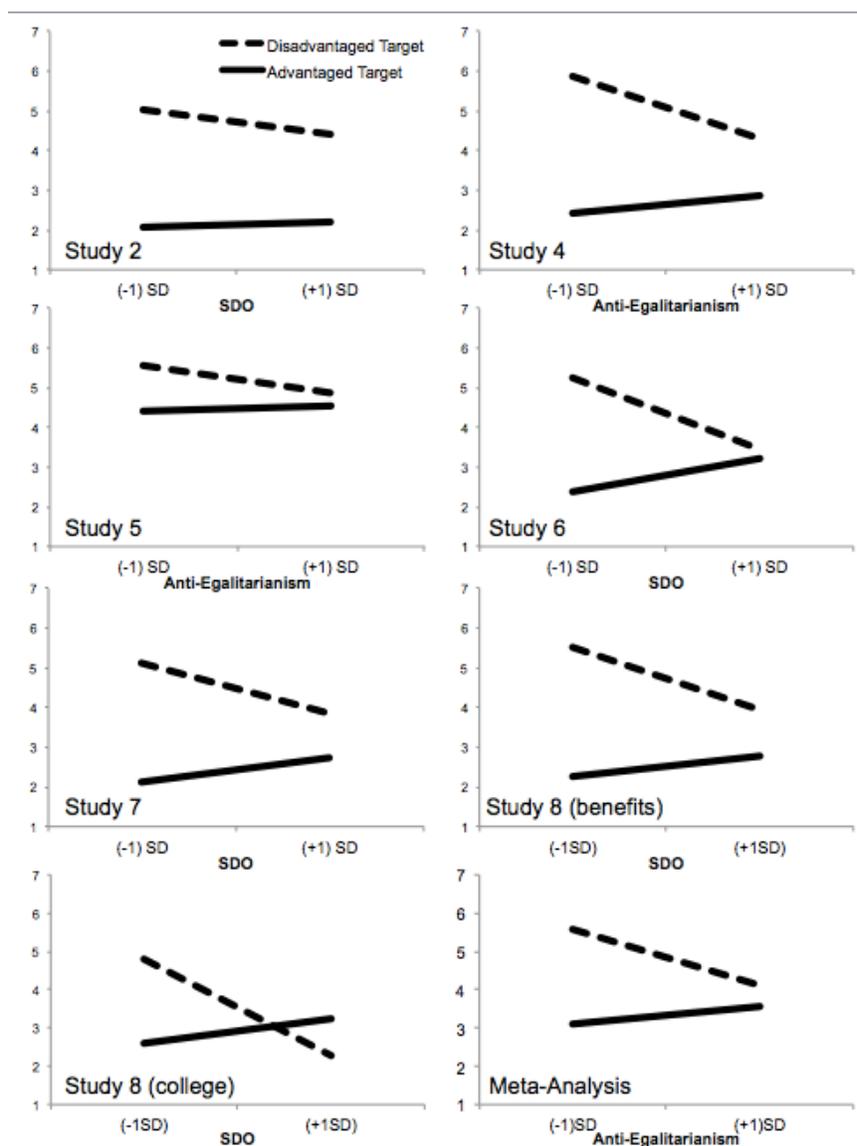
Study	Measure	M	SD	25%	50%	75%
1	SDO-7	2.59	1.23	1.50	2.44	3.56
2	SDO-7	2.59	1.06	1.19	2.50	3.38
3	SDO-7	2.59	1.23	1.53	2.34	3.44
	HT	3.01	1.61	1.60	2.60	4.20
	Composite	2.69	1.27	1.67	2.45	3.62
4	HT	2.75	1.55	1.40	2.20	3.80
5	SDO-7	2.69	1.30	1.63	2.50	3.56
	HT	3.12	1.67	1.80	3.00	4.20
	Composite	2.79	1.33	1.71	2.57	3.76
6	SDO-7	2.44	1.17	1.38	2.13	3.38
7	SDO-7(s)	2.50	1.06	1.75	2.38	3.25
8 (new cases)	SDO-7	4.84	.77	4.19	4.63	5.31

Table S8. Unstandardized betas of the (anti-)egalitarianism x target-rank interaction on empathy and simple slopes at different demographic segments, in the meta-analysis.

	<i>n</i>	<u>AE*Target-Rank</u>		<u>Simple slope:</u> <u>Disadvantaged target</u>		<u>Simple slope:</u> <u>Advantaged target</u>	
		<i>b</i>	<i>CI</i>	<i>b</i>	<i>CI</i>	<i>b</i>	<i>CI</i>
<u>Social Class</u>							
1 st quartile	534	.33***	.22, .44	-.57***	-.72, -.41	.10	-.06, .26
2 nd quartile	552	.27***	.18, .36	-.46***	-.60, -.33	.07	-.05, .20
3 rd quartile	542	.36***	.17, .54	-.41***	-.62, -.20	.12	-.09, .33
4 th quartile	534	.43***	.34, .53	-.57***	-.70, -.43	.30***	.16, .44
<u>Gender</u>							
Women	1,102	.33***	.26, .40	-.45***	-.55, -.35	.21***	.11, .31
Men	1,058	.30***	.23, .37	-.47***	-.56, -.37	.14*	.03, .24
<u>Race</u>							
Non-White	434	.37***	.25, .49	-.50***	-.68, -.32	.24**	.07, .40
White	1,728	.32***	.27, .38	-.48***	-.56, -.41	.16***	.08, .24
<u>Conservatism</u>							
1 st quartile	430	.38***	.18, .58	-.41*	-.76, -.06	.35*	.04, .65
2 nd quartile	355	.38***	.24, .53	-.56***	-.78, -.34	.20	-.05, .46
3 rd quartile	581	.31***	.21, .42	-.49***	-.63, -.35	.13	-.03, .30
4 th quartile	586	.33***	.23, .44	-.53***	-.68, -.38	.13 [†]	-.01, .28
<u>Combined Demographics</u>							
Low SES minority female	112	.59***	.36, .82	-.82***	-1.30, -.33	.37	-.07, .81
High SES majority male	403	.36***	.25, .47	-.48***	-.66, -.31	.24**	.06, .43

Note: Analyses included participant and study as random effects and controlled for each of study's interactions with AE and target-rank. [†] $p \leq .10$, * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Figure S1. The (anti-)egalitarianism by target-rank interaction on empathy, across studies.



Note: The x-axis is labeled with the anti-egalitarianism measure used in each study (see study for details); SDO indicates the social dominance orientation scale, and anti-egalitarianism indicates either Hatemi et al.'s (2014) scale (Study 4) or a composite of these two measures (Study 5). In Study 7, the outcome measure is reported moral outrage on behalf of the target.