

Cruelty and indifference are the point: Preference for hierarchy is related to support for policies that harm marginalized groups through feeling both less empathy and more schadenfreude

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## Abstract

Individuals who have relatively higher levels of social dominance orientation (SDO; Ho et al., 2015) are more likely to support policies and engage in behaviors that harm marginalized groups through both passive (e.g., neglect) and active (e.g., subjugation) means. While SDO is positioned as a relevant antecedent to outcomes regarding intergroup conflict, the mechanisms by which SDO impact group harm are underspecified. In this paper we investigate the social emotions of intergroup empathy and schadenfreude—the congruent negative and incongruent positive emotional reactions, respectively, a person has in response to the suffering of members from another social group—as key mediators between SDO and intergroup harm. More specifically, we test a model in which SDO leads to active harm primarily through feeling schadenfreude while SDO leads to passive harm primarily through not feeling empathy. In four pre-registered studies ( $N = 3,468$ ), we show initial support for this model, as SDO's associations with actively harmful policy support were more strongly mediated through schadenfreude than empathy, while SDO's associations with passively harmful policy support were more strongly mediated through empathy than schadenfreude. We discuss the relevance of these findings to intergroup conflict interventions more broadly, as well as highlight the role of schadenfreude in motivating intergroup harm.

*Keywords:* social dominance orientation, intergroup harm, empathy, schadenfreude, mediation

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The power struggle between U.S. Democrats and Republicans reached new heights in modern history on January 6<sup>th</sup>, 2021, when several hundred Republican Trump supporters overwhelmed officers at the capitol in Washington DC. Armed with misinformation about election fraud and corrupt politicians, these Trump supporters sought to disrupt the transfer of power from Republican Donald Trump to Democrat Joseph Biden and eliminate several key politicians for their role in “stealing the election” (Edmondson & Broadwater, 2021). What was remarkable about this event was not only that individuals took action and stormed the capitol but, that some people, tasked with the job of protecting the capitol, instead facilitated the protestors’ progress. For example, several Capitol police officers were filmed opening up the gates for the protestors, taking selfies, and in general engaging the protestors in a congenial manner (Gerstein, 2021). In the days, weeks, and even months after the protest, high ranking Republican politicians refused to condemn the protestors or former President Donald Trump for what could be considered a premeditated violent insurrection (Polantz & Rabinowitz, 2021). Furthermore, several of these individuals were later accused of giving inside information to the protestors to help them more effectively take control of the capitol (Moneymaker, 2021).

As the above example illustrates, intergroup conflict can be facilitated in two ways. Individuals and groups can one, willingly direct active harm towards a perceived outgroup and/or two, passively let harm go unchallenged or condone the harm being done. In other words, intergroup conflict often has elements of both passive and active harm (Cuddy et al., 2008). The dual nature of harm feature prominently in many social psychological theories around conflict, from Hannah Arendt’s “banality of evil” (borrowed by Stanley Milgram) regarding why people

obey authority figures (Burger, 2009) and research on the bystander effect (Darley & Latane, 1968; Gaertner et al., 1982) to work on blatant dehumanization (Kteily et al., 2015) and active violence (Levin et al., 2003). Understanding the precursors of active and passive intergroup harm is thus a consistent thread of inquiry within social psychology, including personality and individual-difference variables, ideologies and beliefs, affective states, attitudes, and contextual constraints. A fair amount of research has isolated social dominance orientation (SDO; Ho et al., 2015) as an ideology that is associated with increased engagement in passive and active intergroup harm, ranging from holding attitudes, supporting policies, and engaging in behaviors that harm low-status and outgroups (Sidanius et al., 2017; Sidanius & Pratto, 1999).

Given its well-established relationship with harmful intergroup attitudes and behaviors, SDO is well positioned to be included in theories for why intergroup violence occurs and become exacerbated. Some models start with social contexts and personality, showing that tough-mindedness and a “dog-eat-dog” worldview can lead to higher levels of SDO, which subsequently increases prejudice, ethno-nationalism, and support for right-wing politics (Duckitt & Sibley, 2010). Other models place SDO at the start of the explanatory pathway, arguing that the relationships between SDO and specific behavioral outcomes are mediated through endorsement of specific hierarchy legitimizing ideologies such as meritocracy, racism, and noblesse oblige (Pratto et al., 1998).

However, there is little work integrating the role of emotions into models of SDO impacting intergroup behaviors and attitudes. The lack of research is surprising because emotions play a key role in predicting behavior, and often a larger role than even attitudes (Dovidio et al., 2010). Furthermore, emotions are particularly sensitive to context and group dynamics (Cottrell & Neuberg, 2005), as feeling emotions such as anger, fear, disgust, and pity

can lead to distinct behavioral outcomes. Thus, emotional responses overall are likely potent mediators in explaining why individuals higher in SDO engage in group-based harm.

The work that does exist on SDO and emotions primarily investigates empathy and counter-empathy – the congruent or opposite emotional reaction, respectively, a person has in response to the assumed emotional state of another (Cikara et al., 2014). For example, SDO is negatively correlated with trait levels of empathic concern and perspective taking (Nicol & Rounding, 2013; Sidanius et al., 2013), as well as correlated with individuals' willingness to feel reduced empathy and increased counter-empathy towards low-status and out-groups (Hudson et al., 2019, 2020; Lucas & Kteily, 2018). The connection between SDO and counter-empathy seem to be strongest when a target group experiences a misfortune, namely *schadenfreude*. Given the research to date on the connection between empathy/*schadenfreude* and intergroup behaviors, it appears that explicitly incorporating these emotions into models examining the relationship between SDO and harm is a fruitful avenue for future research.

In this paper we provide evidence that empathy and counter-empathy are key mediators between SDO and harmful intergroup behaviors and attitudes. We build a theoretical model by which SDO primarily relates to outcomes that passively harm marginalized groups through acts of omission, disinterest, and neglect due to reductions in empathy. In contrast, SDO primarily relates to outcomes that deliberately harm such groups through acts of commission, active hate, and subjugation due to increased feelings of pleasure, or *schadenfreude*, in response to marginalized people's suffering. In the next sections we outline current evidence supporting our model connecting SDO, empathy, *schadenfreude* with actively and passively harmful intergroup outcomes.

## Social Dominance Orientation and Intergroup Harm

SDO is the psychological construct (i.e., ideology) proposed by social dominance theory, which outlines why hierarchies are ubiquitous in societies and the forces that maintain them (Sidanius & Pratto, 1999). SDO measures the extent to which individuals accept and promote group-based inequality. Those with relatively higher levels of SDO believe that some social groups deserve to be at the top compared to others. SDO is a powerful predictor of intergroup outcomes, predicting intergroup attitudes such as racism, sexism, and xenophobia, intergroup policy support such as beliefs around the legitimacy of torture and affirmative action as well as unequal resource distribution, and intergroup behaviors like donating, allocating scarce resources, and engaging in intergroup help (Freeman et al., 2009; Haley & Sidanius, 2006; Hiel & Mervielde, 2005; Lindén et al., 2016; Sibley et al., 2007; Sidanius et al., 2007).

While many of the downstream attitudes and behaviors related to SDO are explicitly negative towards marginalized groups more broadly, it is important to note that SDO correlates more strongly with the *outcome*, more so than the target, of group-based attitudes and behaviors. SDO reflects a proclivity towards hierarchy and not simply a proclivity towards group-based animus, and therefore is positively related overall to attitudes, policies, and behaviors that entrench hierarchy and negatively related to things that would attenuate it. In most circumstances, for example, being anti-immigration supports the current status quo. However, SDO can be *positively* related to support for immigration when the immigrants are presumed to be low status, effectively integrating them into the national context “where they belong” (Thomsen et al., 2008). Thus, SDO motivates the actions of individuals with the expressed purpose of forming and maintaining hierarchical relations. Here we argue that empathic and

counter-empathic emotions are part of that motivational process, connecting SDO with hierarchy-enhancing behaviors that are ultimately harmful to outgroups and low-status groups.

Some of the strongest evidence for the relationship between SDO and active harm is in the realm of punishment. SDO is associated with an increased preference for retribution, or making people suffer (Redford & Ratliff, 2018). As support for harmful policies is often served by a desire to be punitive against low-status and undesirable groups (Dambrun, 2007; Newheiser & DeMarco, 2018), SDO is associated with increased support for the death penalty and for torture (Sidanius et al., 2006), especially when these policies disproportionately affect marginalized groups (Dambrun, 2007). As another example, SDO is related to positive attitudes around police excessive use of force but not reasonable use of force, suggesting that the desire to actively harm and punish deviant behavior is a better underlying explanation for the connection between SDO and supporting police use of force than a desire for law and order (Gerber & Jackson, 2017). The desire to cause others to suffer can even lead individuals higher in SDO to purposefully incur a cost so that outgroups suffer to a greater degree. When asked to assign a fine to ingroup and outgroup members, people higher in SDO maximize the harm to the outgroup, even if that harm requires the ingroup to also suffer more than necessary (Sidanius et al., 2007).

Individuals higher in SDO passively support group-based inequality as well. Passive harm can be due both to inaction in the face of active harm as well as disinterest in actively helping marginalized groups (Ho et al., 2012). As an example, individuals higher in SDO show reduced support for redistributive wealth policies (Kugler et al., 2010), affirmative action policies, as well as other policies that would change the status quo (Ho et al., 2012). Relatedly, higher levels of SDO is associated with an increased level of indifference to social rights violations for a variety of marginalized groups (Passini, 2019). Generally, SDO is also negatively

associated with helping behaviors. SDO is negatively related to Whites' donation behaviors to the United Negro College Fund (Freeman et al., 2009), or helping Black Americans. When confronted with a situation in which an outgroup member needed help, SDO is associated with reduced helping intentions (Halabi et al., 2008). In these situations, the primary way individuals higher in SDO decided to help, if they helped at all, was through dependent-related help. Helping in this way keeps the outgroup in question continuously dependent upon the goodwill of the ingroup, which in contrast to autonomous help, gives outgroups the means to help themselves (and potentially increase their status)<sup>1</sup>. Finally, SDO is tied to conservatism along economic and environmental lines (Stanley et al., 2017), stemming from reduced compassion and caring for others.

### **(Counter-)Empathic Responses and Intergroup Harm**

Empathy and counter-empathy are also related to harmful intergroup outcomes. While there are many definitions and types of empathy<sup>2</sup> (M. H. Davis, 1983; Weisz & Cikara, 2021), most of the work on SDO and empathic responding has focused on trait levels of affective empathy. For our purposes, we too focus on the affective nature of empathy and counter-empathy—feeling rather than knowing what another is feeling. On one hand, individuals often feel empathy, or a congruent emotional reaction, in response to another person experiencing an event (Cikara et al., 2014). This event can be positive or negative, but feeling empathy is often a

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<sup>1</sup> We note, again, that SDO is not always related to reduced concern for others. SDO can predict increased concern for others but only for groups that are higher in status (Lucas & Kteily, 2016), highlighting the fact that SDO's relationship with policy and behavior is dependent upon context and whether the ultimate outcome will maintain hierarchy.

<sup>2</sup> For example, empathy can be the cognitive capacity to understand the emotional experiences of others as well as the affective resonance with another person. Empathy is often operationalized through trait questions that assess individual differences in the inclination to perspective take and care about the wellbeing of others as well as state questions that ask about emotional expression and regulation in the moment. Finally, empathy can be assessed on the level of the individual as well as on the level of the group.

precursor for affiliative behaviors when the event is positive (Morelli et al., 2015; Telle & Pfister, 2014) and helping behaviors when the event is negative (Coke et al., 1978). On the other hand, individuals can feel counter-empathy, or feel an emotional response that is incongruent and opposite of that of another person. This consists of *schadenfreude*, or feeling positively at another person's pain, and *gluckschmerz*, feeling negatively about another person's pleasure (Smith & van Dijk, 2018).

Many intergroup conflict interventions routinely focus on increasing empathy toward the outgroup because it is associated with helping behaviors and is often reduced in protracted conflicts. The literature on empathy and helping behaviors is vast (see for review: Eisenberg & Miller, 1987; Penner, Dovidio, Piliavin, & Schroeder, 2005). Empathy is generally related to costly altruism, from refusing to administer shocks to another person, even if that refusal means a loss of financial resources (FeldmanHall et al., 2015) to donating time and money to those in need (Pavey et al., 2012). Although empathy is often an automatic response, in some contexts people are motivated to avoid feeling it because empathy requires cognitive effort (Cameron et al., 2019) and can interfere with competition and other group processes (Zaki, 2014). In fact, individuals rarely feel the same amount of empathy for outgroups as they do for ingroups (Cikara et al., 2014; Cikara, Bruneau, et al., 2011).

Feeling empathy often inhibits behaviors that are harmful to others and promotes prosocial inclinations (Tangney et al., 2007); thus a *lack* of empathy, or apathy, towards outgroups is a precursor to intergroup conflict. Feeling indifference is enough to perpetuate group-based conflicts, in part because people will let marginalization go unchallenged. For example, indifference to the restriction of social liberties for marginalized groups was associated with increased blatant and subtle prejudice towards those groups (Passini, 2019). As another

example, lack of outgroup empathy predicted a variety of passive harm behaviors, including reduced outgroup altruism, reduced donating to outgroup causes, as well as increased support for withholding life-saving resources (Bruneau et al., 2017).

While feeling empathy is useful for facilitating prosocial intergroup behaviors and attitudes, apathy towards outgroups is often insufficient to motivate violent intergroup clashes. Indeed, there is only a small negative correlation ( $r = -.11$ ) between feeling empathy and engaging in aggressive behaviors in general (Vachon et al., 2014). This suggests that the lack of empathy is not necessarily sufficient for intergroup harm, but is sufficient for general avoidance, and neglect, of outgroup members. In situations of violent and protracted intergroup conflict, not only do individuals fail to adopt the emotional responses of relevant outgroup members, but they often adopt the opposite response; they experience counter-empathy. Feeling *schadenfreude* in particular is seen as a nasty, spiteful emotion and often felt in competitive settings. Individuals can feel *schadenfreude* in response to the sufferings of rival sport teams, romantic rivals, envied high status individuals, or even novel outgroup members (Cikara, Botvinick, et al., 2011; Cikara & Fiske, 2013; Colyn & Gordon, 2013; Leach et al., 2003; Lehr et al., 2019).

Thus, engaging in intergroup outcomes that deliberately harm outgroups likely require not only the absence of empathy but also the presence of counter-empathy (i.e., antipathy): specifically, *schadenfreude* and *gluckschmerz* should predict active harm more so than the lack of empathy alone. Both emotions are hypothesized to serve as a signal that how the world ought to be is being violated, making it clear that some action is necessary to rectify the imbalance (D. W. Davis & Wilson, 2022; Spears & Leach, 2004; van de Ven, 2018). *Schadenfreude* in response to observing outgroup suffering may very well serve as a sufficient motivator for collective violence and is hypothesized to be the first step in overcoming aversion to engaging in harm

oneself (Cikara, 2015). Furthermore, intergroup schadenfreude has been found to restore self-esteem and reduce feelings of group inferiority (Leach & Spears, 2008, 2009) in the wake of perceived threats to the ingroup. Intergroup schadenfreude also acts as a “social-functional dominance regulator” (Lange & Boecker, 2019), deployed in order to diminish the perceived dominance, and thus the perceived threat, of its targets. Thus, counter-empathy seems to be emotions tied to actively redressing group dynamics in ways that comport with dominance and subjugation.

Synthesizing the research above, empathy and counter-empathy act as inhibitors and activators, respectively, on processes involved in intergroup conflict and violence. When individuals feel empathy for outgroup suffering, they are less likely to engage in any active harm towards them, putting inhibitions on intergroup violence. Not only does empathy inhibit intergroup harm but also activates prosocial behaviors to alleviate their suffering. However, the absence of empathy in a group context does not automatically ensure that intergroup harm is imminent. The motivation to distance oneself from another group is distinct from the motivation to actively act against another group (Cuddy et al., 2008; Mackie et al., 2000). Similarly, promoting or engaging in active harm requires more than just a lack of empathy but actual antipathy or feeling counter-empathy. Counter-empathy is likely a stronger motivator for collective violence than apathy alone (Lehr et al., 2019) and is perhaps the first step in overcoming aversion to doing harm directly (Cikara, 2015).

### **Social Dominance Orientation and Empathic and Counter-Empathic Responding**

SDO, empathy, and counter-empathy are associated with intergroup passive and active harm. In this section, we discuss the direct connection between SDO and empathic and counter-

empathic responses, to justify our model of how empathy and counter-empathy serve as mediators between SDO and intergroup harm.

Early theorizing regarding SDO placed reduced “concern for others” (i.e., a form of empathy) as the personality construct most related to SDO (Pratto et al., 1994). And indeed, there is evidence that individuals with higher levels of SDO are less likely to have an empathic reaction in the face of people’s suffering in general as well as based on group identities. For example, people with higher levels of SDO are more likely to make the utilitarian choice in the classic trolley problem paradigm (Bostyn et al., 2016), but importantly, this pattern is driven solely by a decreased preference for the deontological, emotional option. As another example, individuals with higher levels of SDO are less likely to see corporal punishment as physical abuse, instead being more likely to label it as physical punishment (Hess et al., 2012). This implies that SDO is related to empathic appraisal strategies (i.e., changing the affective meaning of a target’s emotional event) to see suffering as less extreme (Zaki, 2014) as well as empathic responses.

Theoretically, SDO should correlate with reduced empathy, particularly towards low-status or marginalized targets. Feeling empathy is counter-productive to engaging in competition, as feeling bad when an outgroup is losing would make it increasingly difficult to engage in behaviors that will allow your group to win. This is partly why empathy is often reduced in competitive settings (Zaki, 2014). Furthermore, people often see empathy as effortful and cognitively costly (Cameron et al., 2019) and would be less likely to engage in a costly act for outgroups in general but especially under competition. Given that individuals with higher levels of SDO see the world through a perpetually competitive lens (Duckitt & Sibley, 2010), these are the individuals who are most likely chronically feel reduced empathy.

Several structural equation models find evidence that trait levels of empathy and SDO are negatively related (Bäckström & Björklund, 2007; Nicol & Rounding, 2013), even modeling that empathy acts as a mediator between SDO and prejudicial attitudes. Recent longitudinal evidence substantiates a significant link between SDO and empathy, operationalized as trait levels of empathic concern. In a combined sample size of over 5000 participants, SDO at time 1 predicted reduced empathic concern at time 2, controlling for levels of empathic concern at time 1 (Sidanius et al., 2013). Interestingly, the relationship was bidirectional—empathic concern at time 1 also predicted decreased levels of SDO at time 2; however, in this study, the direction from SDO to empathy was stronger than the reverse. A separate longitudinal study found that engaging in helping behaviors over a 9-week period decreased levels of SDO specifically through increased empathic concern for others (Brown, 2011).

These longitudinal studies and structural equation models raise the possibility that SDO, and not empathy, should be the mediator predicting prejudicial attitudes and behaviors. This is a distinct possibility and should be investigated further. However, trait empathy, as it was used in the subsequent studies, is rarely the culprit for intergroup behaviors in the moment. Instead, state levels of empathy, and/or the difference between the amount of empathy felt for in-group versus out-group members, better map onto behavior than trait forms of the same emotions (Bruneau et al., 2017; Cikara et al., 2014). While SDO might be a downstream consequence of *trait* levels of empathy, in this paper we focus on participants levels of *state* emotions and behaviors. Given that SDO is a general ideology and orientation, it is more plausible that SDO predicts (state) empathy rather than the reverse.

In line with a focus on state emotions, SDO is also related to emotional reactions in the moment rather than just to the general tendency to empathize. Individuals with higher levels of

SDO not only feel less empathy at the sufferings of others in general (Chiao et al., 2009), they feel even less empathy for outgroups compared to ingroups in competitive settings (Hudson et al., 2019). Note, again, however that these reactions are always in service of hierarchy maintenance. For example, SDO is positively related to empathy specifically for advantaged targets but negatively related for disadvantaged targets (Lucas & Kteily, 2018). In other work, SDO correlates with the desire to avoid feeling empathy towards low-status groups. When given a choice, those with higher levels of SDO are more likely to opt-out of situations in which they will be asked to feel empathy towards such groups (Hudson et al., 2020).

There is very little research on SDO and counter-empathic emotions; However, theoretically, SDO should also be related to counter-empathy. Feeling counter-empathy is most prevalent in competitive settings and SDO reflects a competitive orientation towards group relations. Furthermore, SDO is positively associated with psychopathy and Machivellian personality traits, traits that also correlate with feeling counter-empathy (Ho et al., 2015; James et al., 2014; Porter et al., 2014). Finally, recent work on state schadenfreude and gluckschmerz also found modulation by SDO in the face of group-based competition (Hudson et al., 2019). When group competition is highlighted, the relationship between SDO and counter-empathy (and especially schadenfreude) becomes significantly stronger for both racial and novel outgroups compared to ingroups.

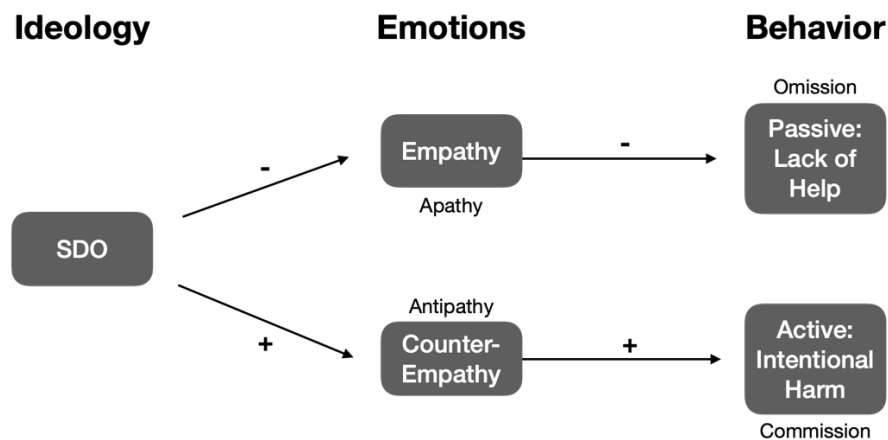
### **Overview of Theoretical Model and Predictions**

We propose that in situations of group competition, SDO predicts feeling emotions that subsequently lead to a cascade of attitudes, behaviors, and policy support that serve to entrench social hierarchy and are harmful to members of outgroups and low-status groups (Figure 1). First, SDO is positively related to both passive and active intergroup harm. Second, SDO is also

strategically related to empathy and counter-empathy such that the strength of the relationship between SDO and empathic resonance is congruent with hierarchy maintenance. For example, when the group in question is low-status or an outgroup, SDO will negatively predict feeling empathy and positively predict feeling counter-empathy. From there, empathy and counter-empathy are systematically related to inhibiting and facilitating intergroup helping and harming behaviors. More specifically, decreases in empathy lead to a lack of help and thus passive harm. However, lacking empathy is necessary but not sufficient for active harming behaviors. Instead, counter-empathy is the primary driver of active harm. Feeling increased counter-empathy facilitates active harm.

### Figure 1:

*Model explaining the relationship between SDO, empathic and counter-empathic emotions, and intergroup behavior*



### Current Research

Here we present four studies/experiments ( $N = 3,468$ ) designed to test the relationship between SDO, empathy, schadenfreude, and active and passive intergroup harm (i.e., harmful policy support). In our first study we investigate whether empathy and schadenfreude mediate the relationship between SDO and supporting passively and actively harmful policies for three

low status social groups in America: LGBT, poor people, and undocumented immigrants. By including multiple low-status groups, we investigate the generalizability of our model. In Study 2, we replicate our SDO-to-emotions effect with homeless people as the target, and conceptually replicate policy support for passive and active harm towards homeless people using a new policy endorsement measure. Study 2 also investigated the relative importance of general feelings of empathy and schadenfreude towards the target compared to more specific feelings tied to the impact of the policies. Finally, in Studies 3 and 4 we experimentally manipulated feeling empathy and schadenfreude and tested whether there was a corresponding shifting in support for active and passive harmful policies.

Across all studies we had four broad hypotheses. First, we expected to replicate past research such that overall, SDO will negatively relate to empathy and positively relate to schadenfreude for all low-status groups (Hudson et al., 2019, 2020; Lucas & Kteily, 2018). Second, we expected the relationship between SDO and both active and passive harmful policy support to be positive. As we operationalized passive harm as a lack of support for *helpful* policies, SDO is negatively related to passive harm in these studies, but the general hypothesis is that SDO is positively related to both types of harm. Third, we expected that empathy would be more strongly related to passive harm (compared to schadenfreude) and schadenfreude more strongly related to support for active harm (compared to empathy). Fourth and most relevant to the model, we expected that empathy and schadenfreude would mediate the relationship between SDO (or the emotional manipulation) and support for harm in a specific way: the indirect effect through empathy would be stronger than the indirect effect through schadenfreude for passive harm while the indirect effect through schadenfreude would be stronger than the indirect effect through empathy for active harm.

The studies reported were approved by an internal subject IRB panel at [REDACTED] University and [REDACTED] University, and all participants provided informed consent. We report how we determined our sample size, all data exclusions, all manipulations, and all measures in the study. We pre-registered part or all our hypotheses and data analysis strategies in each study. Pre-registrations, research materials, anonymized data, and data analysis code can be found on OSF at [https://osf.io/hc8kw/?view\\_only=3fd47248083744799fa99a3a5fd34c93](https://osf.io/hc8kw/?view_only=3fd47248083744799fa99a3a5fd34c93). Data were analyzed using *R*, version 4.1.2 (R Core Team, 2021), and the lavaan (Rosseel, 2012) and psych (Revelle, 2020) *R* packages.

**Study 1: Empathy and schadenfreude mediate SDO's relationship with support for helpful and harmful policies for three marginalized groups**

**Methods**

***Participants***

We used the Monte Carlo Power Analysis calculator for indirect effects to determine sample size (Schoemann et al., 2017), imputing zero-order correlations for our variables of interest from a previous study (see pre-registration for more details). A sample size of 350 gave us 80% power to detect parallel mediation by empathy and schadenfreude. We planned to recruit 400 subjects for each target group (total  $N = 1200$ ) to account for the fact that the zero-order correlations were based on reactions to a social group not tested here.

We paid a total of 1268 participants (566 participants failed the initial attention screener and thus never saw the consent form nor were they compensated) from Amazon Mechanical Turk through the CloudResearch platform, restricting our potential sample to those who were 18 years or older, residing in the United States, and had completed 1000 or fewer hits. The sample

predominantly self-identified as White (68.1%) and comprised 538 men and 678 women,  $M_{\text{age}} = 34.56$ ,  $SD = 11.47$ .

### ***Procedure***

We told participants who passed an initial screener that they would report their attitudes on a randomly selected group in America. We randomly assigned participants to answer questions about LGBT people, poor people, or undocumented immigrants. After reading a short paragraph defining the group and the hardships members of the group face, participants indicated their overall feelings of empathy and schadenfreude towards the group. Next, participants answered two policy support scales that were specific to the social group assigned; one that tapped into their (lack of) support for explicitly helpful policies—our operationalization of passive harm—and one that assessed their support for explicitly harmful policies—our operationalization of active harm. Finally, participants filled out the 16-item SDO<sub>7</sub> scale and brief demographics before reading the debriefing.

### ***Scale Measures***

**Empathic and Counter-Empathic Emotions.** We assessed emotions on a 1 – 5 (1 = Not at all; 5 = Extremely so) scale. Empathy was measured by asking “how bad / sad / sympathetic / compassionate / concerned do circumstances of [TARGET GROUP] in America make you feel?” while schadenfreude was measured by asking “how good / relieved / happy / satisfied do circumstances of [TARGET GROUP] in America make you feel?” We measured empathy and schadenfreude together, randomly presenting the nine items in one scale. An exploratory factor analysis using eigenvalues and parallel analysis supported the split between empathy and schadenfreude. For LGBT, empathy accounted for 35% of the variance (factor loadings between .73-.84) while schadenfreude accounted for 33% of the variance, (factor loadings between .80

and .89); for poor people, empathy accounted for 35% of the variance (factor loadings between .75-.85) while schadenfreude accounted for 34% of the variance, (factor loadings between .85 and .90); for undocumented immigrants, empathy accounted for 38% of the variance (factor loadings between .78-.90) while schadenfreude accounted for 34% of the variance, (factor loadings between .84 and .90).

**Social Dominance Orientation.** We measured SDO using the 16-item (Ho et al., 2015) SDO<sub>7</sub> scale anchored from 1 – 7 (1 = Strongly Oppose; 7 = Strongly Favor). The scale was coded such that higher numbers corresponded to higher acceptance and promotion of group-based inequality. Sample items included “We should do what we can to equalize conditions for different groups,” (reverse coded) and “Some groups of people must be kept in their place.

**Active Harm Policy Support.** We operationalized active harm using support for explicitly harmful policies, using modified posse scales (Altemeyer, 1988). The posse scale was designed to capture the extent to which individuals believe themselves willing to engage in increasingly extreme behaviors to harm a (marginalized) group. The scale prompt varied by group. For LGBT, participants responded to “suppose the American government, sometime in the future, repealed legalization of same-sex marriage and passed a law outlawing any same-sex partnerships”. For poor people, participants responded to a law “making it mandatory for all people over the age of 18 to have a job”, and for undocumented immigrants, participants responded to a law “temporarily banning any immigration into the United States”. The items in the scale ranged from “I would tell my friends that it is a good law” to “I would support the execution of [TARGET] who broke the law”. Participants responded to the six items on a 1 (Extremely Untrue of Me) – 9 (Extremely true of me) scale. We calculated an average item index by group.

**Passive Harm Policy Support.** Our operationalization of passive harm consisted of a *lack* of support for explicitly helpful policies. Each policy support scale contained between six and seven items capturing the extent to which individuals supported (or opposed) policies directed at improving the lives of the targeted group on a 1 (Strongly Oppose) – 7 (Strongly Support) scale. We generated policies from [www.isidewith.com](http://www.isidewith.com) to assess support of policies that were currently in the public discourse. Each item was worded in the direction of helping the group in question, unlike the Posse scales, including items like “Gay couples should have the same adoption rights as straight couples”, “Poor people should not be forced to work in order to qualify for health care (i.e., Medicaid)”, and “Undocumented immigrants should have access to government subsidized healthcare.” We averaged the items in each scale to create a single composite by group.

### *Analyses*

We pre-registered that we would run parallel mediation analysis such that the effect of SDO on support for active and passive harm (separately) was mediated by participants' feelings of empathy and schadenfreude towards the group, resulting in six mediation models. We used the *lavaan* package (Rosseel, 2012) in *R* and calculated our estimates and standard errors using 5000 bootstrap samples. We report unstandardized and standardized regression coefficients as well as BCA 95% confidence intervals. Finally, we compared the strength of the indirect effects through empathy and schadenfreude (rather than the direction of the effects) by bootstrapping the difference between the absolute values of the effects.

## **Results**

### *Correlation Patterns*

Table 1 contains descriptive statistics and zero-order correlations split by group: LGBT, poor people, and undocumented immigrants. As shown in Table 1, both hypotheses 1 and 2 were supported. SDO was positively related to schadenfreude and harmful policy support while negatively related to empathy and helpful policy support for all targets. Hypothesis 3 was also supported. We used the *r.test* function from the *psych* package in *R* to test the difference between empathy and schadenfreude's correlation with the helpful and harmful policy support by target, allowing for empathy and schadenfreude to be correlated themselves. We took the absolute value of the correlations to again test differences in the strength, rather than direction, of the relationships. Schadenfreude had a stronger relationship with harmful policy support than did empathy for LGBT targets,  $t(409) = -3.41, p < .001$ , poor targets,  $t(417) = -11.18, p < .001$ , and undocumented immigrants,  $t(405) = -4.54, p < .001$  while empathy had a stronger relationship with helpful policy support than did schadenfreude for LGBT targets  $t(409) = 10.54, p < .001$ , poor targets  $t(417) = 6.71, p < .001$ , and undocumented immigrants,  $t(405) = 14.05, p < .001$ .

**Table 1**

*Zero-order correlations and descriptive statistics from Study 1 by group*

				<b>Correlations</b>			
LGBT ( $N = 409$ )	<i>M</i>	<i>SD</i>	$\alpha$	1	2	3	4
1. SDO <sup>a</sup>	2.53	1.19	.93	--			
2. Empathy <sup>b</sup>	3.05	1.05	.89	-.49***	--		
3. Schadenfreude <sup>b</sup>	2.07	0.97	.92	.11*	.06	--	
4. Harmful Policy Support <sup>c</sup>	1.18	1.48	.95	.54***	-.12*	.34***	--
5. Helpful Policy Support <sup>a</sup>	4.82	1.68	.92	-.64***	.67***	.11*	-.23***
Poor ( $N = 417$ )	<i>M</i>	<i>SD</i>	$\alpha$	1	2	3	4
1. SDO <sup>a</sup>	2.79	1.14	.90	--			
2. Empathy <sup>b</sup>	3.82	0.84	.90	-.45***	--		

3. Schadenfreude <sup>b</sup>	1.41	0.87	.92	.33***	-.08	--	
4. Harmful Policy Support <sup>c</sup>	2.23	1.65	.93	.40***	-.09	.67***	--
5. Helpful Policy Support <sup>a</sup>	4.62	1.51	.89	-.54***	.48***	.08	-.01

Undocumented Immigrants ( <i>N</i> = 405)	<i>M</i>	<i>SD</i>	$\alpha$	1	2	3	4
1. SDO <sup>a</sup>	2.65	1.19	.92	--			
2. Empathy <sup>b</sup>	3.43	1.07	.91	-.57***	--		
3. Schadenfreude <sup>b</sup>	1.56	0.90	.93	.40***	-.06	--	
4. Harmful Policy Support <sup>c</sup>	2.23	1.65	.92	.65***	-.34***	.59***	--
5. Helpful Policy Support <sup>a</sup>	4.40	1.80	.94	-.59***	.71***	.00	-.32***

Note: \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

<sup>a</sup> scales anchored at 1-7

<sup>b</sup> scales anchored at 1-5

<sup>c</sup> scales anchored at 1-9.

### ***Mediation between SDO and Support for Actively Harmful Policies***

We found partial support for hypothesis 4 (

Figure 2). There was a significant relationship between SDO and harmful policy support towards **LGBT** people,  $b = 0.67$ , 95%CI [0.55, 0.81],  $z = 10.05$ ,  $p < .001$ . Contrary to predictions, the relationship between SDO and support for active harm towards LGBT was mediated through empathy,  $b_{\text{indirect}} = -0.09$ , 95%CI [-0.17, -0.04],  $z = -2.94$ ,  $p = .003$ , but not schadenfreude,  $b_{\text{indirect}} = 0.04$ , 95%CI [0.00, 0.089],  $z = 1.75$ ,  $p = .080$ . Furthermore, the indirect effects were not significantly different from one another as the confidence interval of the contrast contained zero ( $b_{\text{contrast}} = 0.06$  95%CI [0.00, 0.13],  $z = 1.78$ ,  $p = .075$ ). After accounting for mediation through empathy and schadenfreude, the relationship between SDO and harmful policy support for LGBT people remained significant and strengthened,  $b' = 0.73$ , 95%CI [0.59, 0.89],  $z = 9.26$ ,  $p < .001$ , suggesting empathy was a suppressor variable on SDO's relationship to support for active harm towards LGBT people.

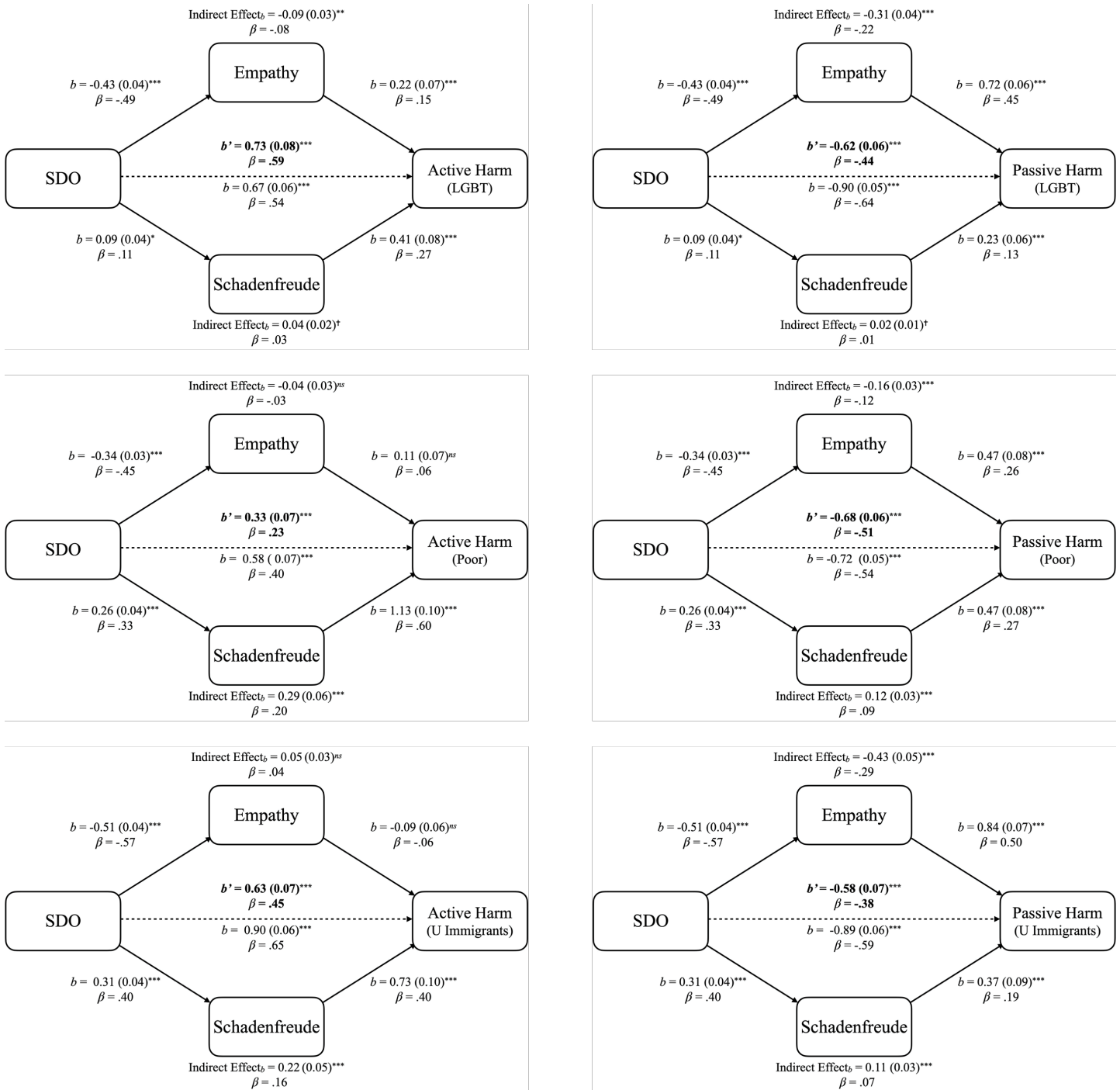
In contrast and in line with our predictions, the relationship between SDO and harmful policy support towards the **poor**,  $b = 0.58$ , 95%CI [0.45, 0.72],  $z = 8.33$ ,  $p < .001$ , was mediated through schadenfreude,  $b_{\text{indirect}} = 0.29$ , 95%CI [0.19, 0.41],  $z = 5.08$ ,  $p < .001$ , but not empathy,  $b_{\text{indirect}} = -0.04$ , 95%CI [-0.09, 0.01],  $z = -1.46$ ,  $p = .145$ . Additionally, the indirect pathway through schadenfreude was significantly stronger than the indirect pathway through empathy ( $b_{\text{contrast}} = -0.25$ , 95%CI [-0.37, -0.14],  $z = -4.31$ ,  $p < .001$ ). After accounting for mediation through empathy and schadenfreude, the relationship between SDO and harmful policy support for the poor remained significant but reduced,  $b' = 0.33$ , 95%CI [0.20, 0.47],  $z = 4.87$ ,  $p < .001$ .

Mediation of harmful policy support for **undocumented immigrants** was identical to the mediation for poor people. The relationship between SDO and harmful policy support for undocumented immigrants,  $b = 0.90$ , 95%CI [0.79, 1.02],  $z = 15.55$ ,  $p < .001$  was mediated through schadenfreude  $b_{\text{indirect}} = 0.22$ , 95%CI [0.14, 0.32],  $z = 4.79$ ,  $p < .001$ , but not empathy,

$b_{\text{indirect}} = -0.05$ , 95%CI [-0.02, 0.11],  $z = 1.46$ ,  $p = .144$ . Again, the indirect pathway through schadenfreude was significantly stronger than the indirect pathway through empathy ( $b_{\text{contrast}} = -0.18$ , 95%CI [-0.29, -0.06],  $z = -2.97$ ,  $p = .003$ ). After accounting for mediation through empathy and schadenfreude, the relationship between SDO and harmful policy support for undocumented immigrants remained significant but reduced,  $b' = 0.63$ , 95%CI [0.51, 0.76],  $z = 9.74$ ,  $p < .001$ .

**Figure 2:**

*Empathy and schadenfreude's mediation of the relationship between SDO and active and passive harm in Study 1*



Note: Presented are unstandardized regression weights ( $b$ ) and associated standard errors ( $SEb$ ) in parentheses and standardized weights ( $\beta$ ). The adjusted statistics after mediation are bolded while the mediated relationship is represented by the dotted line. ns  $p > .1$ ; †  $.05 < p < .1$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

### **Mediation between SDO and Passively Harmful Policy Support**

The relationship between SDO and helpful policy support for **LGBT** people,  $b = -0.90$ , 95%CI [-1.00, -0.81],  $z = -17.73$ ,  $p < .001$ , was mediated through empathy,  $b_{\text{indirect}} = -0.31$ , 95%CI [-0.40, -0.24],  $z = -7.95$ ,  $p < .001$ , but not schadenfreude,  $b_{\text{indirect}} = 0.02$ , 95%CI [0.00, 0.05],  $z = 1.79$ ,  $p = .074$ . In line with predictions, the indirect pathway through empathy was significantly stronger than the indirect pathway through schadenfreude ( $b_{\text{contrast}} = 0.29$ , 95%CI [0.21, 0.37],  $z = 6.94$ ,  $p < .001$ ). After accounting for the mediation pathways, the relationship between SDO and helpful policy support for LGBT people remained significant but reduced,  $b' = -0.62$ , 95%CI [-0.72, -0.50],  $z = -11.17$ ,  $p < .001$ .

In contrast, the relationship between SDO and helpful policy support for the **poor**,  $b = -0.72$ , 95%CI [-0.82, -0.62],  $z = -13.85$ ,  $p < .001$ , was mediated through both empathy,  $b_{\text{indirect}} = -0.16$ , 95%CI [-0.22, -0.10],  $z = -5.42$ ,  $p < .001$ , and schadenfreude,  $b_{\text{indirect}} = 0.12$ , 95%CI [0.07, 0.18],  $z = 4.39$ ,  $p < .001$  at equal strength ( $b_{\text{contrast}} = 0.04$ , 95%CI [-0.04, 0.12],  $z = 0.92$ ,  $p = .355$ ). After accounting for the mediation pathways, the relationship between SDO and helpful policy support for poor people did not substantively change,  $b' = -0.68$ , 95%CI [-0.79, -0.57],  $z = -12.34$ ,  $p < .001$ , because each mediation pathway exerted an equal but opposite force on the relationship<sup>3</sup>.

Finally, the relationship between SDO and helpful policy support for **undocumented immigrants**,  $b = -0.89$ , 95%CI [-1.01, -0.78],  $z = -15.89$ ,  $p < .001$ , was mediated through empathy,  $b_{\text{indirect}} = -0.43$ , 95%CI [-0.53, -0.34],  $z = -8.73$ ,  $p < .001$ , and schadenfreude,  $b_{\text{indirect}} =$

<sup>3</sup> We replicated this result in a follow-up study. The analyses can be found in supplementary materials (Supplementary Study 1).

0.11, 95%CI [0.05, 0.18],  $z = 3.57$ ,  $p < .001$ . However, as predicted, the indirect pathway through empathy was significantly stronger than the indirect pathway through schadenfreude ( $b_{\text{contrast}} = 0.32$ , 95%CI [0.20, 0.45],  $z = 5.01$ ,  $p < .001$ ). After accounting for the mediation pathways, the relationship between SDO and helpful policy support for undocumented immigrants remained significant but reduced,  $b' = -0.58$ , 95%CI [-0.71, -0.43],  $z = -8.23$ ,  $p < .001$ .

## Discussion

Study 1 tested our model regarding the connections between SDO, empathic and counter-empathic emotions, and support for active and passive harm for three low-status groups. Overall, our hypotheses were supported. We replicated previous work showing that SDO was associated with increased support for policies that passively and actively harmed marginalized groups. We also replicated previous work on the nature of SDO and (counter-)empathy (Hudson et al., 2019) and extended it to new social groups. SDO was negatively related to empathy and positively related to schadenfreude for LGBT people, poor people, and undocumented immigrants. Furthermore, we found direct evidence for the hypothesis that empathy was more strongly related to support for policies that passively harm groups while schadenfreude was more strongly related to support for policies that actively harmed groups.

Crucially, we found support for our model connecting SDO with passive and active harm through empathic and counter-empathic responses. Our mediation results suggest that overall feeling empathy weakens the positive relationship between SDO and increased support for harmful policies while feeling schadenfreude strengthens it. However, these forces were divergently activated when the harm was active or passive. Both processes of apathy and

antipathy lead to passive and active harm, but antipathy was more relevant for support for active harm while apathy was more relevant for support for passive harm.

**Study 2: SDO's relationship with support for active and passive harm is mediated by empathic and counter-empathic emotions related to the harm, not only about the group**

Study 1 provided initial evidence that people's feelings of empathy and schadenfreude in response to the overall plight of three social groups in America mediated the relationship between SDO and support for actively and passively harmful policies. One potential shortcoming of Study 1 is that the empathic and counter-empathic responses solicited were not reactions to the policy measures. It is currently unclear whether SDO's relationship with harmful policy support is better mediated by (counter-)empathic feelings towards group suffering in general or towards the harm that the policy will enact on the group in question. Study 2 addresses this question in a conceptual replication by measuring empathic and counter-empathic emotions towards group suffering in general but also in response to the policies themselves. Study 2 also expands previous work by utilizing a new social group for which is more socially sanctioned to disparage compared to the groups investigated in Study 1, namely people who are homeless. Individuals who are homeless are perceived to be low in warmth and competence (Fiske et al., 2002), making them unfortunate targets of dehumanization and discrimination (Bruneau et al., 2018). Our hypotheses were identical to Study 1 hypotheses, with the addition that both measures of empathy and counter-empathy will relate to SDO and policy support in the hypothesized manner.

## **Methods**

### ***Participants***

We paid a total of 313 participants from Amazon Mechanical Turk through the CloudResearch platform with the same sample restrictions as in Study 1. The sample was again predominantly White (71%) and evenly split between men (57%) and women (43%),  $M_{\text{age}} = 33.01$ ,  $SD = 10.47$ . We did not have a good sense of the anticipated effect size; thus, we powered the study to the same level of mediation from Study 1. Furthermore, correlations of the average effect in psychology stabilize with ~250 participants (Schönbrodt & Perugini, 2013).

### ***Procedure***

Participants who passed an initial screener gave consented and learned that the study was about homelessness in America. After indicating their general feelings of empathy and schadenfreude towards homeless people, we told them they would review several policies that organizations put in place in response to homelessness in their city. They reviewed four policies in total: two that help homeless people and two that hurt homeless people. After reviewing a policy, participants indicated how good and how bad they felt about the policy (i.e., empathic and counter-empathic emotions in response to the policies), how much they favored or opposed the policy, and how much they desired to live in a city with those policies. Finally, participants completed the SDO<sub>7</sub> scale and brief demographics then read the debriefing.

### ***Scale Measures***

**General Empathic and Counter-Empathic Emotions towards Homeless People.** We assessed general empathic and counter-empathic emotions using the same scale format as in Study 1. We changed the target group to be “homeless people”; a sample question read “How sympathetic do the circumstances of homeless people in American make you feel?”. Again, the scale reliably split between empathy (factor loadings between .72-.84) and schadenfreude (factor

loadings between .88 - .91), which explained 32% and 36% of the variance in the scale respectively.

### **Policy-Specific Empathic and Counter-Empathic Emotions and Policy**

**Endorsement.** Participants reviewed four policies that helped or hurt homeless individuals in a randomized order. The harmful policies included building city benches with arm rests in the middle as well as installing spikes on the ground to prevent homeless people from sleeping there. The helpful policies included restaurants feeding homeless people for free as well as cities giving homeless people free tents until they could find long-term housing.

Within each policy empathy trial, participants read a short sentence describing the policy and saw two pictures that showed the policy being enacted. On the same page, participants saw four questions assessing their emotional reaction to the policy. First, participants answered, “how bad” and “how good” this policy made them feel on 100-point sliders from Not at all Bad/Good (0) to Extremely Bad/Good (100) without feedback. The slider questions were presented in a randomized order and constituted our measure of empathy and counter-empathy specifically about the policies (Cikara et al., 2014; Hudson et al., 2019). More specifically, how good participants felt about a helpful policy was positive empathy while how bad they felt about the helpful policy was *gluckschmerz*. How bad participants felt about a harmful policy was negative empathy while how good they felt about that same harmful policy was *schadenfreude*.

Second, participants answered a single item asking the extent to which they favored or opposed the policy on a 1 (Strongly Oppose) – 7 (Strongly Favor) scale and a single item asking how much they desired to live in a city with the policy on a 1 (Not at all) – 5 (A great deal) scale. The two single item questions were always presented last in that order and constituted our policy endorsement questions. We pre-registered analyzing the endorsement questions separately for

each policy, but the questions were reliable as two-item composites. Thus, we collapsed the policy support and the city desirability question by policy and used the aggregate as a repeated-measures variable in the regression models. Endorsing the bench arm policy ( $r = .76$ ,  $M = 2.8$ ,  $SD = 1.5$ ), the ground spike policy ( $r = .77$ ,  $M = 2.46$ ,  $SD = 1.47$ ), the free food policy ( $r = .63$ ,  $M = 5.06$ ,  $SD = 1.05$ ), and the free tent policy ( $r = .60$ ,  $M = 4.60$ ,  $SD = 1.16$ ) were each reliable.

**Social Dominance Orientation.** We measured SDO on the same 16-item scale as in Study 1.

## Results

### *Correlation Patterns*

Table 2 shows the descriptive statistics and zero-order correlations in Study 2. We supported our hypothesis regarding SDO's relationship with emotions, as SDO was negatively related to general empathy towards homeless people and positively related to general schadenfreude. SDO was also related to empathic and counter-empathic and counter-empathic feelings about the policies themselves, as SDO was positively related to feeling good about harmful policies (i.e., schadenfreude) as well as feeling bad about helpful policies (i.e., gluckschmerz), but negatively correlated to feeling bad about harmful policies (i.e., negative empathy) and feeling good about helpful policies (i.e., positive empathy).

Using the *r.test* function as in Study 1, we also find support for the relative strength of connection between emotions (general and policy-specific) and policy support. General schadenfreude had a stronger relationship than did general empathy for supporting bench armchairs,  $t(313) = 3.58$ ,  $p < .001$ , and ground spikes,  $t(313) = 4.54$ ,  $p < .001$ . This held true for the policy-specific emotions too, as how good participants felt (i.e., schadenfreude) about bench armchairs,  $t(313) = 7.14$ ,  $p < .001$ , and ground spikes,  $t(313) = 5.42$ ,  $p < .001$ , was more related

to policy endorsement than how bad participants felt (i.e., negative empathy). Conversely, general empathy had a stronger relationship than did general schadenfreude for supporting free food,  $t(313) = 4.79, p < .001$ , and temporary tents,  $t(313) = 5.33, p < .001$ , for individuals who are homeless. Again, this was true for policy-specific emotions, as how good participants felt (i.e., positive empathy) about free food,  $t(313) = 8.54, p < .001$  and temporary tents,  $t(313) = 7.45, p < .001$  was more related to policy endorsement than how bad participants felt (i.e., gluckschmerz)

**Table 2:**

*Zero-order correlations and descriptive statistics from Study 2*

	Correlations										
	<i>M</i>	<i>SD</i>	$\alpha$	1	2	3	4	5	6	7	8
1. How Good-Harmful (schadenfreude) <sup>a</sup>	28.13	28.67	.87	---							
2. How Good-Helpful (positive empathy) <sup>a</sup>	77.33	19.14	.80	-.26***	---						
3. How Bad-Harmful (negative empathy) <sup>a</sup>	68.30	26.79	.61	-.52***	.40***	---					
4. How Bad-Helpful (gluckschmerz) <sup>a</sup>	27.29	25.06	.72	.51***	-.47***	-.06	---				
5. SDO <sup>b</sup>	2.84	1.16	.91	.55***	-.25***	-.39***	.28***	---			
6. General Empathy <sup>c</sup>	3.61	0.86	.87	-.20***	.36***	.52***	.00	-.35***	---		
7. General Schadenfreude <sup>c</sup>	1.80	1.18	.94	.67***	-.12*	-.17**	.50***	.56***	-.03	---	
8. Endorsement- Harmful <sup>c</sup>	2.63	1.40	.91	.85***	-.25***	-.64***	.36***	.59***	-.30***	.58***	---
9. Endorsement- Helpful <sup>c</sup>	4.83	0.97	.80	-.27***	.73***	.48***	-.34***	-.34***	.52***	-.07	-.28***

Note: \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ . We aggregated “how good”, “how bad”, and endorsement ratings separately across the two helpful policies and the two harmful policies in the correlation table.

<sup>a</sup> scales anchored at 0-100

<sup>b</sup> scales anchored at 1-7

<sup>c</sup> scales anchored at 1-5.

Gender is scored such that male = 0, female = 1

### **Mediation Analyses between SDO and Policy Support**

Similar to Study 1, we ran parallel mediation analyses on policy endorsement for helpful and harmful policies, including both general and policy specific empathic and counter-empathic

emotions (thus four mediators in total per analyses), and bootstrapped our estimates as well as the difference between the absolute value of the indirect effects. Thus, we assessed whether the relationship between SDO and endorsement of harmful policies was mediated by general feelings of empathy and schadenfreude towards homeless people (labeled general empathy and general schadenfreude) as well as “how bad” and “how good” participants felt about the harmful policies (labeled policy negative empathy and policy schadenfreude respectively). Next, in a separate model, we assessed whether the relationship between SDO and endorsement of helpful policies was mediated by general empathy and general schadenfreude as well as “how good” and “how bad” participants felt about the helpful policies (labeled policy positive empathy and policy gluckschmerz respectively). We inadvertently indicated our mediation analyses were exploratory in our pre-registration<sup>4</sup> but these analyses mirror the ones done in Study 1. Results from the two mediation analyses are displayed in **Figure 3**.

Starting with harmful policy endorsement, we find that the relationship between SDO and support for harmful policies,  $b = 0.71$ , 95%CI [0.61, 0.82],  $z = 12.90$ ,  $p < .001$ , was only significantly mediated through policy-specific measures of negative empathy,  $b_{\text{indirect}} = 0.13$ , 95%CI [0.08, 0.20],  $z = 4.04$ ,  $p < .001$ , and schadenfreude,  $b_{\text{indirect}} = 0.40$ , 95%CI [0.31, 0.51],  $z = 7.09$ ,  $p < .001$ , but not general measures of empathy,  $b_{\text{indirect}} = -0.002$ , 95%CI [-0.03, 0.02],  $z = -0.14$ ,  $p = .889$  and schadenfreude,  $b_{\text{indirect}} = 0.05$ , 95%CI [-0.02, 0.13],  $z = 1.44$ ,  $p = .151$ . In addition, and in line with our model, the pathway through policy schadenfreude was significantly stronger than the pathway through policy negative empathy,  $b_{\text{contrast}} = -0.27$ , 95%CI [-0.42, -0.14],  $z = -3.51$ ,  $p < .001$ , although the pathway through general schadenfreude wasn't significantly stronger than the pathway through general negative empathy,  $b_{\text{contrast}} = -0.05$ ,

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<sup>4</sup> In this study's pre-registration, we included running a multilevel model on SDO, policy support, and emotions as our confirmatory hypotheses. We include these analyses in supplementary materials.

95%CI [-0.14, 0.00],  $z = -1.47$ ,  $p = .145$ <sup>5</sup>. After accounting for mediation through all four mediators, the relationship between SDO and support for harmful policies remained significant but reduced,  $b' = 0.13$ , 95%CI [0.05, 0.20],  $z = 3.24$ ,  $p = .001$ .

In contrast, the relationship between SDO and helpful policy endorsement,  $b = -0.29$ , 95%CI [-0.37, -0.21],  $z = -6.20$ ,  $p < .001$ , was mediated through policy positive empathy,  $b_{\text{indirect}} = -0.12$ , 95%CI [-0.18, -0.06],  $z = -3.56$ ,  $p < .001$ , general empathy,  $b_{\text{indirect}} = -0.08$ , 95%CI [-0.12, -0.04],  $z = -4.21$ ,  $p < .001$ , and general schadenfreude,  $b_{\text{indirect}} = 0.07$ , 95%CI [0.02, 0.13],  $z = 2.80$ ,  $p = .005$ , but not through policy gluckschmerz,  $b_{\text{indirect}} = -0.02$ , 95%CI [-0.06, 0.00],  $z = -1.72$ ,  $p = .085$ . In support of our hypotheses, the mediation pathway through policy positive empathy was significantly stronger than the mediation pathway through policy gluckschmerz,  $b_{\text{contrast}} = 0.10$ , 95%CI [0.04, 0.17],  $z = 2.721$ ,  $p = .006$ , while general empathy and schadenfreude mediated at equal strength<sup>6</sup>,  $b_{\text{contrast}} = 0.005$ , 95%CI [-0.06, 0.07],  $z = 0.14$ ,  $p = .887$ .

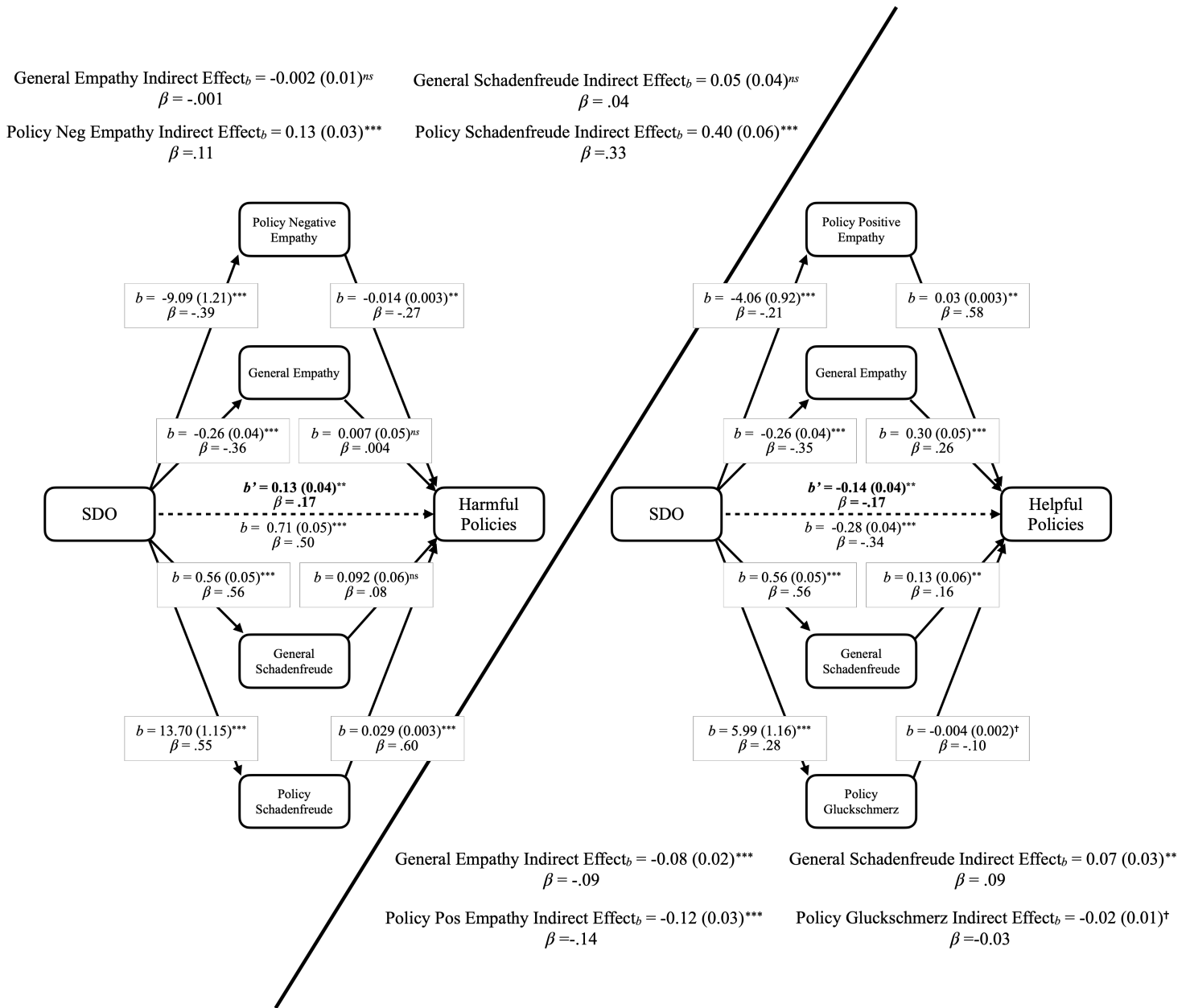
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<sup>5</sup> Replicating Study 1, general schadenfreude was a significantly stronger mediator than general (negative) empathy between SDO and support for harmful policies when those emotions are entered into a parallel mediation model alone without the policy emotions.

<sup>6</sup> General empathy was a significantly stronger mediator than general schadenfreude between SDO and support for helpful policies when those emotions are entered into a parallel mediation model without the policy emotions.

**Figure 3:**

*Empathy and counter-empathy mediating the relationship between SDO and harmful/helpful policies towards people who are homeless in Study 2*



*Presented are unstandardized regression weights (b) and associated standard errors (SEb) in parentheses and standardized weights (β). The adjusted statistics after mediation are bolded while the mediated relationship is represented by the dotted line. ns p > .1; † .05 < p < .1; \*p < .05; \*\*p < .01; \*\*\*p < .001*

## **Discussion**

All of our hypotheses were supported in this study. We hypothesized and found that SDO was positively related to counter-empathy and negatively related to empathy. We hypothesized and found that empathy had a stronger relationship with helpful policy endorsement than counter-empathy while counter-empathy had a stronger relationship than empathy with harmful policy endorsement. For both hypotheses, these effects were true for the general empathy/schadenfreude measures as well as the policy-specific emotions. Furthermore, we found support for our mediation model. How participants felt about the policies mediated the relationship between SDO and policy endorsement, above and beyond general empathy and schadenfreude towards people who are homeless. More specifically, policy schadenfreude was a stronger mediator for the relationship between SDO and harmful policies while policy-specific positive empathy was a stronger mediator for the relationship between SDO and helpful policies, exactly conforming to our model's predictions.

### **Study 3: Manipulating feelings of empathy and schadenfreude towards immigrants**

Studies 1 and 2 combined suggest that counter-empathy plays a unique role in support for actively harmful policies. However, both studies were correlational. Thus, we wanted to experimentally manipulate levels of empathic and counter-empathic emotions and test whether there was a corresponding shift in support for helping and harmful policies. We chose to focus on immigrants in Study 3, as we previously found in Study 1 that SDO's relationship with support for active harm for undocumented immigrants was more strongly mediated by schadenfreude while passive harm was more strongly mediated by (a lack of) empathy. Thus, in Study 3 we experimentally manipulated aspects of an immigrant from South America—namely their entry into the United States as well as the status of their occupation—who suffered a

misfortune. Previous research finds people feel more schadenfreude (and less empathy) towards targets that display hubris, are undeserving of their position, or have higher status (Cikara & Fiske, 2012; Smith et al., 2009), suggesting that manipulating the status and the way an immigrant enters the United States could modulate empathic and counter-empathic emotions.

Our hypotheses for this study were similar to the correlational ones in Studies 1 and 2. First, we expected that participants' levels of empathy and schadenfreude would depend on the status and entry-type of the immigrant. More specifically, participants would feel less empathy and more schadenfreude for immigrants that enter the U.S. unauthorized (or "illegally") or are high status (i.e., a dentist<sup>7</sup>) compared to immigrants that enter the U.S. with authorization or are low status (i.e., a farmer). Second, we expected participants' empathy and schadenfreude to be related to support for helpful and harmful policies. Participants in the authorized immigrant and the low-status immigrant conditions should show more support for helpful policies and less support for harmful policies compared to participants in the other conditions. Third, while not pre-registered as confirmatory but as exploratory, we hypothesized that empathy and schadenfreude would mediate the relationship between our manipulations (moving from authorized to un-authorized as well as moving from low to high status) and helpful and harmful policy support. We expected that shifts in empathy would correlate with helpful policy support while shifts in schadenfreude would correlate harmful policy support.

## **Methods**

### ***Participants***

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<sup>7</sup> We chose a dentist because we ran this study at the beginning of the COVID-19 pandemic. Traditional high-status jobs such as doctors and corporate America workers might have been seen differently when the demand for healthcare workers skyrocketed and many white-collar jobs were targeted for elimination.

Using Gpower (Erdfelder et al., 1996), we calculated that with 80% power and a small-medium Cohen's  $f$ , we could detect a main effect with 400 subjects (100 subjects in each condition). We multiplied 400 by three to include the second main effect and the interaction term for a total of 1200 subjects, adding 100 for attrition. We paid 1326 participants \$0.90 who passed the initial screener from Amazon Mechanical Turk through the CloudResearch platform using the same exclusion criteria as in Study 1. We excluded participants who did not remember Alejandro's migrant status or his nationality. There were 75 participants that didn't remember that Alejandro was from Guatemala and 183 participants that didn't accurately remember how Alejandro entered the United States. Approximately twice as many people incorrectly remembered that Alejandro entered the United States lawfully ( $n = 105$ ; even though in the story he entered unlawfully) than incorrectly remembered the reverse ( $n = 44$ ). After exclusions, we had a total of 1106 usable participants with 73.06% of them self-identifying as White. The sample comprised 629 men and 471 women (42.59%). The mean age of the sample was 37.14,  $SD = 12.66$ . We pre-registered that we needed at least 250 participants in each condition. We fulfilled that requirement, as there were at minimum 265 subjects in each condition.

### ***Procedure***

We told participants this was a study about different experiences in America. We randomly assigned participants to one of four vignettes about Alejandro: A male Guatemalan dentist or farmer immigrant who entered the United States with or without authorization. For all vignettes, a negative event happened to Alejandro after he entered (i.e., he couldn't find a job). After reading the vignette (and answering some comprehension checks to ensure they read the vignette), participants indicated their overall levels of empathy and schadenfreude about Alejandro as well as their support for policies that would help or harm Alejandro or people like

Alejandro. Participants always indicated their emotions first, and the order of answering the helpful and harmful policies about Alejandro or people like Alejandro was counterbalanced. Afterward the task, participants filled out the SDO scale and brief demographics.

### ***Scales and Measures***

**Empathic and Counter-Empathic Emotions towards Alejandro.** We assessed empathic emotions using the same nine-item scale format as in Study 1. We changed the target to be “Alejandro”; a sample question read “How happy do Alejandro’s circumstances make you feel?” Again, the scale was reliable split between empathy ( $\alpha = .90$ ;  $M = 3.09$ ;  $SD = 1.00$ ; factor loadings between .78-.84) and schadenfreude ( $\alpha = .94$ ;  $M = 1.69$ ;  $SD = 1.07$ ; factor loadings between .87 - .91), which each explained 36% of the variance in the scale.

**Social Dominance Orientation.** We measured SDO as in Study 1. Responses on this scale did not vary as a function of Occupation,  $F(1, 1102) = 0.617, p = .423$ , Entry-Type,  $F(1, 1102) = 1.07, p = .302$ , nor the interaction,  $F(1, 1102) = 1.50, p = .221$ .

**Harmful Policy Support.** We measured harmful policy support in two ways. The first was the same Posse scale towards immigrants used in Study 1. Second, we asked participants a single-item question around government obligation to prevent immigrants like Alejandro access resources on a 0 (No Obligation) – 100 (Strong Obligation) sliding scale. Participants thought the government did not necessarily have an obligation to harm people like Alejandro, as the mean ( $M = 46.93$ ) was significantly lower than the midpoint,  $t(1105) = -2.99, p = .003, d = 0.09$ .

**Helpful Policy Support.** We also measured helpful policy support in two ways. The first was the same seven-item policy support scale towards immigrants used in Study 1, asking participants to indicate how much they supported or opposed policies directed at improving the lives of “people like Alejandro”. Second, we asked participants a single item question around

government obligation to help immigrants like Alejandro access resources on a 0 (No Obligation) – 100 (Strong Obligation) sliding scale. Participants believed the government had an obligation to help people like Alejandro as the average response ( $M = 57.35$ ) was significantly above the midpoint,  $t(1104) = 7.66, p < .001, d = 0.23$ .

**Attitudes towards Immigrants.** Finally, we asked participants about their attitudes towards immigrants like Alejandro on a 0 (Extremely Negatively) – 100 (Extremely Positively) slider scale. Participants on the whole felt more positively than negatively towards immigrants like Alejandro ( $M = 65.63$ ), compared against midpoint:  $t(1105) = 20.01, p < .001, d = 0.60^8$ .

## Results

**Analyses.** We pre-registered running a series of 2 x 2 ANOVAs in which our manipulations predicted participants' empathy and schadenfreude as well as helpful and harmful policy support. Pre-registered again as exploratory, we ran mediation analyses such that our manipulation predicted helpful and harmful policy support mediated by empathy and schadenfreude.

**Table 3:**

*Descriptive statistics and zero-order correlations in Study 3*

	<i>M</i>	<i>SD</i>	$\alpha$	Correlations						
				1	2	3	4	5	6	7
1. SDO <sup>a</sup>	2.94	1.17	.92							
2. Empathy <sup>b</sup>	3.09	1.00	.90	-.20***						
3. Schadenfreude <sup>b</sup>	1.69	1.07	.94	.47***	.23***					
4. Government Help <sup>c</sup>	57.35	31.90	---	-.20***	.59***	.27***				
5. Government Harm <sup>c</sup>	46.93	34.08	---	.54***	-.25***	.43***	-.36***			
6. Harmful Policies <sup>d</sup>	2.92	2.1	.94	.62***	.11***	.78***	.10**	.58***		
7. Helpful Policies <sup>a</sup>	4.60	1.65	.92	-.42***	.56***	.18***	.66***	-.40***	-.05	
8. Attitudes <sup>c</sup>	65.63	25.97	---	-.29***	.59***	.15***	.65***	-.42***	-.10***	.62***

<sup>8</sup> We do not incorporate this measure in analyses, but report for completeness.

Note: \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

<sup>a</sup> scales anchored at 1-7

<sup>b</sup> scales anchored at 1-5

<sup>c</sup> scales anchored at 0-100.

<sup>d</sup> scales anchored at 1-9.

As in our previous studies, our correlations supported our model (see Table 3). SDO was significantly correlated with reduced empathy and increased schadenfreude, reduced government helpful behavior and increased harmful behavior towards Alejandro, as well as increased support for harmful policies and decreased support for helpful policies. Comparing correlations, we again found schadenfreude correlated more strongly than empathy with harmful policy support and government harm towards Alejandro while empathy correlated more strongly than schadenfreude with the Policy scale and government help towards Alejandro,  $t_s > 5.32$ ,  $p_s < .001$ .

**Emotions varying as a function of manipulation.** To test this question, we ran 2(Occupation) x 2(Entry-Type) between-subjects ANOVAs regressing empathy and schadenfreude separately. Only Entry-Type impacted emotions,  $F(1, 1102) = 34.57$ ,  $p < .001$  and the interaction was not significant. Participants felt more empathy for the immigrant that entered in the U.S. legally ( $M = 3.26$ ) compared to the immigrant that entered illegally ( $M = 2.91$ ),  $d = 0.36$ . Regarding schadenfreude, neither main effects was significant,  $F_s > 2.89$ ,  $p_s > .090$ , nor the interaction.,  $F(1, 1102) = 3.33$ ,  $p = .068$

**Policy support varying as a function of manipulation.** To test this question, we ran 2(Occupation) x 2(Entry-Type) between-subjects ANOVAs regressing each of our policy support DVs separately. For helping, there was a significant main effect of Entry-Type on participants policy support,  $F(1, 1102) = 9.66$ ,  $p = .002$ ,  $d = 0.19$ , as well as on belief that the government is obligated to help,  $F(1, 1101) = 107.32$ ,  $p < .001$ ,  $d = 0.62$ , but no main effect of Occupation or an interaction. Participants supported helpful policies more for the immigrant that entered in the

U.S. legally ( $M = 4.75$ ) compared to the immigrant that entered illegally ( $M = 4.44$ ) and thought the government was more obligated to help immigrants that entered in the U.S. legally ( $M = 66.56$ ) than to help immigrants that entered illegally ( $M = 47.54$ ).

The results diverged for harmful policy support. There was a significant main effect of *Occupation* instead of Entry-Type,  $F(1, 1102) = 5.01, p = .026$ , but still no interaction. Participants supported harmful policies more towards the low-status immigrant ( $M = 3.06$ ) compared to the high-status immigrant ( $M = 2.77$ ). In terms of support for government harm, there was only a main effect of Entry-Type,  $F(1, 1102) = 57.64, p < .001, d = 0.45$ . Participants thought the government was more obligated prevent immigrants that entered in the U.S. illegally ( $M = 54.72$ ) from accessing resources than immigrants that entered legally ( $M = 39.64$ ).

### ***Mediation Analyses between Manipulation and Policy Support***

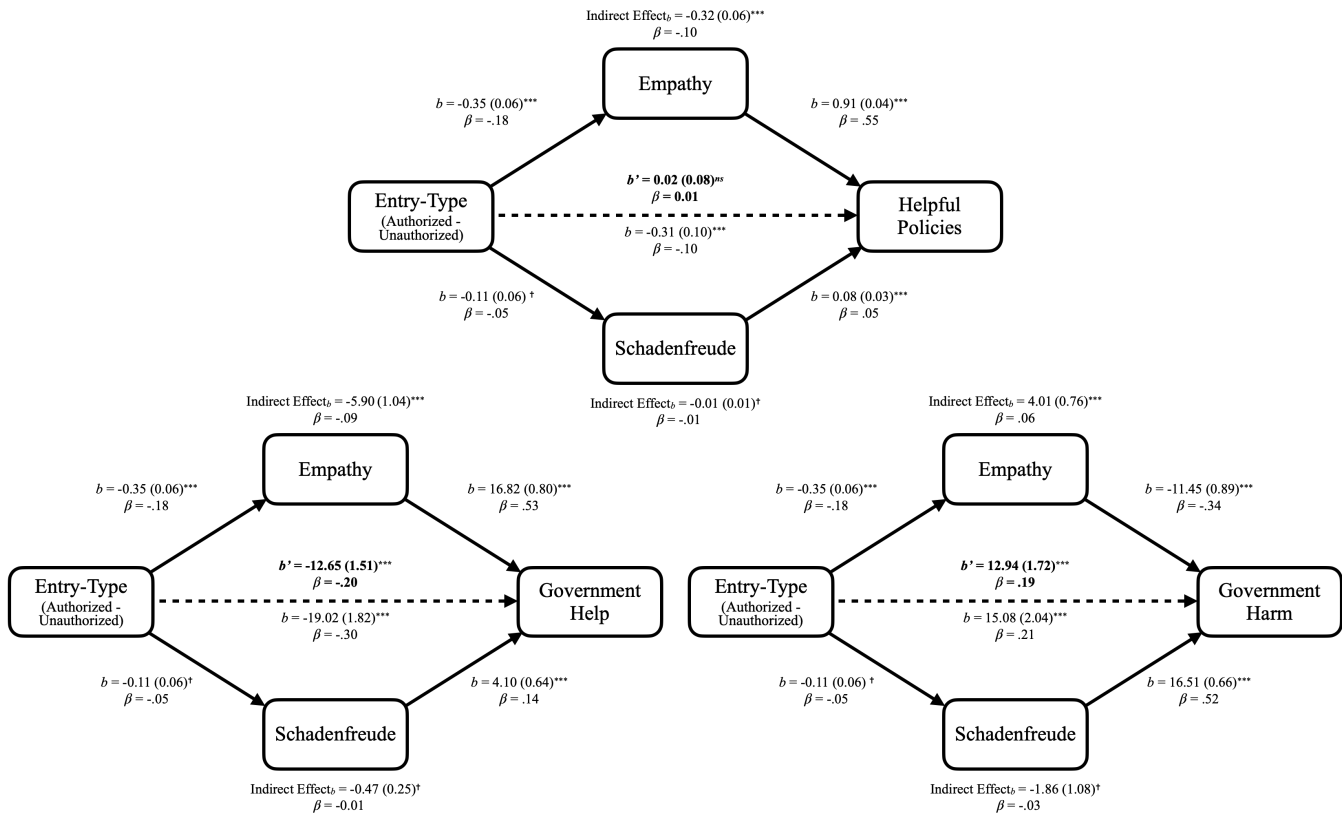
We again ran a series of parallel mediation analyses, this time assessing whether the effect of our manipulation on endorsement of help and harm could be accounted for by changes in empathy and schadenfreude (Figure 4). We also replicated the above mediation analyses with SDO as a predictor, which can be found in supplementary materials. Given that Entry-Type was the primary dimension along which emotions and policy support changed, we included only Entry-Type in our analyses as our predictor variable (i.e., moving from authorized to unauthorized). Because we only manipulated levels of empathy and, according to our model, empathy is primarily associated with a lack of help, we newly expect that only support for helpful policies would be mediated.

Using Entry-Type as a predictor in the parallel analyses, we found our hypothesized pattern for helpful policy support. Moving from authorized to unauthorized led to a reduction in policy support,  $b = -0.31, 95\%CI[-0.50, -0.12], z = -3.09, p = .002$ . Importantly, this relationship

was mediated through empathy,  $b_{\text{indirect}} = -0.32$ , 95%CI[-0.43, -0.21],  $z = -5.73$ ,  $p < .001$  but *not* schadenfreude,  $b_{\text{indirect}} = -0.01$ , 95%CI[-0.03, 0.00],  $z = -1.35$ ,  $p = .178$ . Furthermore, empathy was a significantly stronger mediator than schadenfreude ( $b_{\text{contrast}} = 0.31$ , 95%CI [0.20,0.42],  $z = 5.63$ ,  $p < .001$ ). Accounting for empathy’s mediation, the direct effect was no longer significant,  $b' = 0.02$ , 95%CI[-0.14, 0.18],  $z = 0.24$ ,  $p = .811$ .

**Figure 4:**

*Empathy and schadenfreude mediated the relationship between SDO and harmful/helpful policies towards immigrants in Study 3*



Note: Presented are unstandardized regression weights ( $b$ ) and associated standard errors ( $SE_b$ ) in parentheses and standardized weights ( $\beta$ ). The adjusted statistics after mediation are bolded while the mediated relationship is represented by the dotted line. ns  $p > .1$ ; †  $.05 < p < .1$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

Support for government help showed a similar effect. Moving from an authorized to unauthorized immigrant led to a reduction in the belief that the government should help,  $b = -$

19.02, 95%CI[-22.54, -15.36],  $z = -10.27$ ,  $p < .001$ . Again, this relationship was mediated only through empathy,  $b_{\text{indirect}} = -5.90$ , 95%CI[-7.91, -3.92],  $z = -5.79$ ,  $p < .001$  and not schadenfreude,  $b_{\text{indirect}} = -0.47$ , 95%CI[-1.01, 0.01],  $z = -1.80$ ,  $p = .073$ . The indirect effect through empathy was significantly stronger than the indirect effect through schadenfreude ( $b_{\text{contrast}} = 5.43$ , 95%CI [3.50, 7.42],  $z = 5.47$ ,  $p < .001$ ) and after accounting for the mediation, the direct effect became attenuated  $b' = -12.65$ , 95%CI[-15.61, -9.63],  $z = -8.17$ ,  $p < .001$ .

Entry-Type was not significantly related to support for harmful policies; however, we still investigated the indirect effects. We found that the indirect effect through empathy was significant  $b_{\text{indirect}} = 0.06$ , 95%CI [0.02, 0.10],  $z = 2.82$ ,  $p = .005$ , but not the indirect effect through schadenfreude,  $b_{\text{indirect}} = -0.18$ , 95% CI[-0.37, 0.01],  $z = 1.76$ ,  $p = .078$ . There also was no difference in the strength of each effect,  $b_{\text{contrast}} = -0.12$ , 95%CI[-0.32, 0.04],  $z = -1.27$ ,  $p = .203$ . In contrast, for government harm, changing the immigrant from authorized to unauthorized did impact levels of support,  $b = 15.08$ , 95%CI[-11.01, 19.04],  $z = 6.78$ ,  $p < .001$ . However, similar to support for harmful policies, only the indirect effect through empathy was significant,  $b_{\text{indirect}} = 4.01$ , 95%CI [2.62, 5.55],  $z = 5.31$ ,  $p < .001$  (schadenfreude  $b_{\text{indirect}} = -1.86$ , 95%CI [-4.02, 0.25],  $z = -1.71$ ,  $p = .088$ ) and there was no difference in the strength of the two effects,  $b_{\text{contrast}} = 2.15$ , 95%CI [-0.17, 4.34],  $z = 1.88$ ,  $p = .060$ . Accounting for the mediation attenuated the direct effect,  $b' = -12.94$ , 95%CI [9.61, 16.34],  $z = 7.60$ ,  $p < .001$ .

## Discussion

Study 3 aimed to manipulate levels of empathy and schadenfreude towards immigrants with the expectation that changing levels of emotions would subsequently change policy support. We partially supported our hypotheses. While our manipulation was only successful at altering levels of empathy, we then found empathy was only a stronger mediator compared to

schadenfreude for passive and not active harm, fully in line with our proposed model. In other words, empathy has a unique mediative role on passive, and not active, harm, suggesting that empathic and counter-empathic processes are dissociable. Engendering a lack of empathy was not sufficient to increase endorsement of active harm. We attempted to address the failed schadenfreude manipulation in the next experimental study.

#### **Study 4: Manipulating levels of empathy and schadenfreude towards individuals who use unemployment benefits**

Study 4 was a second attempt at manipulating schadenfreude in conjunction with empathy, using a new target: individuals on unemployment benefits. Due to the COVID-19 pandemic, the unemployment rate reached the highest levels in the history of tracking such data (Falk et al., 2021), setting up a situation in which empathy for individuals forced to turn to the government to help would be high. However, the unprecedented numbers of individuals receiving unemployment benefits, benefits augmented by the CARES Act passed in March 2020, raised concerns for benefits abuse, especially as lockdown measures eased and fewer people went back to work than expected (Morath, 2021). Thus, in Study 4 we experimentally manipulated people's orientations towards people on unemployment benefits by describing them as individuals who were responsibly spending their unemployment benefits or who were "misusing" them. Our pre-registered hypotheses for Study 4 were identical to Study 3, expecting the "responsible use" condition would mirror the "authorized entry" condition in Study 3.

#### **Methods**

##### ***Participants***

We based our sample size calculation on Schoemann and colleagues (2017). We piloted the manipulation in this study on our emotions and used those zero-order correlations in the

simulation (see supplementary materials). However, we did not measure the policy support questions in the pilot, so we took the zero-order correlations from a previous study in which we included our policy support questions in conjunction with a manipulation for poor targets (Supplementary Study 1). We used the Monte Carlo Power Analysis calculator for indirect effects (1000 reps) and found that a sample size of 350 gave us 80% power to detect all indirect effects as well as calculating the difference between the indirect effects. We ran the model both for helpful and harmful policy support and found the same result.

Thus, we aimed for 700 participants to account for the two conditions. We paid 785 participants \$0.90 who passed the initial screener from Prolific.co through using the same exclusion criteria as in Study 1. We excluded four participants who failed our attention check, which asked people “How many fatal heart attacks have you had”, with the correct answer being zero. The mean age of the sample was 36.21,  $SD = 13.92$ . We pre-registered that we needed at least 350 participants in each condition. We fulfilled that requirement, as there were at minimum 390 subjects in each condition.

### ***Procedure***

We told participants that they would respond to a news story that is currently circulating in America. We randomly assigned participants to read one of two articles: an article that discussed people abusing their COVID-19 unemployment benefits on non-necessities (misuse condition) or people using their benefits only for bills and rent (responsible condition)<sup>9</sup>. After reading the article (and indicating their thoughts about it in an open-ended response question as well as filling out a manipulation check), participants indicated their empathic and counter-

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<sup>9</sup> We ran a pilot study assessing whether this manipulation impacted empathy and schadenfreude. We found that indeed, participants in the “responsible use” condition felt more empathy and less schadenfreude than participants in the “misuse” condition. These analyses can be found in supplementary materials. In the study presented, we also tested policy support and mediation analyses.

empathic emotions in a situation in which unemployment benefits might be significantly harder to obtain. They then responded to the same helpful and harmful policy support questions as in the poor condition in Study 1 in a randomized order, the SDO<sub>7</sub> scale, and brief demographics.

### ***Manipulations and Measures***

**Manipulation.** Participants read one of two article vignettes that discussed how participants were spending their pandemic stimulus benefits. Participants in the “misuse” condition read that “at least half of adults in households with incomes of \$25,000 or less said they were using their payments in part for indulgent purchases,” and read about a woman named Lisa’s experiences with her friends misusing the benefits. In contrast, participants in the “responsible use” condition read that “87.6% of adults in households with incomes of \$25,000 or less said they’d use their stimulus payments to meet immediate expenses,” and read about Lisa’s experiences using her stimulus benefits to pay her rent, leaving her with only \$12.00 left over.

Participants reported how they thought overall people have been spending their stimulus benefits, either on necessities or on luxuries, on two 100-point sliders from “None of it” to “All of it”. The manipulation was successful in shifting how people thought benefits were being spent, as participants in the “responsible use” condition thought people were spending more of their money on necessities ( $M = 80.12$ ) than participants in the “misuse” condition ( $M = 60.93$ ),  $t(752.25) = 13.11, p < .001, d = 0.94$ . Participants in the “responsible use” ( $M = 20.89$ ) condition also believed participants were spending less money on luxuries than participants in the “misuse” condition ( $M = 42.66$ ),  $t(762.55) = -14.25, p < .001, d = -1.02$ .

**Empathic and Counter-Empathic Emotions.** We assessed empathic emotions using the same scale format as in Study 3 but newly on 100-point sliders. Participants indicated how good, sad, relieved, etc., they would be if “unemployment benefits became dramatically more

restrictive so that far fewer people would qualify.” Again, the scale reliably split between empathy (factor loadings between .50 - .87) and schadenfreude (factor loadings between .88 - .94), which explained 38% and 29% of the variance in the scale respectively.

**Social Dominance Orientation.** We measured SDO as in Study 1. The scale marginally varied as a function of our empathic response manipulations,  $F(1, 782) = 3.38, p = .067, d = -0.13$ . Participants in the “misuse” condition ( $M = 2.39$ ) tended to report higher SDO scores than participants in the “responsible use” condition ( $M = 2.23$ ).

**Harmful and Helpful Policy Support.** We measured harmful and helpful policy support using the same scales used in Study 1 towards poor people.

## Results

### *Analyses*

We pre-registered running a series of *t*-tests in which our manipulation predicted participants’ empathy and schadenfreude as well as helpful and harmful policy support. Furthermore, we pre-registered running parallel mediation analyses such that the effect of our manipulation on Helpful and Harmful Policy support (separately) was mediated by participants’ empathic and counter-empathic feelings towards unemployment recipients. Zero-order correlations and descriptive statistics can be found in Table 4.

**Table 4:**

*Descriptive statistics and zero-order correlations in Study 4*

				<b>Correlations</b>			
	<i>M</i>	<i>SD</i>	$\alpha$	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1. SDO <sup>a</sup>	2.31	1.19	.94	--			
2. Empathy <sup>b</sup>	53.61	26.68	.85	-.47***	--		
3. Schadenfreude <sup>b</sup>	14.40	21.49	.95	.46***	-.39***	--	
4. Helpful Policies <sup>a</sup>	1.71	1.19	.93	-.53***	.54***	-.45***	--

5. Harmful Policies <sup>c</sup>	5.18	1.53	.93	.41***	-.08*	.40***	-.11**
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Note: \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

<sup>a</sup> scales anchored at 1-7

<sup>b</sup> scales anchored at 0-100

<sup>c</sup> scales anchored at 1-9.

As in our previous studies, our correlations supported our hypotheses. SDO significantly correlated with reduced empathy and increased schadenfreude, reduced support for helpful policies and increased support for harmful policies. Empathy was negatively related to harmful policy support and positively related to helpful policy support while schadenfreude was positively related to harmful policy support and negatively related to helpful policy support. We again find schadenfreude correlated more strongly with the harmful policy support scale than empathy,  $t(785) = -8.84, p < .001$ . Empathy was also significantly more strongly correlated with helpful policy support than schadenfreude,  $t(785) = 2.78, p = .006$ . Next, we tested whether our manipulations impacted emotions and policy support.

**Emotions and Policy Support Varying as a Function of Manipulation.** We ran two  $t$ -tests on the amount of empathy and schadenfreude participants reported, by condition. In line with hypotheses, participants felt more empathy ( $M = 59.31$ ),  $t(780.71) = 6.09, p < .001, d = 0.44$ , and less schadenfreude ( $M = 12.21$ ),  $t(776.87) = -2.85, p = .0045, d = -0.20$ , in the “responsible use” condition compared to the “misuse condition” ( $M_{\text{empathy}} = 47.96, M_{\text{schadenfreude}} = 16.56$ ). However, neither levels of helpful policy support ( $M_{\text{responsible}} = 5.25, M_{\text{misuse}} = 5.12$ ),  $t(781.52) = 1.20, p = .232, d = 0.09$ , nor harmful policy support ( $M_{\text{responsible}} = 1.72, M_{\text{misuse}} = 1.71$ ),  $t(781.90) = 0.14, p = .888, d = 0.01$ , varied by condition.

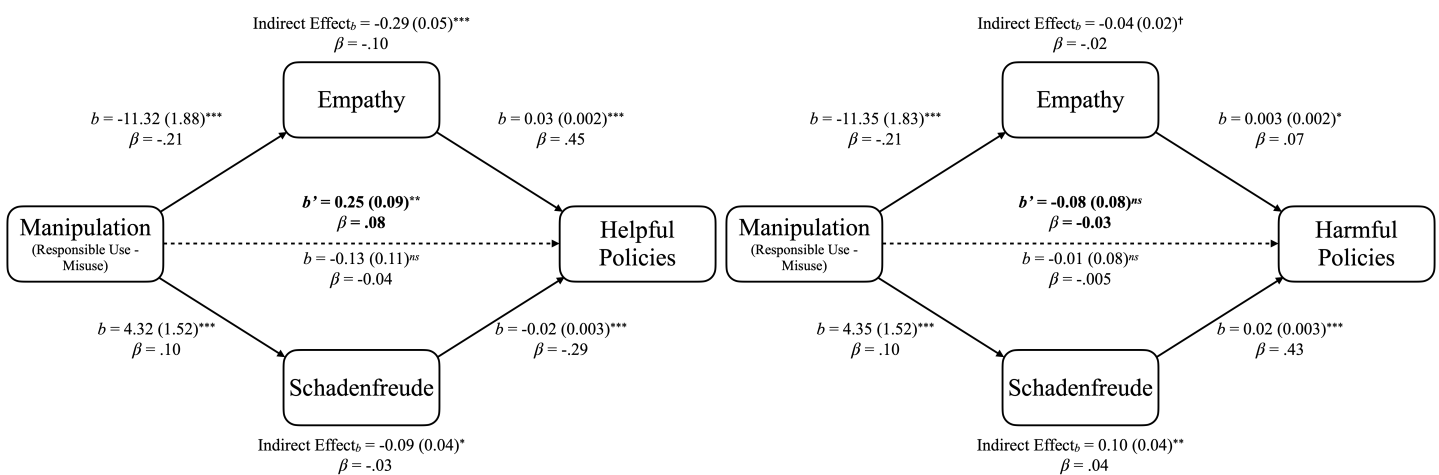
**Mediation Analyses between Manipulation and Policy Support.** While the manipulation did not directly impact helpful and harmful policy support, we still ran parallel mediation analyses to assess whether the indirect effects were significant. Parallel mediation models with SDO can be found in the supplemental materials. Given that empathy and

schadenfreude theoretically mediate the effect of the manipulation on policy support in opposite directions, the indirect effects might be significant without evidence of a direct effect.

Starting with helpful policies, we find our hypothesized pattern. While both the indirect effect through empathy,  $b_{\text{indirect}} = -0.29$ , 95% CI[-0.40, -0.20],  $z = -5.70$ ,  $p < .001$ , and schadenfreude,  $b_{\text{indirect}} = -0.09$ , 95%CI[-0.17, -0.03],  $z = -2.49$ ,  $p = .013$ , were significant, empathy was a significantly stronger mediator than schadenfreude ( $b_{\text{contrast}} = 0.21$ , 95%CI [0.10, 0.32],  $z = 3.66$ ,  $p < .001$ ). We did not find our hypothesized pattern for harmful policies. While the indirect effect through schadenfreude,  $b_{\text{indirect}} = 0.10$ , 95% CI[0.04, 0.18],  $z = 2.76$ ,  $p = .006$ , was significant but not the indirect effect through empathy,  $b_{\text{indirect}} = -0.04$ , 95%CI[-0.08, 0.00],  $z = -1.92$ ,  $p = .054$ , schadenfreude was still not a significantly stronger mediator than empathy,  $b_{\text{contrast}} = -0.07$ , 95%CI [-0.14, 0.00],  $z = -1.78$ ,  $p = .075$ .

### Figure 5:

*Empathy and schadenfreude mediating the relationship between SDO and harmful/helpful policies towards people on unemployment benefits in Study 4*



Note: Presented are unstandardized regression weights ( $b$ ) and associated standard errors ( $SEb$ ) in parentheses and standardized weights ( $\beta$ ). The adjusted statistics after mediation are bolded while the mediated relationship is represented by the dotted line. ns  $p > .1$ ; †  $.05 < p < .1$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

## **Discussion**

Study 4 had mixed findings like Study 3. Consistent with past studies our correlations were completely in line with our hypotheses. However, while both empathy and schadenfreude towards people on unemployment benefits changed as a function of our manipulation in the expected direction, there was not a subsequent change in support for helpful and harmful policy support. That said, the indirect effect of empathy was still more strongly related to helpful policy support than was schadenfreude.

### **General Discussion**

Across four studies, we probed the role of empathy and schadenfreude in explaining the relationship between SDO and support for harmful intergroup processes. We consistently find support for most of our hypotheses. Using a variety of targets, outcome measures, and online samples, SDO was negatively related to empathy while also being positively related to schadenfreude in all studies. SDO, empathy and schadenfreude also correlated with active and passive harmful policy support as predicted by our model for all studies. Crucially, in every case tested (i.e., 14 out of 14 cases), empathy was more strongly related to passively harmful policy support than schadenfreude, while schadenfreude was more strongly related to actively harmful policy support than empathy. This finding underscores the relevance of schadenfreude, above and beyond empathy, as an emotion that can support hierarchy maintenance through harmful means.

Furthermore, SDO's relationship with both helpful and harmful policy support was mediated through empathy and schadenfreude in unique ways. Across all studies (including supplementary analyses from Studies 3 and 4), while SDO was related to both actively and

passively harmful policy support, empathy was the stronger mediator for passive harm in four out of seven cases. Of the three cases in which empathy was not the stronger mediator, in two of those cases empathy was an equally strong mediator as schadenfreude (towards poor people in Study 1 and immigrants in Study 3). Similarly, schadenfreude was the stronger mediator compared to empathy for active harm in six out of seven cases. These findings highlight that other emotions beyond empathy are relevant for support for active harm.

Studies 3 and 4 attempted to directly manipulate emotional responses and see subsequent change in policy support. While we were not successful in manipulating levels of schadenfreude in Study 3, we did manipulate levels of empathy. The change in participants' levels of empathy explained changes in support for passive harm, showcasing a disassociation between passive and active harm in line with our model. Support for passive harm is uniquely connected to empathy, relative to schadenfreude, and support for passive harm does not necessarily mean individuals will support active harm. In Study 4, our manipulation altered levels of empathy and schadenfreude but not subsequent policy support. That said, the indirect effect of our manipulation through empathy for passive harm was stronger than the indirect effect through schadenfreude, again in line with hypotheses.

Across all studies there were several findings that invite further inquiry. First, although the inhibitory and facilitative roles of empathy and schadenfreude seem to be occurring simultaneously, their manifestations were not consistent across target groups. For example, in Study 1, SDO did not relate to feelings of schadenfreude towards LGBT targets to the same degree as it did towards poor people or undocumented immigrants, suggesting that antipathy might not be a strong factor to why social dominants show increased prejudice towards LGBT individuals. Instead, those higher in SDO seem to support for harmful policies against LGBT

individuals primarily due to disinterest in their plight rather than a reveling in their misfortunes. As another example, the correlation between SDO and levels of schadenfreude, and the indirect effect of SDO impact on harmful policy support through schadenfreude, was highest towards people who are homeless.

Both findings suggest that aspects of the low status groups in question, perhaps perceived competition and threat as well as the symbolic or realistic nature of the competition and threat, are important moderators of the effect. There is not strong evidence that those higher in SDO perceive LGBT individuals as threats (Moor et al., 2019; Whitley, Jr. & Lee, 2000), which supports the lack of connection between SDO and schadenfreude. Similarly, homeless people are routinely dehumanized (Bruneau et al., 2018) and subjected to punitive policies (Faragó et al., 2021), supporting a particularly strong connection between SDO and schadenfreude. Thus, our model might be best applied towards low-status groups that are seen as realistically threatening (e.g., resource consumption) rather than symbolically threatening (e.g., changing values). This becomes further complicated by the fact that the same low status group can be seen as realistically or symbolically threatening (Stephan et al., 1999). Additional research is needed to test this prediction.

Second, there was an asymmetry in how often empathy and schadenfreude mediated the relationship between SDO and harmful policy support. While our hypotheses were rooted in the relative strength of the indirect effects, overall schadenfreude was often related to both types of harm while a lack of empathy tended to be related to passive harm specifically. We did not a priori hypothesize this, but this pattern is in line with previous work. Schadenfreude likely exists in tandem with a lack of empathy, but a lack of empathy does not necessarily imply feeling schadenfreude. Thus, we should expect to see antipathy related to harm regardless of its type,

while apathy is specifically tied to passive harm. In sum, the antecedents to passive harm might be less straightforward than active harm, a discussion we turn to in the limitations section below.

### **Implications and Future Directions**

Here we discuss our findings in juxtaposition to the positionality of ideology, emotions, and attitudes in models that explain intergroup violence as well as other relevant ideologies such as RWA and system justification.

**SDO in Relation to Other Ideologies.** Although we've discussed the relationship between SDO, empathy, and counter-empathy exclusively, we would be remiss not to discuss other ideologies like system justification (Jost et al., 2004) and right-wing authoritarianism (RWA; Duckitt, 1989) that correlate with SDO and thus could be important contributors to these processes. Dual process motivational models discuss the synergic effects of SDO and RWA on SDO and prejudice as well as emotions like anger and disgust (Duckitt & Sibley, 2009; Matthews & Levin, 2012), suggesting that RWA in particular might be relevant for understanding when SDO predicts empathic and counter-empathic responding. Recent work on system justification finds that increased beliefs in the legitimacy of the current economic system predicts decreased emotional reactions in the face of poverty (Goudarzi et al., 2019) while RWA is often correlated with reduced trait levels of empathy (Bäckström & Björklund, 2007). Thus SDO, RWA, and system justification are all likely related to empathic responding.

However, there is evidence to suggest that the general connection between ideology and counter-empathy is unique to SDO. Part of the signature of a social dominant is their belief that the world is a dog-eat-dog place in which groups are always competing with one another. In those environments, counter-empathy thrives. Furthermore, SDO is routinely related with hostile behaviors and attitudes. For example, SDO is linked with hostile sexism but not benevolent

sexism, while RWA is uniquely linked with benevolent sexism only (Sibley et al., 2007). SDO is positively related to increased punitiveness and desire for retribution (Redford & Ratliff, 2018; Sidanius et al., 2006, 2007), all actively harmful behaviors and attitudes that seem to be well served by also feeling counter-empathy. Of course, for someone high in RWA or someone high in system justifying beliefs, there are situations in which they could feel counter-empathy and quite strongly. Indeed, our findings with LGBT targets suggest that RWA might be the relevant ideology that motivates feeling increased schadenfreude above and beyond SDO. However, SDO might be tied to feeling counter-empathy chronically as well as situationally. More research is needed to understand the common and unique variance explained by SDO, RWA, and other ideologies on empathic and counter-empathic emotions in a variety of settings.

**Modeling the Positionality of Attitudes, Emotions, and Ideologies.** In this research we treated SDO as the cognitive process that influences affective reactions and ultimately policy support. However, SDO has characteristics of both a personality variable and an ideology. In its resemblance to a personality variable, SDO also influences other ideologies. For example, research shows that SDO's influence on behavior and policy support goes through endorsement of hierarchy legitimizing attitudes and ideologies that serve as justification. SDO was negatively related to noblesse oblige beliefs (i.e. beliefs about the responsibility of the wealthy to support the poor) but positively related to racism, which both predicted support for social welfare (Pratto et al., 1998). If SDO predicts ideologies and attitudes, it is not clear where to place emotions in this causal pathway.

Work on intergroup helping and empathy suggests three possible configurations (Dovidio et al., 2010). SDO could be serially mediated through empathy and attitudes, placing empathy before attitudes and behavior in the causal chain. Empathy and attitudes also could serve as

parallel mediators between SDO and intergroup behavior. Finally, attitudes could moderate empathy's mediation of the SDO – intergroup behaviors link. Depending on the context, all these configurations could reflect reality; future research can uncover under what situations one configuration would be more appropriate over another.

### **Limitations**

Despite the richness of our findings, there are several limitations to this research. First, our model focuses only on group-based suffering for low-status groups. Future research should expand beyond negative events and include positive ones to generalize empathic and counter-empathic responses (i.e., we did not explicitly measure positive empathy nor *gluckschmerz* although the results from the mediations in Study 2 suggest we would find similar results). We also only included targets low in status. However, these processes should still be at play for targets higher in status, just in the opposite direction. High status targets allow for more stringent tests of the motivated nature of empathic responding as a function of SDO, as previous work has shown SDO can even relate to increased *schadenfreude* towards high-status ingroup members (Hudson et al., 2019).

Second, we did not measure actual behavior. Although policy support is an important downstream consequence of SDO, assessing behavior, and ideally harmful violent behavior, is important. For example, SDO is associated with more harmful responses on the Vladimir task, where individuals indicate how punitive they are willing to be towards an outgroup at the increasing cost of harming the ingroup. Are responses on the Vladimir task specifically motivated by feelings of *schadenfreude* towards out-group targets (Sidanius et al., 2007)? Does feeling *schadenfreude* lead to collective violence as a function of SDO? Future research should measure behavior, especially since it is unclear whether supporting harmful policy support is

simply a milder form of engaging in harmful intergroup behaviors, or whether the underlying motivations to support harmful policies versus engage in harmful behaviors are dissociable. Understanding the connection between our work on policy support and behavior is relevant because of theorizing that feeling *schadenfreude* facilitates intergroup harm (Cikara, 2015). It is unclear whether *schadenfreude* is purely a passive emotion (Spears & Leach, 2004) or is involved in cycles of reactive emotional responses that can lead to violence (D. W. Davis & Wilson, 2022; Littman & Paluck, 2015). Our results suggest that *schadenfreude* is at least a powerful emotion for *support* for intergroup harm, but we assessed emotions and policy support at the same time temporally. For emotions to influence behavior, ideally these constructs would be assessed sequentially, such that feeling *schadenfreude* (above and beyond not feeling empathy) at time 1 would predict engagement in actively harmful behaviors at time 2.

Third, we only examined the affective components of empathy. Future research should explore whether cognitive components of empathy, like perspective taking and/or empathic concern towards low status groups, also mediate the relationship between SDO and harmful policy support. Related, future work must test whether other emotions serve as mediators between SDO and harmful policy support and behaviors. For example work on the dual process motivational model has connected SDO to feelings of anger but not disgust. (Matthews & Levin, 2012), suggesting that empathy and *schadenfreude* are not the only relevant emotions to further downstream intergroup outcomes. That said, there is evidence that *schadenfreude* might be a uniquely related to hierarchy maintenance as *schadenfreude* has been shown to be a social-dominance regulator, deployed specifically to lower the perceived status of a person and/or group in the eyes of others (Lange & Boecker, 2019). Thus, while other emotions might relate to

harmful policy support and behaviors, counter-empathy might be uniquely tied to motivations to maintain hierarchy and distinctions between social groups.

Fourth and finally, we conflate a lack of help with passive harm. While it is clear that not supporting policies that help marginalized groups is a form of passive harm, other theories on active and passive processes places these two constructs on separate axes. For example, according to the BIAS map (Cuddy et al., 2008), active harm and active help are the two ends of one axis while passive harm and passive facilitation are the two ends of another. These studies are unable to disentangle whether there is a latent factor of passive versus active, as posited by the BIAS map, or a latent factor for help versus harm. We look forward to subsequent research that will continue to more precisely specify these constructs.

## **Conclusion**

In 2018 Adam Serwer, a writer for The Atlantic, wrote an article entitled “The cruelty is the point” (Serwer, 2018), offering the opinion that some of the nasty partisan behavior seen in American politics is motivated by actual delight in the suffering of others. Although he was writing specifically about politics, the idea that cruelty towards other groups can facilitate violence is a more general one, and one that hasn’t received much attention in the literature, especially compared to the power of empathy. Empathy is often hailed as the emotion to target in intergroup conflicts, as it predicts consequential prosocial behaviors that can help reduce inequality. While people can struggle to feel empathy for those not part of their social groups, it is clear that empathy cannot adequately explain why people harm members of other groups.

In this paper we developed a model that offers a more nuanced perspective, proposing that we need to incorporate a second, understudied emotion, namely *schadenfreude*, to understand people’s more nasty, harmful behaviors. Not only do people’s levels of social

dominance orientation, or SDO, motivate feeling reduced empathy and increased schadenfreude towards low-status groups in America, these relationships have consequences. SDO is related to passive harm primarily through a lack of empathy while schadenfreude is the emotion that mediates the relationship between SDO and active harm.

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