Being an Effective Ally: Values, Self-Efficacy, and Outgroup Collective Efficacy Predict Support for Autonomy- and Assistance-Focused Affirmative Action Policies

A DISSERTATION

SUBMITTED TO THE FACULTY OF THE UNIVERSITY OF MINNESOTA

BY

Hyun Euh

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

Advisors:

Marti Hope Gonzales, Ph.D.

Mark Snyder, Ph.D.

August 2021

Acknowledgements

I wouldn't have been able to complete the dissertation without help from the people around me. First of all, I would like to thank my advisors Dr. Marti Hope Gonzales and Dr. Mark Snyder for mentoring me to become an independent researcher. Marti, you helped me find meanings in what we do and cherish what is important in life. Mark, you encouraged me to answer big questions and supported me to actualize it. I am deeply grateful to my committee chair Dr. Alex Rothman and reviewer Dr. Christopher M. Federico for providing their valuable feedback and going above and beyond to improve my dissertation. I also wish to thank Dr. Akshay Rao for his support and insights and to acknowledge Dr. Hoon-Seok Choi for his unwavering encouragement and guidance for the past 10 years.

All my academic friends and colleagues: Monique Nakamura, Hyunsuk Lee, Rachael Jones, I wouldn't have made it through if it weren't for you. Thank you for moral support, loads of laughter, and stimulating conversations. Keven Joyal-desmarais, you helped me from day one in the graduate program and keep inspiring me to be a better scholar. Lauren Clatch, I'm lucky to have a friend and colleague like you. Hyerin Han, Hyesung Yoo, thank you for being there for me through thick and thin.

To my family: We are an ocean apart, but you are always close to my heart. My mom, Hyunjoo Lee, I'm forever indebted to your unconditional love and support. My dad, Kyungsun Euh, you believed in me when I couldn't, and it helped me through the dark times. Aunt (Gomo) Heungsun Euh, thank you for being a great example. I'm following in your footsteps. Aunt (Imo) Kyungjoo Lee and uncle (Imobu) Gookhan Yoon, I'm grateful to you for embracing me into your family and looking out for me since 2002 when I first landed in the United States.

To my friends: I have not been the greatest friend, and thank you for being patient with me. Doore Lee, Soyoon Lee, Nakyung Ahn, together we passed through the most vigorous phase of life and now we are walking on different paths. But I know for sure that we will be walking alongside each other for the rest of our lives. Kyujin Kim, you always make me want to be a better person. I admire you and miss you. Yihwa Baek, I was fortunate to have met you, and you completed my life in Minnesota. Jeong-gil Seo, we argue, talk nerdy, and laugh over drinks. I hope we continue for years to come.

Lastly, I wish to express my appreciation to the department of psychology at the University of Minnesota and everyone who donated to Mark Snyder Graduate Student Research Fund for financial support.

Abstract

Members of high-status groups (e.g., White Americans) often act as allies who invest effort to benefit members of low-status groups (e.g., Black Americans). Although this effort can manifest in a wide range of behaviors, little is known about what predicts these varied actions. The current research investigated motivation and cognition as predictors of White Americans' attitudes and behavior to reduce racial inequality. Specifically, I argue that both egalitarian values *and* self-efficacy are necessary to predict Whites' efforts to reduce group-based inequality (i.e., allyship). Study 1 used a large representative database to provide correlational evidence that individuals' egalitarian beliefs interact with sociopolitical self-efficacy to predict support for affirmative action policies. Building on the findings from Study 1, Study 2 tested whether White Americans' perceptions of Black Americans' collective efficacy are associated with different types of ally behavior (i.e., policies that are focused on developing Blacks' autonomy vs. those that provide direct assistance to fulfill immediate needs). Study 2 showed that perceptions of Blacks' collective efficacy indeed moderated the interaction between egalitarian beliefs and self-efficacy. Findings revealed that White Americans who both have strong egalitarian beliefs and feel efficacious in sociopolitical domains were more likely to support both autonomy- and assistance-focused policies when they believe that Blacks are incapable of producing positive social change, compared to when they believe that Blacks *are* capable of creating such change. However, this effect was reversed for egalitarians who feel inefficacious, suggesting the positive effect of perceiving Blacks as capable of changing society. Study 3 replicated this three-way interaction using an experimental approach, which attests to the causal role of perceptions of Blacks' collective efficacy in shaping Whites' support for policies and programs that are aimed at reducing racial inequality. Findings from these three studies have implications for how powerholders in institutions, organizations, and society can become the catalyst for reducing group-based inequality. Implications for public and organization policy, campaigns, and interventions will be discussed.

Keywords: racial inequality, allyship, egalitarian values, self-efficacy, collective efficacy, affirmative action, political action

Table of Contents

List of Tables

List of Figures

Introduction

Social and moral causes mobilize people, and a united voice from a collective brings changes to the core pillars of society, including laws, policies, and civic consciousness. A recent social movement in response to George Floyd's death is one such example. Over twenty million people in the United States gathered to protest against racial injustice, and it became a global rally, with citizens from more than 60 countries participating in the movement (Buchanan et al., 2020). As can be inferred from the large number of participants, this movement was not limited to those who have been directly affected by the injustice: Protests took place in White-majority areas, with active White American participants. We have also seen male participants in Women's marches (Shavin, 2017) and cis-gendered heterosexuals in LGBT rights movement (Fingerhut, 2011). It is almost axiomatic that these socially advantaged group members' (e.g., male, White, non-LGBT) participation in efforts to reduce inequality plays an important role in amplifying the impact of the movements. This is because a bigger collective has a more powerful voice, and also because advocacy coming from a high-status group tends to be perceived as more legitimate and persuasive than that from a low-status group (McGarry & Hendrick, 1974; Moscovitz, 1996). In addition, high-status groups by definition have more power and resources that might produce actual changes in the real world. In the absence of such support, institution/system-level biases will likely persist, and thus the attainment of a more equitable society will be delayed. Therefore, it is important to investigate what predicts high-status group members' efforts to reduce intergroup inequality, in short, to study ally behavior.

My objectives in this research are twofold: Focusing on racial inequality, I aim to develop a model that outlines different types of programs and policies that are aimed at reducing inequality and to identify their key predictors. The current research distinguishes affirmative action policies that focus on developing disadvantaged group members' autonomy from those that focus on providing direct assistance to them. The former includes programs and policies such as providing opportunities for developing skills and promoting systemic changes to debias hiring processes. Some examples of the latter include providing subsidies and lowering the standards for racial minority jobseekers. Both policies bring benefits to racial minorities, but I argue that they are distinct and vary in their effectiveness at reducing group-level inequality. To be specific, autonomy-focused policies are expected to be more effective, as they are more likely to increase racial minorities' capabilities, autonomy, and sense of empowerment and to bring about group-level changes. Autonomy is a fundamental human need and considered one of important aspects of human functioning (e.g., Self-Determination Theory; Ryan & Deci, 2000). A sense of autonomy and agency is central to initiating tasks, accomplishing goals, and psychological well-being (Ryan & Deci, 2004). Also at the group level, providing disadvantaged group members with opportunities to develop competence and promote independence will be more effective at narrowing the intergroup status gap, compared to handing them a solution that will alleviate their immediate difficulties (Nadler & Halabi, 2006).

Based on this distinction of two key outcome variables, below are the main hypotheses:

Hypothesis 1. There is a racial gap in efforts to reduce racial inequality, such that White Americans, compared to racial minorities, are less likely to support policies aimed at reducing racial inequality.

Hypothesis 2. White Americans who both hold egalitarian values *and* have a sense of sociopolitical efficacy are most likely to support policies aimed at reducing racial inequality (compared to those who hold egalitarian values but who do not have a sense of efficacy and to those who do not hold egalitarian values).

Hypothesis 3. White Americans' perceptions of racial minorities' collective efficacy in bringing about social change positively predicts support for autonomy-focused policies, but not for assistance-focused policies.

My hypotheses have been formulated, in large part, based on the foundational tenet in psychology that *both* motivation and ability are necessary to materialize an action, with the former manifested in egalitarian values and the latter in efficacy beliefs. It is expected that egalitarian values will guide Whites' motivation towards ally behavior, and that sociopolitical efficacy will provide a sense of ability to successfully carry out the behavior. In addition, recent findings have demonstrated that people engage in different ways to help socially disadvantaged groups (e.g., Duncan, 2012; Ho & Unzueta, 2015; Nadler & Halabi, 2006). Integrating the findings, I will operationalize an *effective* ally behavior and test the causal role of Whites' perceptions about racial minorities in encouraging or discouraging such behavior. Results obtained will contribute to the knowledge of the dynamic interplay between values and efficacy beliefs as necessary conditions for tackling social inequalities.

To test these hypotheses, I conducted two correlational studies and one experimental study. In Study 1, I used datasets from national surveys to investigate how White Americans' egalitarianism and self-efficacy are associated with attitudes toward affirmative action using datasets from national surveys. In Study 2, I examined whether Whites' perceptions of Blacks' collective efficacy lead to a less or more effective ally behavior (i.e., assistance- vs. autonomy-focused policies). In Study 3, I tested the causal role of Whites' perceptions of Blacks' collective efficacy in getting involved in a less vs. more effective ally behavior. Implications of the three studies for intervention for socially advantaged group members to become an effective ally to the disadvantaged group will be discussed.

High-Status Group Members as Allies: Why Is It Important?

Theories in social psychology have long assumed that participants in equality efforts come from the low-status group that stands to benefit from challenging the status quo (Tajfel & Turner, 1979; Wright et al., 1990) and have traditionally viewed members of high-status groups as seeking to maintain the social hierarchies that benefit their groups (e.g., Leach et al., 2008; van Zomeren et al., 2008). However, both anecdotal and empirical evidence suggests that some members of high-status groups engage in behaviors that benefit low-status outgroups and reduce group-based inequality (i.e., allyship; e.g., Russell & Bohan, 2016; Sabat et al., 2013). It is crucial that high-status group members coordinate resources and labor to advocate for the interests of low-status groups to challenge systems of intergroup inequality (Goldberg, 1991; Tilly, 2004). Why so?

The first reason is that high-status groups have more power, resources, and leverage to effect change in systems and institutions. By definition, low-status groups have little power, resources, or influence to trigger the change they desire in their position (Iyer & Ryan, 2009). Thus, more often than not, low-status groups need to secure support from other sectors of society if they want to see social change come about (Selvanathan et al., 2018; Simon & Klandermans, 2001; Subašic et al., 2008). Members of high-status groups are over-represented in the public sphere and take up positions of leadership in organizations. For example, in the United States, 93% of Fortune 500 CEOs and 91% of top management positions in S&P 1500 companies are White/Caucasian (Chang et al., 2018; Chen, 2020; U.S. Equal Employment Opportunity Commission). In the political arena, 78% seats in the House of Representatives are taken by Whites (Bialik, 2019; U.S. House of Representatives Press Gallery, 2020). This has implications for public and workplace policies and practices because political/organizational leaders wield a great deal of influence. As a case in point, organization leaders oversee the development of organizational goals and strategies on which policies and practices (e.g., hiring, promotion, evaluation, pay and benefits) are based (Einwohner, 2007; Foster-Fishman et al., 2007; Haslam et al., 2011). Thus, Whites, rather than Blacks, are likely to be in positions of power in society. This makes it more likely for Whites to possess the means to actually reduce inequality at an institution. In sum, because of their greater power and resources, high-status group members play a major role in determining the effectiveness of social justice efforts (Goodman, 2001; Iyer & Leach, 2010).

Second, high-status group members' advocacy of equality has more potential to influence public opinion. In other words, a general audience might be more responsive to

high-status groups' arguments compared to arguments from members of low-status groups. High-status groups' collective action for equality tends to give credibility to low-status groups' grievances and efforts, which might help them convince other sectors of society of the importance of promoting equality (Burstein & Linton, 2002; Simon & Klandermans, 2001; Subašic et al., 2008). This might be partially due to people's attributions for low-status group members' social justice efforts, which have been viewed primarily as instrumental or opportunistic (McGarry & Hendrick, 1974; Moscovitz, 1996). People tend to view the motivation of low-status groups' advocacy as "selfish" (e.g., motivated by the prospect of personal gain) because they are likely gain direct benefit from reduced inequality, whereas high-status group members' advocacy is seen as relatively "pure," given that high-status allies do not benefit directly from reducing inequality. In sum, given that social justice efforts cannot succeed without support from the general public, embracing high status-group members in the inequality-reducing initiatives can yield more effective movements.

Lastly, high-status group members are more effective at motivating fellow ingroup members. For example, White participants were more likely to hire a Black applicant when they were referred by a White individual compared to a Black individual (Silva, 2018).

These findings demonstrate that high-status group members' advocacy plays a significant role in encouraging the general public and other high-status group members to take action against inequality and to actualize system-level changes. Despite its importance, however, rates of participation in ally behavior are low in high-status groups.

Antecedents of Allyship: Barriers and Facilitators

Members of high-status groups are perceived to be less willing to engage in social-justice efforts than are members of low-status groups (Brown & Ostrove, 2003). Indeed, only a small portion of high-status group members take action to promote group-based equality. For example, 40% of White Americans expressed support for Black Lives Matter movement, whereas 65% of Black Americans did (Horowitz & Livingston, 2016). Also, over twice as many Whites (28%) as Blacks (12%) opposed the movement. Another longitudinal survey found that Whites' racial apathy has increased over the past 40 years (Krysan & Moberg, 2016). Research in social psychology has provided some answers as to why high-status group members are prone to be non-participants/bystanders of social justice efforts.

First, high-status group members may be motivated to protect the power and resources conferred by their ingroup and/or ingroup identity. High-status groups may have the most to lose materially when the power discrepancy between groups becomes smaller. Thus, high-status group members might be motivated to remain passive in efforts to reduce inequality (Phillips & Lowery, 2018) and, what's more, to actively oppose social change to preserve the power, resources, and prestige that goes with the high-status position (Sidanius & Pratto, 1999). Indeed, high-status group members' defensive reactions to the prospect of losing power or resources are well-documented (Jetten et al., 2017; Perry et al., 2018). Researchers have found that White individuals who strongly identify with their race were more likely to oppose affirmative action policies when they are described as a loss of privilege among Whites rather than as a gain for Blacks (Lowery et al., 2006). Moreover, a mere perception of intergroup inequalities often prompt high-status group members to deny the White privilege and biases in social

systems, which is a defensive reaction in order to protect their ingroup's advantaged position (Knowles et al., 2014).

In a related vein, it may impose a symbolic threat to high-status group members when someone attempts to "rock the boat" by implementing changes to existing social hierarchies. Efforts to change the status quo are likely to pose threats to the high-status group's image, which in turn triggers ingroup favoritism, outgroup derogation (Branscombe & Wann, 1994), and support for inequality (Gordijn et al., 2006). In addition, high-status group members' attempts to challenge the status quo pose threats to fellow ingroup members as they have negative implications for ingroup's morality, which is deemed one of the most important components of ingroup evaluation (Leach et al., 2007). Specifically, high-status group members are especially likely to experience a threat to their moral image when their group profits from illegitimate advantage (Shnabel & Nadler, 2008; Siem et al., 2013). This threat is associated with less positive attitudes toward the low-status group and less willingness to engage in collective action that is beneficial for the low-status group (Shnabel et al., 2013). Also, supporting changes to the status quo might negatively impact individual advocates' reputations in their ingroup, especially when it is different from the majority members' standpoint (e.g., "black sheep effect"; Marques & Yzerbyt, 1988).

Taken together, there are various psychological barriers to high-status group members' actions for equality. What's worse, these barriers might serve as reasons and motivations to actively derogate and oppose efforts to reduce inequality. Therefore, values that endorse equality are the first necessary antecedents for high-status group members to take action for intergroup equality. The caveat here is that even when high-

status group members hold egalitarian values (or low ingroup-favoring motivations), there is no guarantee that these egalitarians will take action towards equality. High status-group members may not get involved in action when they think their action will not bring any change to the current circumstances. In other words, feeling capable of making a difference should be accompanied with egalitarian values to prompt high-status group members to participate in efforts to reduce intergroup inequality. I discuss this further in the next section.

Egalitarianism and Anti-egalitarianism

One of the factors highly relevant to allyship is egalitarianism, that is, endorsement of equal distributions of resources and power across different groups (e.g., Horberg et al., 2013). Egalitarianism has been operationalized in multiple ways, including personality (e.g., low social dominance orientation, SDO; Sidanius et al., 1996), values (e.g., universalism; Schwartz, 1992), and distributive-justice beliefs (e.g., meritocracy vs. egalitarianism; Horberg et al., 2013). Research findings have consistently shown that egalitarianism is positively correlated with negative attitudes toward the status quo and positive attitudes towards reduced inequality (e.g., Pratto et al., 2006).

Based on these findings, one might expect that egalitarianism *per se* may be a sufficient condition for ally behavior. However, the association between egalitarianism and ally behavior needs further empirical investigation, as there is inconsistency in findings. On the one hand, there is a conceptual grounding that lends support to the positive correlation between egalitarianism and ally behavior. For example, SDO is negatively associated with intergroup attitudes and behaviors that are proxies for ally behavior (e.g., racism, sexism, classism; Cotterill et al., 2014; Dhont et al., 2014; Ho et

al., 2012, 2015; Knowles & Lowery, 2012; Kteily et al., 2012; Kteily et al., 2017; Sibley et al., 2007) and collective action that addresses social justice issues (Choma et al., 2020). On the other hand, prejudice against racial minorities has decreased and egalitarianism has increased in the U.S., but indices of racial discrimination have significantly risen (DiTomaso, 2013). At the individual level, egalitarian values have not always been associated with helping low-status groups (e.g., Washburn & Skitka, 2018). In addition, interventions targeting an egalitarianism mindset can fall short in reducing implicit bias against the low-status group (Lai et al., 2014), which is associated with different kinds of intergroup behavior (Kurdi et al., 2019). These mixed findings can also be explained by the gap between values/ideology and action (e.g., Ajzen, 1985; Snyder & Kendzierski, 1982; see Zanna et al., 1980), which has been extensively documented in the social-psychological literature.

In sum, egalitarianism alone might not be a sole predictor of high-status group members' active participation in efforts to reduce inequality, instead creating "armchair activists" who are motivated to achieve social equality but who hesitate to take actions. In the current research, I propose self-efficacy as one of the key variables that moderate the relation between motivation and action.

Self-efficacy

Self-efficacy (Bandura, 1977) refers to people's beliefs that they can perform behaviors that are aligned with their desired goals. It is closely linked to other well-studied constructs in social psychology such as internal locus of control (Rotter, 1966), sense of agency (David et al., 2008), perceived control (Zimmerman & Rappaport, 1988), and belief in free will (Feldman, 2016; Waldman et al., 1983). It has been conceptualized

as personality, cognitive, and affective constructs (Zimmerman & Rappaport, 1988): Rotter (1966) introduced locus of control as a personality variable; Bandura (1977, 1982) identified self-efficacy as a cognitive aspect of perceived control; and neural evidence suggests that sense of agency is linked to emotional response (Gentsch & Synofzik, 2014). Although each construct focuses on different aspects of self-efficacy, the essential common component is people's perceptions of themselves as agents of their own actions, and their feeling that they can control external events through their own actions (Gentsch & Synofzik, 2014). In the current research, the definition of self-efficacy is based on this fundamental commonality, as it leads to increased action potential, which likely results in more action towards a goal (Gallagher, 2000; McCarty & Shrum, 2001).

Researchers have examined a specific link between individuals' sense of efficacy/agency and sociopolitical behavior. Gamson (1995) argued that people's perceptions that they can change the situation may lead to moral outrage at social injustice and action for social change. Beissinger (2002) applied the concept to the collapse of the Soviet Union and argued that people's beliefs in personal agency brought about the radical political change. He demonstrated that those agentic activists led initial successes in mobilization and accelerated a society-wide change (Beissinger, 2002).

Tying it back to earlier discussion of egalitarianism, one might expect that egalitarians who have a sense of efficacy are likely to get involved in ally behavior. However, this simple expectation is subject to a test, given that there is mixed evidence for the association between a *general* sense of agency and *specific* sociopolitical behavior. The confusion arises from research indicating that activists have a low level of agency beliefs (e.g., some people are more motivated to participate in collective action

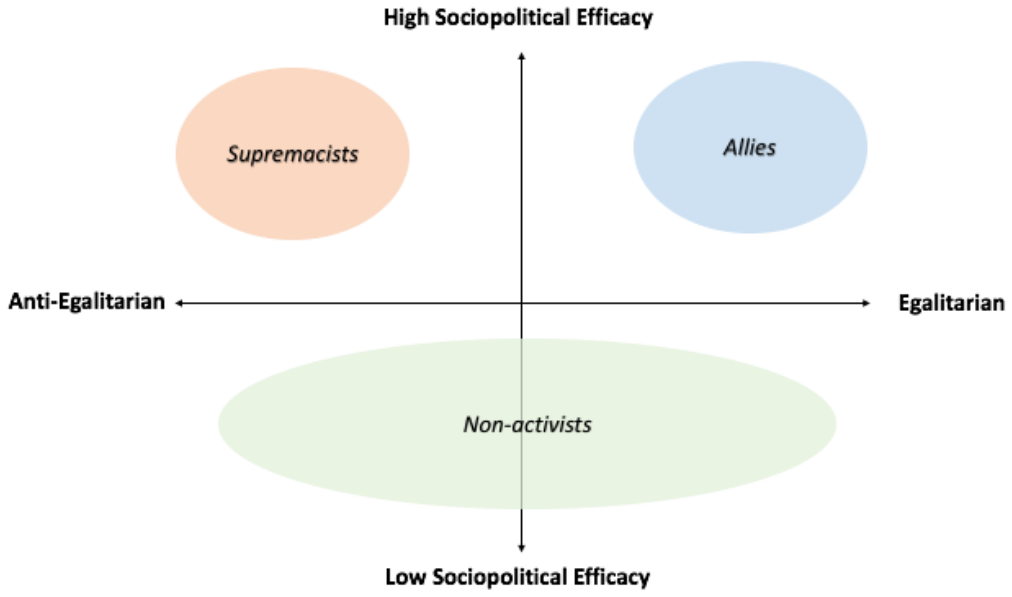
when they believe that powerful others, rather than themselves, hold control over social issues; Silvern & Nakamura, 1971; Thomas, 1970), whereas other reports show them to have a high level (e.g., activists scored high on internal locus of control; Gore & Rotter, 1963; Lefcourt, 1976; Strickland, 1965). This inconsistency in findings justifies further efforts to distinguish sociopolitical control from other aspects of control (Levenson, 1974; Paulhus, 1983; Walkey, 1979). By identifying elements of perceived control that are specifically relevant in sociopolitical contexts, some of the confusion in the relation between control and political attitudes/activism were relieved (Paulhus, 1983).

One construct that taps into this unique aspect of self-efficacy is sociopolitical efficacy (Caprara et al., 2009). The strength of self-efficacy differs across settings, such that efficacy in one life sphere may not generalize to other domains. Political efficacy (Zimmerman, 1989) was reported as an example of sphere-specific efficacy, along with efficacy for health-promotion behaviors (Stanley & Maddux, 1986) and controlling addictive behaviors (Condiotte & Lichtenstein, 1981). Individuals with high sociopolitical efficacy may be more likely to take action to achieve their goals relating to social and political issues. Indeed, high levels of political efficacy are associated with more engagement with political activity (e.g., Caprara et al., 2009). Also, adolescents' sociopolitical efficacy predicts their political participation, including civic engagement, voting, and social action (Diemer & Li, 2011). In addition, activists report feeling greater sociopolitical control than do nonactivists (Laird, 2003).

What was understudied in sociopolitical efficacy is the role of values in shaping the direction of the action. Self-efficacy is associated with people's efforts and perseverance in pursuing a goal, but the content of a goal is shaped by motivation

(Bandura, 1982). Taken together, it stands to reason that both egalitarianism and a sense of sociopolitical efficacy need to be taken account to predict high-status group members' ally behavior. Specifically, sociopolitical efficacy is expected to compel an egalitarian into action, getting involved in actions to reduce intergroup inequality (see Figure 1 for visualization of the expected effect).

Figure 1. Expected Interaction Effects of Egalitarian Values and Sociopolitical Efficacy



In sum, I propose that egalitarian values alone are insufficient to facilitate ally activism. Instead, such values should be accompanied by a high level of sociopolitical efficacy to actualize those values via action. What kind of actions can these "efficacious egalitarians" take to reduce inequality?

Different Types of Ally Behavior

Ally behaviors encompass a wide variety of actions, such as participating in collective action for social change, donating to social justice organizations, and endorsing policies that benefit low-status groups (see Stürmer & Snyder, 2010). In this rather nascent research domain, what needs more thorough investigation is different types of ally behavior and the effectiveness of ally behavior in reducing intergroup inequality. In the present research, I argue that not all ally behaviors are equally effective at reducing group-based inequalities. In fact, there is evidence that low-status groups perceive the varying effectiveness of ally behavior (Cheng et al., 2019). Drawing from previous research on allyship, interpersonal-intergroup helping, and political psychology, I will identify different types of attitudes and behaviors and analyze them on their effectiveness in reducing the group-based inequalities. When an attitude or a behavior is more likely to tackle the fundamental cause of the group-level disparities and prevent reproducing hierarchies, it will be considered more effective.

Interpersonal vs. Intergroup helping

In the case of low-status-group-targeted helping behaviors, helping the group as a whole rather than an individual might be more effective in effecting social change. To look at some of the most frequently studied helping behaviors in intergroup context, collective social action (Snyder & Omoto, 2007; Wright & Tropp, 2001) is a great example of group-level helping, and confrontation of discrimination (Drury & Kaiser, 2014) is an example of individual-level helping.

The two types of behaviors share similarities, such that both are aimed at benefitting the low-status group, and there are common predictors such as a

superordinate-group identity (McFarland et al., 2019; Subašić et al., 2008). However, some research attests to the difference between the two types of behavior and the importance of distinguishing them. Duncan (2012) elaborated the different basis of group- and individual-level helping. On the one hand, allied collective action, which refers to helping low-status group members by challenging the system, may be based on a critical analysis of privilege and general ideology (e.g., McGarty et al., 2009). On the other hand, helping individuals is more closely related to actors' personal experience with discrimination (Duncan, 2012).

In addition, evidence from intergroup contact documents that contact between low- and high-status group members is effective at reducing high-status group members' antipathy toward the low-status group (Pettigrew & Tropp, 2006), but not at increasing willingness to change the status quo (Dixon et al., 2010). More recent findings by Estevan-Reina and colleagues (2020) support this idea by showing that men were willing to confront sexism in an interpersonal setting, either out of paternalistic or egalitarian motivation. However, only one of the two motivations was associated with collective action intention: Egalitarian motivation was positively associated collective action intention, whereas paternalistic motivation was not. In a similar sense, "collegial behaviors" that refer to advantaged group members' support for underrepresented group members were distinguished from conscious efforts to reduce intergroup inequality (Patton & Bondi, 2015).

Taken together, empirical findings show that individual- and group-level helping can stem from different motivations of high-status group members, and group-level helping can be more effective at carrying out group-level change.

Dependency- vs. Autonomy-oriented helping.

How one helps an individual or a group also matters. Defensive helping (Nadler, 2016; Nadler & Halabi, 2006) illustrates different ways for high-status group members to help a low-status group member. One way to help a low-status group member is to provide help that maintains the intergroup hierarchy (i.e., dependency-oriented helping). For example, providing a full solution to a low-status group can perpetuate the existing hierarchy such that low-status group is dependent on a high-status group to solve the problem for them. Findings showed that this is more likely when high-status group members perceive that their high status is under threat. The other way is to help a low-status group member to develop skills or ability (i.e., autonomy-oriented helping). This way, a low-status group can learn how to solve the problem by themselves, not having to rely on a high-status group. This type of helping was more pronounced when group hierarchies were perceived to be stable/fixed rather than unstable/permeable. Altogether, these studies suggest that high status-group members are motivated to protect the current system by providing a dependency-oriented helping.

A similar pattern is observed at the group level. Jackson and Esses (2000) provided empirical evidence in the context of hosts vs. immigrants in Canada. They found that host populations for whom economic threat was made salient were less likely to endorse helping that would likely give immigrants opportunities to build their success by themselves (e.g., "Although immigrants face barriers to adjusting to life in Canada, they can learn to adjust with the cooperation of Canadians."). Also, this type of helping that provides immigrants with autonomy and empowers them to solve their own problems was negatively correlated with host populations' SDO scores, with SDO scores positively

associated with endorsement of immigrant acculturation to the mainstream (e.g., "Immigrants should follow the advice of Canadians to solve the problems of adjustment that they have created for themselves."). The latter form of help is likely to engender immigrants' dependency on host populations and might lead to loss of their unique culture, which ultimately results in low likelihood of reducing the gap between the two groups. Therefore, in the long run, autonomy-oriented helping can be more effective at reducing intergroup inequalities.

System-maintaining vs. -attenuating policies.

Social and public policies can and do impact inequalities. And it is the public consensus that guides what policies are implemented, revised, and abolished. Thus, it is important that high-status groups endorse the policies that aim to reduce intergroup inequality. One of the policies that are most relevant to intergroup inequality is diversity-promoting policies. Affirmative action, amongst many, has been one of the most widely adopted policy in the organization and education settings. With its purpose to promote equality, various types of affirmative actions have been put into practice for over the past 50 years. For example, universities often take into account of students' racial/ethnic identities to grant special admission criteria. Many organizations are practicing affirmative action such as providing mentoring and training to employees from underrepresented groups. Also, some countries use a quota system for Parliament to guarantee a certain number of seats are taken by low-status group members. Despite controversy, affirmative action policies have produced positive effects on selection processes in higher education as well as hiring and promotion in organizations, and representation in the parliament (Crosby et al., 2006; International Institute for

Democracy and Electoral Assistance, 2020), which demonstrates that endorsing these policies can be a highly effective ally behavior. Although there are different policies implemented in different institutions targeting different low-status groups, the common goal is to challenge the existing hierarchy between groups. This goal and its consequences might pose a threat to high-status group members, preventing them from endorsing affirmative action policies.

Decades of research in social science has shown that high-status group members, compared to low-status group members, tend to hold more negative attitudes toward affirmative action. In general, men oppose affirmative action more strongly than do women (Aberson & Haag, 2003; Golden et al., 2001; Konrad & Linnehan, 1995; Kravitz et al., 2000; Summers, 1995; Truxillo & Bauer, 2000) and White Americans oppose it more strongly than do racial minorities (Bell et al., 1997; Bobo & Smith, 1994; Fine, 1992; Golden et al., 2001; Klineberg & Kravitz, 2003; Konrad & Linnehan, 1995; Kravitz et al., 2000; Little et al., 1998). Probabilistically, White men, among social groups, tend to be most likely to oppose affirmative action (Niemann & Dovidio, 1998). This opposition is stronger among those who are highly prejudiced against women (Tougas et al., 1995; Tougas & Veilleux, 1990) and racial minorities (Arriola & Cole, 2001; Bobocel et al., 1998; Hayes-James et al., 2001; Lehman & Crano, 2002; Little et al., 1998; Mack et al., 2002; Sawires & Peacock, 2000; Sears et al., 1997; Sidanius et al., 1996; Tuch & Hughes, 1996; Williams et al., 1999). In addition, those who strongly identify with their high-status group (e.g., White identity; Knowles et al., 2014) and those who strongly endorse intergroup hierarchy (Federico & Sidanius, 2002) or meritocracy

(Kemmelmeier, 2003; Kluegel, 1990; Williams et al., 1999) are more likely to oppose affirmative actions.

A recent study suggests the common underlying mechanism that may integrate a substantial number of studies on the predictors of affirmative action attitudes. Ho and Unzueta (2015) found that people with weaker egalitarian beliefs were more likely to support affirmative action policies when they were framed to help sustain the existing intergroup hierarchy. This finding demonstrates *why* anti-egalitarians oppose affirmative actions in the real world: Affirmative actions are believed to disrupt the existing hierarchy. It is the consequence of adopting such policies (i.e., whether they actually change the status quo) that shapes high-status group members' attitudes toward policies, rather than the policies per se. In other words, it is expected that high-status groups would resist any policies that are perceived to pose a threat to their prestige.

Relating it back to the topic of effectiveness of ally behavior, policies that are likely to result in attenuating intergroup disparities can be more effective than other policies that are aimed at (or that result in) maintaining the existing system.

In sum, high-status group member's ally behaviors are not all equally effective at reducing group-based inequality. When their behavior (a) benefits a group as a whole, (b) focuses on changing the system-level factors, and (c) ensures a low-status group exercises their autonomy in leading a change, it is more likely to reduce intergroup disparities in power and resources. Then, the next question is: Is there a common variable that predicts effective ally behaviors? I argue that it is high-status group members' perceived efficacy of low-status group that determines their attitudes and actions.

Perceived Collective Efficacy of Low-Status Groups

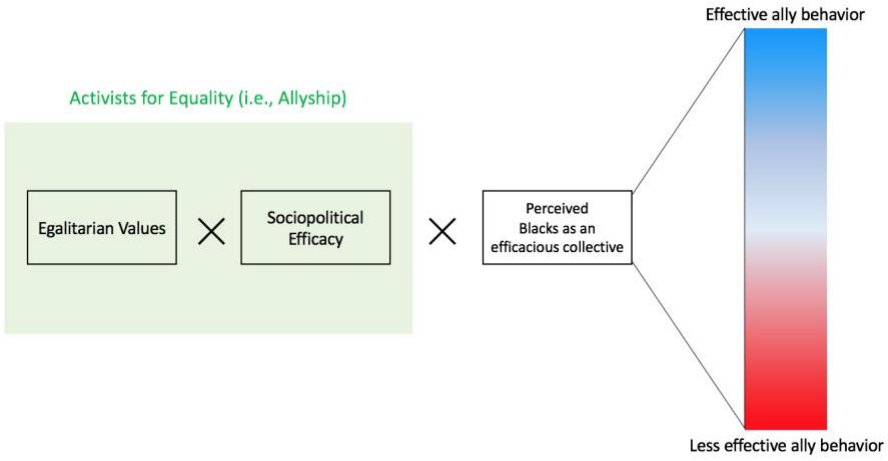
Collective efficacy refers to a belief in the capacity of the group to achieve shared goals and to address shared problems (Bandura, 2000; Sampson et al., 1997). This belief about the group's capacity to achieve a common goal has been one of the prominent predictors of collective action, especially when the action is intended to protect or enhance one's ingroup (van Zomeren et al., 2018). Individuals who strongly identify with a group tend to perceive a high level of collective efficacy, which in turn leads to high willingness to participate in collective action (van Zomeren et al., 2008). These findings explain when low-status groups are willing to participate in collective action that is aimed at benefitting their ingroup: when "we" believe that we can improve the ingroup status through collective action. What has been relatively understudied is how high-status allies, as an outgroup, view the low-status group's collective efficacy.

Perceptions of or assumptions about the efficacy of the low-status group are important because they may shape *how* high-status group members respond to the intergroup inequality issue. To be more specific, when high-status group members believe that the low-status group is capable of carrying out the change (i.e., high perceived collective efficacy), they might think that it is more appropriate for them to help low-status group further develop their autonomy and independence and take a lead role in the movement. Empirical evidence supports this conjecture. Men who believe that women are agentic and competent tend to prefer providing autonomy-oriented help to providing dependency-oriented help, compared to those who believe that women lack autonomy and need to be protected (Estevan-Reina et al., 2020). In addition, people who strongly endorse modern racism (McConahay, 1986) are less likely to support economic policies that offer autonomy-oriented help to racial minorities. For example, for a Latina

student who has difficulty catching up with her school curriculum, participants' racism was associated with more support for lessening the Latina student's class load and less support for providing resources to help her focus on learning (Abad-Merino et al., 2013).

In sum, I argue that high-status group members' evaluation of low-status group's collective efficacy can affect *how* they support the low-status group. Believing that the low-status group is efficacious is a pre-condition for high-status group members to support and engage in effective ally behavior. In other words, when high-status group members perceive that a low-status group is an efficacious (vs. inefficacious) collective, they would be more likely to get involved in effective ally behaviors. (see Figure 2 for visualization of the expected effect).

Figure 2. Expected Moderating Effect of Perceived Black Americans' Collective Efficacy on Different Types of Ally Behavior



The Current Research

This review demonstrates the need to understand more fully who gets involved in ally behavior, when, and how. The current research utilizes a long-standing framework "motivation x ability": Values guide the direction of behavior, and a sense of efficacy provides an affordance for the behavior.

To apply this framework to allyship, it is expected that egalitarian values will shape people's motivation to reduce intergroup inequality, and feeling efficacious in their ability to influence sociopolitical affairs will amplify the positive link between egalitarianism and ally behavior. The present research has three main goals: to examine (a) the racial disparity in efforts to reduce intergroup inequality, (b) a set of characteristics of ally activists and (c) how perceived collective efficacy affects engagement with different types of ally behavior. These three goals will be addressed in the context of racial wealth gap in U.S. society, specifically focusing on social and public policies that are aimed at reducing the wealth gap.

First, I will examine whether racial disparity in support for affirmative action policies still persists using the most recent, nationally representative data. For decades, research has shown that compared to Blacks, Whites hold more negative attitudes toward affirmative action (e.g., Bobo & Smith, 1994; Klineberg & Kravitz, 2003). And I plan to use these timely data that will inform us to what extent the racial gap exists in 2021, the year we observed tragic manifestations of systemic racism, collective action that followed, and the polarization of American racial attitudes.

H1: White Americans, compared to racial minorities, will be less likely to support policies that are aimed at reducing racial inequity.

The racial gap in attitudes toward affirmative action will establish the need for identifying the predictors of ally behavior among White Americans. Thus, I will test the following hypothesis in Studies 1 and 2.

H2: White Americans' egalitarian values will interact with their sociopolitical self-efficacy to predict their attitudes/action toward reduced intergroup inequality. Specifically, Whites with high levels of both egalitarian values and sociopolitical self-efficacy will be more likely to support affirmative action policies than other counterparts.

Based on the findings that efficacious egalitarians are more likely to support allyship, I will test the moderating role of perceptions of Blacks' collective efficacy in the type of ally behavior. Prior research has identified a wide range of ally behaviors that vary on the targeted change (e.g., system-level change vs. individual-targeted change) and the desired consequences (e.g., promote low-status group members' autonomy vs. dependency on the existing system) of those behaviors. Based on the review of the literature, the current research distinguishes the two different types of ally behavior: behaviors that are effective at reducing group-level inequalities and those that are less effective. *Effective ally behaviors* are those that are aimed at changing system-level factors and providing opportunities for low-status group members to develop or exercise their autonomy. These behaviors are more likely to result in low-status groups' acquisition of power and resources compared to *less effective ally behaviors*. Therefore, high-status group members' attitudes toward and intention to engage in highly effective and less effective ally behavior (e.g., endorsement of autonomy-focused vs. assistance-focused affirmative action policies) will be measured.

H3: Egalitarian values, sociopolitical self-efficacy, and perceived collective efficacy of the low-status group will interact to predict effective ally behavior. Specifically, egalitarians with a high level of sociopolitical self-efficacy will be more likely to engage in effective ally behavior when they perceive the low-status group to possess a higher level of collective efficacy versus a lower level. In the context of the racial wealth gap, efficacious egalitarian Whites will be more likely to support autonomy-focused policies when they perceive Blacks as an efficacious collective (vs. inefficacious).

Three studies will be conducted to test the three main hypotheses, and an overview of the three studies is presented in Table 1.

Table 1. Overview of the studies

	Study 1	**Study 2**	**Study 3**
Type	Correlational study	Correlational study	Experiment
Context	Racial discrimination	Racial income and wealth disparities	
Participants	American National Election Studies (ANES)	Prolific	Prolific
Sample size	2020 ANES: *N* = 8,280 2016 ANES: *N* = 4,270	*N* = 328	*N* = 345
Egalitarianism	Equality of Opportunity (Feldman, 1988)	Social Dominance Orientation (Ho et al., 2015)	
Sociopolitical efficacy	Internal Political Efficacy	Policy control from Sociopolitical control scale (Zimmerman & Zahniser, 1991)	
Perceived collective efficacy	.	Measured (e.g., van Zomeren)	Manipulated (High vs. Low)

Dependent measures	Support for affirmative action	- Support for affirmative action - Support for autonomy-focused policies - Support for assistance-focused policies	- Support for autonomy-focused policies - Support for assistance-focused policies - Participation in ally behavior
Exploratory variables	.	Potential mediators - Attribution of the racial wealth gap - Emotions (Anger, Empathy)	.
Pilot study	.	Ratings of policy effectiveness	Blacks' collective efficacy manipulation check
Control variables	- Demographic factors - Political knowledge	- Demographic factors - MacArthur Scale of Subjective Social Status	- Demographic factors - Household income
Main analysis	Testing moderation models using PROCESS, Hierarchical Regression		

The three studies are aligned with ethics guideline and have been approved by Institutional Review Board at University of Minnesota. I have preregistered my main hypotheses on my research project page on Open Science Framework (https://osf.io/rzhta/). On this page, study materials, analytic code, and data will also be made publicly available.

Method

Study 1a

To first examine the racial gap in efforts to reduce racial inequity in today's society, I used the most recent data from American National Election Studies (ANES). The survey was carried out between August 2020 and December 2020, released in March, 2021. ANES provides useful data for testing Hypotheses 1 and 2 for several reasons. First, ANES data consists of a representative sample of U.S. citizens aged 18 or

older varying on important demographic variables such as age, race/ethnicity, gender, age, education, and social class. Second, survey includes questions about individuals' beliefs, political efficacy, and their opinions about social/political issues such as attitudes toward public policies. Thus, the data allowed an examination of the effect of key predictors (i.e., egalitarianism, sociopolitical self-efficacy) on the outcome variable (i.e., support for affirmative action) proposed in Hypothesis 2. Third, the data were collected in the midst of society-wide turbulence where conversation about racial discrimination has been active in many communities in the United States. The 2020 data were collected soon after the murder of George Floyd and simultaneously with nation-wide protests against racial injustice, and this social context provides a stringent test for Hypothesis 1.

Participants and Procedure

The survey consists of pre- and post-election interviews, and I included those who completed the post-election data, as it includes key measures that allow me to test the hypotheses (N = 8,280). Among them, 72% self-identified as non-Hispanic White, 9% as Black, 9% as Hispanic, 3% as Asian, native Hawaiian or other Pacific Islanders, 2% as Native American or Alaska Native, and 3% as multiple races or other. The average age of the participants was 51.57 years (SD = 17.19), ranging from 18 to 80 years. In total, 54% of the participants were female, and 45% were male. Additional demographic information is presented in Table 2.

Table 2. Study 1a: Demographics of Participants

	2020 ANES (*N* = 8280)		**2016 ANES (*N* = 4270)**	
Variable	***n***	**%**	***n***	**%**
Sex				
Female	4450	54%	2231	52%
Male	3763	45%	1987	47%
Refused to answer	67	1%	52	1%
Race/Ethnicity				
White	5963	72%	3038	71%
Black	726	9%	397	9%
Hispanic	762	9%	450	11%
Asian, Native Hawaiian, Pacific Islander	284	3%	148	4%
Native American, Alaska Native	172	2%	27	1%
Multiple races, other	271	3%	177	4%
Refused to answer or Don't know	102	1%	33	1%
Highest Education Completed				
Less than high school	376	5%	73	2%
High school graduate	1336	16%	209	5%
Some college	1684	20%	815	19%
Vocational college degree	615	7%	898	21%
Academic college degree	491	6%	601	14%
Bachelor's degree	2055	25%	955	23%
Master's degree	1185	14%	499	12%
Professional school/Doctoral degree	407	5%	181	4%
Other, Refused to answer, Don't know	131	2%	39	1%
Subjective Socioeconomic Status				
Lower class	528	6%	382	9%
Working class	2531	31%	1394	33%
Middle class	3946	48%	2042	48%
Upper class	368	4%	177	4%
Refused to answer or Don't know	907	11%	275	6%
Variable	**Mean**	***SD***	**Mean**	***SD***
Age	51.57	17.19	49.58	17.58

Note. In 2016 data, subjective socioeconomic status question was asked in pre- and post-election datasets (V161307 and V162132, respectively), and participants' answers were combined.

Measures

Affirmative Action

Participants' attitudes toward affirmative action were assessed using a single item, "What about your opinion—are you for or against preferential hiring and promotion of blacks?" Participants reported their opinion using a 4-point scale (1 = *strongly favor*, 2 = *not strongly favor*, 3 = *not strongly oppose*, 4 = *strongly oppose*). The item was reverse-coded such that higher scores reflect more support for affirmative action (M = 2.05, SD = 1.14).

Sociodemographic Characteristics

Participants' demographic characteristics that are associated with racial attitudes and support for race-related policy were used as control variables in analyses. They include age, sex (0 = *male*, 1 = *female*), subjective socioeconomic status (SES; 1 = *lower class*, 4 = *upper class*), and educational attainment. Participants reported their highest level of school they have completed or the highest degree they have received (1 = *less than high school*, 8 = *professional school degree/doctoral degree*; *other, don't know, refused* coded as missing).

Political knowledge

Participants' political knowledge was assessed using three items related to public figures in U.S. politics. They were asked to identify the speaker of the House of Representatives (Nancy Pelosi), the vice president (Mike Pence), and the chief justice (John Roberts). Correct responses were coded as 1, and incorrect or missing responses were coded as 0. The responses were summed to create an index of political knowledge

ranging from 0 to 3 (*M* = 1.88, *SD* = .80; Cronbach's α = .45; Three items correlated at *r*s > .13; Factor analysis identified one factor, which explains 49% of variance, items' factor loadings > .55). Political knowledge was found to be associated with political attitude strength (Fiorina & Abrams, 2008) and involvement with political issues (Kaufhold et al., 2010), and thus controlled for a rigorous testing.

Analysis and Results

I conducted an analysis of covariance (ANCOVA) to test Hypothesis 1, which was to investigate differential support for affirmative action between White vs. Black Americans. Descriptive statistics and bivariate correlations among all variables are presented in Table 3.

Table 3. Study 1a: Descriptive Statistics and Correlations Among Main Study Variables

	1	2	3	4	5	6	7
1. Race (0 = Black; 1 = White)		**.42**	**-.09**	**.05**	**-.12**	**-.14**	**-.14**
2. Support for affirmative action	**.38**		**-.16**	**.06**	*-.04*	**-.06**	**-.09**
3. Age	**-.09**	**.17**		.01	.02	**.15**	**.16**
4. Sex (0 = male; 1 = female)	**.07**	**.09**	-.01		-.00	-.02	**-.10**
5. Education	**-.10**	**.05**	-.01	-.00		**.40**	**.33**
6. Socioeconomic class	**-.12**	-.01	**.12**	**-.06**	**.38**		**.25**
7. Political knowledge	**-.16**	**-.05**	**.19**	**-.15**	**.31**	**.25**	
2020 ANES							
N	6649	7240	7926	8213	8149	7373	7445
M	.	2.05	51.57	.	4.53	2.56	1.88
SD	.	1.14	17.19	.	2.04	0.70	0.80
2016 ANES							
N	3435	3545	4149	4218	4231	3995	3648
M	.	1.84	49.58	.	4.78	2.50	1.69
SD	.	1.06	17.58	.	1.65	0.73	0.92

Note. Correlations using 2020 data is below the diagonal, and 2016 data above the diagonal. Correlations in bold are significant at $p < .001$, italicized correlation is significant at $p < .05$.

White vs. Black Americans

I conducted an ANCOVA in which participants' self-identified race (White vs. Black) was entered as the independent variable, support for affirmative action as the dependent variable, and age, sex, education, subjective SES, political knowledge as control variables. As predicted, White Americans' level of support for affirmative action was lower ($M_{adjusted}$ = 1.88, SE = 0.15, n = 5017) than Black Americans' ($M_{adjusted}$ = 3.31, SE = 0.43, n = 595), $F(1, 5605) = 974.01$, $p < .001$, $\eta_p^2 = .15$. The partial eta squared indicates that 15% of the total variance of attitudes toward affirmative action can be accounted for by race, which is considered a large effect (Keppel, 1991; Lakens, 2013).

White vs. non-Black Racial Minorities

Additional analyses were conducted to investigate the difference between non-Black racial minorities and White Americans. Participants who self-identified as Asian, native Hawaiian, other Pacific Islanders, Native American, Alaska Native, or Hispanic were compared with White Americans on their attitudes toward affirmative action. ANCOVA again revealed that White Americans' level of support for affirmative action was lower ($M_{adjusted}$ = 1.89, SE = 0.15, n = 5017) than non-Black racial minorities' ($M_{adjusted}$ = 2.14, SE = 0.31, n = 1193), $F(1, 6203) = 48.88$, $p < .001$, $\eta_p^2 = .01$.

Additional analysis using 2016 data.

I conducted the same set analysis using the ANES data collected between November 9 and January 8, 2017 (ANES, 2017). The dataset included 4,270 participants, and 71% identified themselves as non-Hispanic White, 11% as Hispanic, 9% as Black, 4% as Asian, native Hawaiian or other Pacific Islanders, 1% as Native American or

Alaska Native, and 4% as multiple races or other. More information about the participants is presented in Table 4.

Table 4. Study 1a: Summary of ANCOVA Results

		2020 ANES				
		Support for Affirmative Action				
Respondent Race	Observed Mean	Adjusted Mean	*SD*	*SE*	*n*	
White	1.88	1.88	1.05	0.15	5017	
Black	3.30	3.31	1.05	0.43	595	
Source	SS	*df*	MS	*F*	*p*	η_p^2
Age	117.80	1	117.80	110.50	< .001	0.02
Sex	23.44	1	23.44	21.99	< .001	0.00
Education	56.73	1	56.73	53.21	< .001	0.01
Socioeconomic class	4.48	1	4.48	4.21	0.040	0.00
Political knowledge	4.36	1	4.36	4.09	0.043	0.00
Participant race	1038.37	1	1038.37	974.01	< .001	0.15
Error	5975.35	5605	1.07			
		2016 ANES				
		Support for Affirmative Action				
Respondent Race	Observed Mean	Adjusted Mean	*SD*	*SE*	*n*	
White	1.64	1.64	0.92	0.02	2482	
Black	3.01	2.98	1.15	0.05	317	
Source	SS	*df*	MS	*F*	*p*	η_p^2
Age	33.97	1	33.97	38.54	< .001	0.01
Sex	1.26	1	1.26	1.43	0.232	0.00
Education	3.06	1	3.06	3.47	0.063	0.00
Socioeconomic class	0.41	1	0.41	0.46	0.498	0.00
Political knowledge	3.23	1	3.23	3.66	0.056	0.00
Participant race	482.30	1	482.30	547.24	< .001	0.16
Error	2460.67	2792	0.88			

Note. Adjusted R^2 = .18 for 2020 data, .19 for 2016 data.

Findings were consistent with 2020 data. White Americans' level of support for affirmative action was lower ($M_{adjusted}$ = 1.64, *SE* = 0.02, *n* = 2482) compared to Black Americans' ($M_{adjusted}$ = 2.98, *SE* = 0.05, *n* = 317), $F(1, 2792) = 547.24$, $p < .001$, $\eta_p^2 = .16$, and non-Black racial minorities' ($M_{adjusted}$ = 2.01, *SE* = 0.05, *n* = 465), $F(1, 2940) = 54.86$, $p < .001$, $\eta_p^2 = .02$. Consistent with 2020 data, a large effect size was found for Blacks vs. Whites and a small effect for non-Black minorities vs. Whites.

Discussion

As predicted in Hypothesis 1, White Americans, compared to Black Americans, were more likely to oppose affirmative action that advocates for Blacks' hiring and promotion. This racial gap was observed when comparing White Americans with non-Black racial minorities in general, pointing to White Americans' reluctance to support affirmative action. These results can be discouraging to some people given the heightened racial awareness in 2020. It is also worth noting that these findings are consistent with 2016 data, when racial hatred incidents were not as publicly discussed as in 2020-2021. These findings justify the need for looking into the antecedents of White's support for racial equality.

Study 1b

I used the ANES data to test the hypothesis that egalitarianism and sociopolitical self-efficacy interact to predict ally behavior (Hypothesis 2). Specifically, I expected that White Americans who hold egalitarian beliefs and who at the same time have confidence that they can make the change in sociopolitical domain are most likely to have positive attitudes toward affirmative action. The ANES provides a suitable testbed for testing this hypothesis. First, it includes a sizable number of White American participants that vary

on their demographic characteristics (*n*s > 3038). Second, the survey contains questions that enable me to examine the two-way interaction hypothesis: egalitarianism, political self-efficacy, and support for affirmative action.

Participants and Procedure

I included participants who self-identified as non-Hispanic White. The average age of the participants was 53.49 years (*SD* = 17.10), ranging from 18 to 80 years. In total, 53% of the participants were female, and 46% were male. Additional demographic information is presented in Table 5.

Table 5. Study 1b: Demographics of Participants

	2020 ANES (*N* = 5963)		**2016 ANES (*N* = 3038)**	
Variable	***n***	**%**	***n***	**%**
Sex				
Female	3177	53%	1591	52%
Male	2763	46%	1421	47%
Refused to answer	23	0.4%	26	1%
Highest Education Completed				
Less than high school	211	4%	30	1%
High school graduate	941	16%	112	4%
Some college	1172	20%	555	18%
Vocational college degree	451	8%	629	21%
Academic college degree	342	6%	425	14%
Bachelor's degree	1558	26%	742	24%
Master's degree	903	15%	380	13%
Professional school/Doctoral degree	307	5%	145	5%
Other, Refused to answer, Don't know	78	1%	20	1%
Subjective Socioeconomic Status				
Lower class	314	5%	229	8%
Working class	1695	28%	921	30%
Middle class	3085	52%	1580	52%

Upper class	283	5%	142	5%
Refused to answer or Don't know	586	10%	166	6%
Variable	**Mean**	***SD***	**Mean**	***SD***
Age	53.49	17.10	51.29	17.60

Note. In 2016 data, subjective socioeconomic status question was asked in pre- and post-election datasets (V161307 and V162132, respectively), and participants' answers were combined.

Measures

The full items are presented in Appendix A.

Support for Affirmative Action

Participants s' support for affirmative action was measured using the same item in Study 1a.

Egalitarian Beliefs

The ANES contained four items that assess general endorsement or opposition to intergroup equality (adapted from Feldman, 1988). Sample items include "'Our society should do whatever is necessary to make sure that everyone has an equal opportunity to succeed" and "It is not really that big a problem if some people have more of a chance in life than others." Participants indicated how much they agreed or disagreed with each statement on 5-point Likert scales (1 = *agree strongly*, 5 = *disagree strongly*; $\alpha = .77$). Two items were reverse-coded, and then four items were averaged such that higher scores reflect higher level of egalitarian beliefs.

Sociopolitical Self-efficacy

In my research, sociopolitical self-efficacy is defined as one's personal sense of competence in understanding, communicating, participating, and making a change in social and political matters. This conception is aligned with internal political efficacy

(Neimi et al., 1991), citizens' feelings of their personal competence to participate in politics. Thus, participants' internal political efficacy was used as a predictor. Participants answered the following two questions "How often do politics and government seem so complicated that you can't really understand what's going on?" (1 = *always*, 5 = *never*) and "How well do you understand the important political issues facing our country?" (1 = *extremely well*, 5 = *not well at all*; reverse-coded) using 5-point Likert scales (r = .38, p < .001). The two items were averaged to form a composite index such that higher scores indicate higher level of political efficacy.[1]

Control Variables

I controlled for the demographic variables that may be associated with the predictor and outcome variables. Consistent with Study 1a, participants' age, sex, education, and SES were included in analyses, as they are associated with racial attitudes. In addition, findings suggest that these demographic characteristics are associated with the predictors. For example, women (vs. men) tend to endorse egalitarian values more strongly (Schmitt & Wirth, 2009), education attainment is associated with higher level of political efficacy (Nie et al., 1996), higher social class is associated with lower level of prosocial value orientation and concern for others' welfare (Piff et al., 2010) and higher political efficacy (Uslaner & Brown, 2005).

[1] Political efficacy is traditionally differentiated into two dimensions (Balch, 1974). Distinct from internal efficacy, external efficacy reflects individuals' feelings that they have a say in decisions that are made in politics (Acock et al., 1985). High external efficacy is associated with greater trust in political system and institutions (Cole, 1973). The role of individuals' beliefs about the responsiveness of political entities are beyond the scope of this research. However, the potential effect of external efficacy will be discussed in General Discussion.

Consistent with Study 1a, participants' political knowledge was controlled in the analysis, as people with higher levels of political knowledge tend to have higher levels of internal political efficacy (Jung et al., 2011).

Analysis and Results

Before testing the hypothesis, descriptive statistics and bivariate correlations among all variables were assessed (see Table 6).

Table 6. Study 1b: Descriptive Statistics and Correlations Among Main Study Variables

	1	2	3	4	5	6	7	8
1. Egalitarian beliefs		*.05*	**.34**	*-.05*	**.12**	**.09**	-.02	*.05*
2. Sociopolitical self-	**.09**		.04	**.07**	**-.19**	**.28**	**.23**	**.32**
3. Support for affirmative	**.45**	**.09**		**-.13**	.02	*.05*	.02	*-.05*
4. Age	*-.03*	**.10**	**-.14**		.01	-.03	**.14**	**.14**
5. Sex (0 = male; 1 = female)	**.06**	**-.14**	**.06**	.00		-.00	-.02	**-.11**
6. Education	**.15**	**.25**	**.15**	**-.05**	.00		**.41**	**.29**
7. Socioeconomic class	*.03*	**.22**	**.06**	**.12**	**-.05**	**.40**		**.25**
8. Political knowledge	**.09**	**.35**	**.05**	**.15**	**-.15**	**.28**	**.25**	
2020 ANES								
N	5398	5402	5279	5755	5940	5885	5377	5415
M	3.72	3.38	1.88	53.49	.	4.63	2.62	1.96
SD	0.94	0.82	1.05	17.10	.	2.02	0.68	0.75
2016 ANES								
N	2625	2626	2572	2968	3012	3018	2872	2631
M	3.54	3.18	1.64	51.29	.	4.91	2.57	1.78
SD	0.85	0.81	0.92	17.60	.	1.62	0.71	0.88

Note. Correlations using 2020 data is below the diagonal, and 2016 data above the diagonal. Correlations in bold are significant at $p < .001$, italicized correlation is significant at $p < .05$.

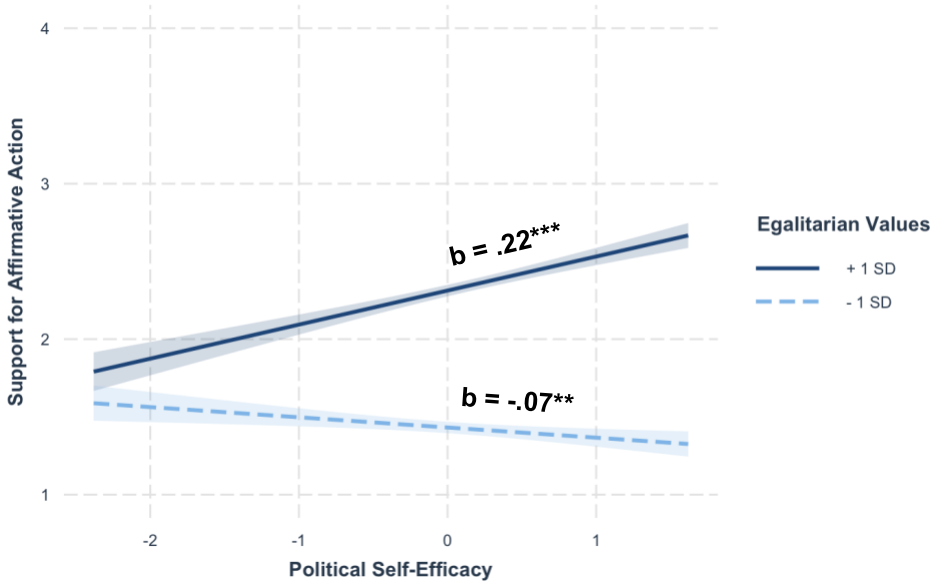
Interaction between egalitarian beliefs and sociopolitical self-efficacy

To test the proposed two-way interaction effect, I used Hayes' PROCESS macro (2013). PROCESS uses bootstrapping methodology in the ordinary least squares (OLS)

regression framework. This statistical tool has been employed in a number of psychological studies to test the moderating effect. Using Model 1, I examined the interaction effect between egalitarian beliefs and sociopolitical efficacy on support for affirmative action while controlling for the covariates. I set the number of bootstrap samples for the bias-corrected bootstrap confidence interval as 10,000, and the level of confidence for all confidence intervals is 95%. I expected that CIs of the interaction effect will not include zero, suggesting that sociopolitical efficacy moderated the effect of egalitarian beliefs on attitudes toward affirmative action.

Findings showed that the interaction term (Egalitarian beliefs × Political efficacy) significantly predicted support for affirmative action, $\Delta R^2 = .012$, $B = .15$, $SE = .02$, $p < .001$, $CI = [.12, .18]$. Simple slope analyses revealed the nature of the interaction. People with strong egalitarian beliefs (+1*SD*; 4.67) were more likely to support affirmative action when they have high level of political efficacy, $B = .22$, $SE = .02$, $p < .001$, $CI = [.17, .26]$, compared to when they have low level of political efficacy. In contrast, those with weak egalitarian beliefs (-1*SD*; 2.78) were less likely to support affirmative action when they have high level of political efficacy, $B = -.07$, $SE = .02$, $p < .001$, $CI = [-.11, -.02]$, than when they have high level of political efficacy (see Figure 3).

Figure 3. Study 1b: Interaction Between Egalitarian Beliefs and Political Efficacy on Support for Affirmative Action (2020 ANES)



Note. The two predictors were centered. $p < .001$***, $p < .01$**

Additionally, I conducted a hierarchical linear regression analysis to examine the effect of all predictor variables. Two key predictors (i.e., egalitarian beliefs and political efficacy) and control variables (demographic characteristics and political knowledge) were centered. In the first phase, the five control variables were entered, followed by two main effects, then the interaction effect was entered as a predictor. I regressed support for affirmative action scores on this set of predictors to test Hypothesis 2. Table 7 presents the summary of results.

Table 7. Study 1b: Summary of Hierarchical Regression Analyses Using ANES 2020 Data

	Step 1				Step 2				Step 3			
Variable	*B*	*SE*	β	*95% CI*	*B*	*SE*	β	*95% CI*	*B*	*SE*	β	*95% CI*
Control variables												
Age	-.01	.00	**-.15**	[-.01, -.01]	-.01	.00	-.14	[-.01, -.01]	-.01	.00	-.14	[-.01, -.01]
Sex	.14	.03	**.07**	[.09, .20]	.09	.03	.04	[.04, .14]	.09	.03	.04	[.04, .14]
Education	.06	.01	**.12**	[.05, .08]	.03	.01	.05	[.01, .04]	.02	.01	.05	[.01, .04]
Social class	.05	.02	*.03*	[.00, .10]	.07	.02	.04	[.03, .11]	.06	.02	.04	[.02, .10]
Political knowledge	.06	.02	*.04*	[.01, .10]	-.01	.02	-.01	[-.05, .03]	-.02	.02	-.01	[-.05, .02]
Main effects												
Egalitarian beliefs					.49	.01	**.44**	[.46, .51]	.47	.01	.42	[.44, .49]
Political efficacy					.07	.02	**.05**	[.03, .10]	.08	.02	.06	[.04, .11]
Interaction effect												
Egalitarian beliefs ×Political efficacy									.15	.02	**.11**	[.12, .18]
R^2			.05				.23				.25	
Adjusted R^2			.05				.23				.25	
ΔR^2			**.05**				**.19**				**.01**	

Note. All continuous variables were centered at their means; Standardized coefficients in bold are significant at < .001, and italicized coefficients < .05; R square changes are significant at < .001.

Consistent with the results using PROCESS, the proposed interaction effect was significant. In addition, the two main effects were significant, such that higher levels of egalitarian beliefs and political efficacy were associated with more support for affirmative action. Additionally, demographic variables and political knowledge were significantly associated with support for affirmative action: Lower age, women, higher levels of education, socioeconomic class, and political knowledge were associated with more support for affirmative action.

2016 ANES Data

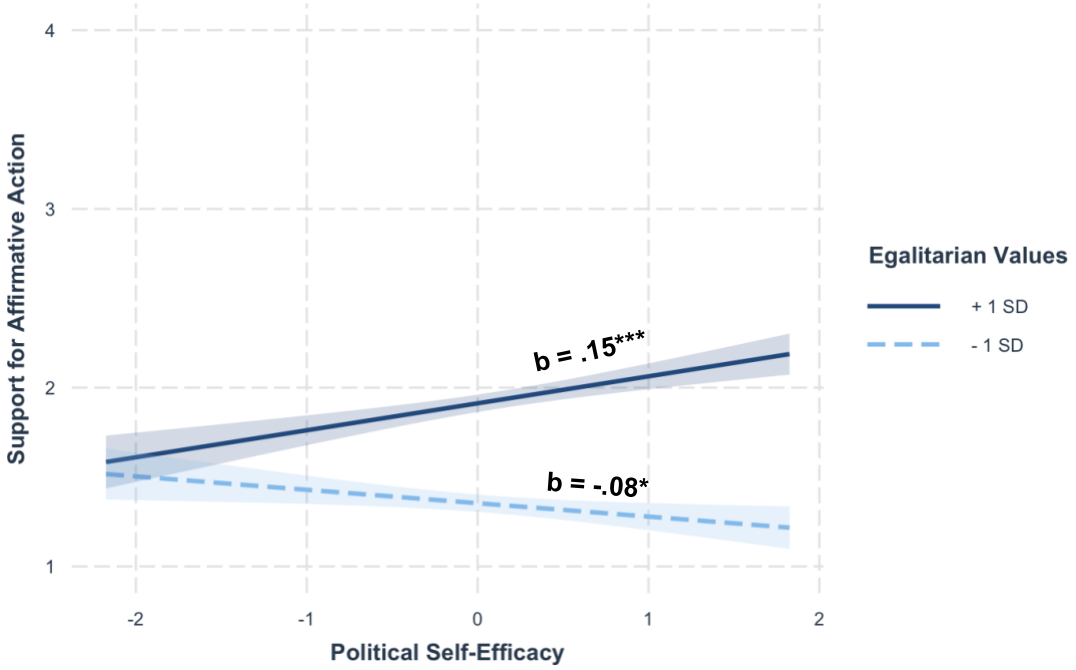
I conducted the same set analysis using the 2016 ANES data. The data included 3038 participants who self-identified as non-Hispanic White. The average age of the participants was 51.29 years (*SD* = 17.60), ranging from 18 to 90 years. In total, 52% of the participants were female, and 47% were male. Additional demographic information is presented in Table 5.

The reliabilities of measures were acceptable. I averaged four items that assess egalitarian beliefs (α = .70; all items correlated at *r*s > .30, *p* < .001; PCA identified one factor that explains 52% of the variance, factor loadings > .66), two items that assess internal political efficacy (*r* = .35, p < .001), and three items that assess political knowledge (α = .51; all items correlated at *r*s > .29, *p* < .001; PCA identified one factor that explains 51% of the variance; factor loadings > .64) to create composite indices. All other variables were measured using a single item.

Findings showed the same pattern of results as 2020 data. Analysis using the PROCESS macro revealed that the significant interaction effect between egalitarian beliefs and political efficacy on support for affirmative action, $\Delta R^2 = .010$, *B* = .13, *SE*

= .02, $p < .001$, *CI* = [.08, .18]. Specifically, people with strong egalitarian beliefs (+1*SD*; 4.38) were more likely to support affirmative action when they have higher level of political efficacy, *B* = .15, *SE* = .03, $p < .001$, *CI* = [.08, .21]. In contrast, those with weak egalitarian beliefs (-1*SD*; 2.68) were less likely to support affirmative action when they have higher level of political efficacy, *B* = -.08, *SE* = .03, $p = .011$, *CI* = [-.14, -.02] (see Figure 4).

Figure 4. Study 1b: Interaction Between Egalitarian Beliefs and Political Efficacy on Support for Affirmative Action (2016 ANES)



Note. The two predictor variables were centered. $p < .001$*** $p < .05$*

Furthermore, I conducted a hierarchical linear regression analysis to examine the effect of all predictor variables. I regressed support for affirmative action onto the

proposed key predictors (i.e., egalitarian beliefs and political efficacy) along with control variables. Table 8 presents the summary of results.

Table 8. Study 1b: Summary of Hierarchical Regression Analyses Using ANES 2016 Data

	Step 1				Step 2				Step 3			
Variable	*B*	*SE*	β	*95% CI*	*B*	*SE*	β	*95% CI*	*B*	*SE*	β	*95% CI*
Control variables												
Age	-.01	.00	**-.13**	[-.01, -.00]	-.01	.00	-.11	[-.01, -.00]	-.01	.00	-.11	[-.01, -.00]
Sex	.04	.04	.02	[-.04, .11]	-.03	.04	-.01	[-.10, .05]	-.02	.04	-.01	[-.09, .05]
Education	.03	.01	*.06*	[.01, .06]	.01	.01	.02	[-.01, .04]	.01	.01	.02	[-.02, .03]
Social class	.03	.03	.02	[-.03, .08]	.05	.03	.04	[-.00, .10]	.05	.03	.04	[-.00, .10]
Political knowledge	-.05	.02	*-.05*	[-.09, -.01]	-.08	.02	-.07	[-.12, -.03]	-.08	.02	-.08	[-.12, -.04]
Main effects												
Egalitarian beliefs					.35	.02	**.33**	[.31, .39]	.33	.02	.31	[.29, .37]
Political efficacy					.03	.02	.03	[-.01, .08]	.04	.02	.03	[-.01, .08]
Interaction effect												
Egalitarian beliefs × Political efficacy									.13	.02	**.10**	[.08, .18]
R^2			.02				.13				.14	
Adjusted R^2			.02				.13				.14	
ΔR^2			**.02**				**.11**				**.01**	

Note. All continuous variables were centered at their means; Standardized coefficients in bold are significant at < .001, and italicized coefficients < .05; R square changes are significant at < .001.

Consistent with the 2020 data, the proposed interaction effect was significant. Looking at the main effects, egalitarian beliefs were associated with more support for affirmative action, but political efficacy was not significantly associated with support for affirmative action. Some demographic variables and political knowledge were significantly associated with support for affirmative action. Lower age, higher levels of education and political knowledge were associated with more support for affirmative action. However, gender and subjective social class were not significantly associated with attitudes toward affirmative action.

Discussion

Drawing on data from the 2016 and 2020 ANES, there were two main findings. First, I found that White Americans, compared with Black Americans, are less likely to support affirmative action (as predicted in Hypothesis 1). Some people argue that racism no longer exists in society (Brown, 2019), however the systemic discrimination and racial gap in employment, income, and wealth persists until now (Bhutta et al., 2020). Therefore, affirmative action that increases hiring and promoting Blacks is crucial to reducing racial economic inequality. Another insight gained from the data collected 5 years ago is that White Americans on average opposed affirmative action (White Americans' mean score was 1.64 on a scale ranging from 1 = *strongly oppose* and 4 = *strongly favor*), and they still do in the current day (M = 1.88). This finding showcases why research on White ally is timely and important.

Second, findings from the two datasets provided support for the interaction hypothesis (Hypothesis 2). To roughly divide the sample into two categories along the two key dimensions, efficacious egalitarians were more likely to support affirmative

action than inefficacious egalitarians, efficacious anti-egalitarians, and inefficacious anti-egalitarians. Egalitarian beliefs were a strong predictor, and there was additional variance explained by its interaction with political efficacy. Although not expected, I found that political efficacy had a negative effect for those who hold anti-egalitarian beliefs. It means that anti-egalitarians who feel politically efficacious were more likely to oppose affirmative action than those who feel inefficacious. These efficacious anti-egalitarians can be compared with active allies (i.e., efficacious egalitarians), as both groups are more like to express their political opinions that are aligned with their values (cf. Figure 1). This result may also be connected with previous findings that socially advantaged group members (e.g., White Americans) who have a sense of power and personal control are less likely to empathize with others (Galinsky et al., 2006) and endorse the ideology that individuals can "move up the ladder" without systemic support (i.e., meritocracy beliefs; Major et al., 2007).

The two hypotheses were supported from both datasets, but it is worth noting that some effects were inconsistent. For example, political efficacy was significantly associated with affirmative action only in the 2020 data. As for the demographic variables, age, education, and political knowledge were significant predictors in both datasets, whereas gender and social class were significant predictors only in the 2020 data. Overall, the focal predictors (egalitarian beliefs and political efficacy) explained a large variance of participants' attitudes toward affirmative action.

Study 2

The main goals of Study 2 are threefold. First, I aim to replicate the findings of Study 1 using the measures that are tailored to test Hypothesis 2. I will use validated scales to measure the key predictors, egalitarian beliefs, and sociopolitical efficacy. Second, I seek to extend Study 1 by testing the hypotheses in a specific social issue in which racial inequality matters, that is, the racial income and wealth gap. Additionally, one of the limitations in Study 1 was that the outcome variable was a single item and measured general attitudes toward Blacks' preferential hiring and promotion. In this study, I will provide participants with statistical facts regarding racial income and wealth gap and measure their attitudes toward policies that can be adopted by higher education institutions, local/federal government, and private organizations, which play critical roles in individuals' employment, income, and wealth. Third, I will test the three-way interaction effect among egalitarian beliefs, sociopolitical efficacy, and perceptions of Blacks' collective efficacy on effective ally behavior (Hypothesis 3). In my research, effective ally behavior is defined as taking part in actions or supporting policies that are aimed to increase Black Americans' autonomy, which will ultimately contribute to reducing the group-level inequality. It is contrasted with less effective ally behavior that provide Black Americans with temporary assistance that contributes relatively little to tackling the group-level inequality. I expect that White Americans' perceptions of Blacks' collective efficacy will moderate the proposed two-way interaction to predict effective ally behavior. In other words, efficacious egalitarian Whites who believe that Blacks are collectively efficacious will be most likely to support effective ally behavior.

As a first step, I will probe these questions using a correlational study. Study 2 will also explore the roles of attribution and emotion in mediating the association between Egalitarian beliefs × Sociopolitical efficacy and ally behavior. For potential mediators, a cognitive and an affective aspects of the hypothesized effect will be assessed. Given that situational attribution of poverty and emotions toward inequality (e.g., anger, empathy) have been found to be associated with inequality-reducing efforts, Study 2 will test whether attribution of the racial gap in wealth and/or emotion towards the inequality mediate the hypothesized interaction effect.

These confirmatory and exploratory hypotheses were preregistered on OSF in May 2021.

Participants

For this study, I recruited White American participants on an online labor platform Prolific (www.prolific.ac). I chose Prolific because it has a pre-screening feature where I can target-recruit certain groups of participants using their demographic and attitudinal characteristics (Palan & Schitter, 2018). Additionally, Prolific users tend to be more naïve to research tasks in social science and have more diverse backgrounds in terms of ethnicity and location (Peer et al., 2017). I used four pre-screen filters to recruit White Americans who currently reside in the United States and vary on their political ideology spectrum. In doing so, I recruited self-identified liberals, moderates, and conservatives, each of which made up 33% of the sample.

I recruited 332 participants. The sample size decision was based on a priori power analysis of linear multiple regression (Fixed model, R^2 increase) with the purpose of testing the three-way interaction (G*Power 3.1 software; Faul et al., 2009). To achieve

the power of .80, I need 485 participants based on the assumption that the effect size is small (f^2 = .02; alpha = .05; 1 effect tested among 11 predictors) and 68 with a medium effect size (f^2 = .15). Given that the general retention rate of a sample recruited on Prolific is above 90%, the possible range becomes 75 to 534. I expected the final sample size to be 300 or more, and thus recruited 332 participants.

Procedure

Prolific users who passed the four pre-screens were able to see the study advertised as "Survey on Contemporary Social Issues." Participants read that the survey was developed to collect Americans' opinions on social issues in various domains such as public health, politics, economy, and education. This was done to minimize the selection bias in sampling (e.g., to prevent recruiting participants who are interested in racial issues or economic issues, or both). Participants who signed up for the study were provided with a consent form that outlines the aims and procedures of the study, assuring them that participation is voluntary and that they can withdraw from the study at any time without consequence.

Participants who consented first saw a screen informing that they will be randomly chosen to report their thoughts on a topic, and on the next page they learned that they will be asked about issues regarding the economic gap in the U.S. Participants then read an excerpt from an article on the racial income disparity between Black and White Americans. This excerpt includes statistics about the racial disparities in college admissions, college completion, household income, and wealth (National Center for Education Statistics, 2020; Pew Research Center, 2016). After reading the excerpt,

participants completed the measures listed below. At the end of the survey, the full procedure and study aim were disclosed to participants.

Measures

Full items are presented in Appendix B. Within each measure, all items were presented in a random order to exclude the possibility of an order effect.

Predictor 1: Egalitarian Beliefs

I used Social Dominance Orientation (SDO; Sidanius et al., 1996) to measure participants' beliefs in egalitarianism. Social Dominance Theory (Sidanius & Pratto, 1999) argues that individuals possess varying levels of anti-egalitarian values and desire to establish and support group-based hierarchies. Individuals who are relatively high in SDO seek to maintain or enhance social hierarchies. Conversely, individuals who are relatively low in SDO seek to attenuate social hierarchies. Therefore, higher SDO scores reflect anti-egalitarianism and lower SDO scores egalitarianism (Ho & Unzueta, 2015). The most recently validated SDO scale (Ho et al., 2015) consists of two subscales, anti-egalitarianism and dominance. For the purpose of the study, I used anti-egalitarian subscale as a predictor.

Participants completed a full 16-item SDO scale (Ho et al., 2015). Eight items that measure (anti-)egalitarianism included "We should work to give all groups an equal chance to succeed," "Group equality should be our ideal," and "Group equality should not be our primary goal." Participants responded using a 7-point Likert scale (1 = *strongly oppose*, 7 = *strongly favor*; $\alpha = .93$; PCA identified one factor that explains 67% of the variance, factor loadings > .72). Four items were reverse-coded, and the scores for

eight items were averaged such that higher scores indicate higher levels of egalitarianism, and lower scores reflect higher levels of anti-egalitarianism.

Predictor 2: Sociopolitical Self-efficacy

To increase the measurement reliability, I used a validated scale comprised of multiple items. In this study, the sociopolitical control scale (Zimmerman & Zahniser, 1991) was used to assess participants' self-efficacy in the sociopolitical domain. This scale was developed and validated to measure individuals' beliefs about their capabilities and efficacy in social and political systems. Examples of sociopolitical control include beliefs that one can influence policy decisions or organize one's neighbors. The original scale has two factors, leadership competence and policy control, and given the purpose of the study, I used 9 items from the policy control subscale. Participants responded using a 7-point Likert scale (1 = *strongly disagree,* 7 = *strongly agree*; $\alpha = .79$).

Different from the original paper on scale validation, PCA identified three factors, each factor consisting of three items and explaining approximately 20% of the variance (See Appendix C for full analysis). First factor had three items that are focused on personal understanding and qualification in political participation (e.g., "I feel like I have a pretty good understanding of the important political issues which confront our society."), second factor on responsiveness of political institution and public officials (e.g., "Most public officials wouldn't listen to me no matter what I did."), and third factor on personal importance of political issues and events (e.g., "So many other people are active in local issues and organizations that it doesn't matter much to me whether I participate or not."). How sociopolitical efficacy is defined in the current research is most comparable with the first factor. Therefore, two items that were not cross-loaded with the

other two factors were used in the analysis. The two items were correlated at $r = .58$ ($p < .001$) and averaged such that higher scores indicate higher levels of sociopolitical self-efficacy.

Predictor 3: Perceptions of Black Americans' Collective Efficacy

Four items were used to measure individuals' perception of Black Americans' efficacy as a collective. Sample items include "Black people, working together as a group, can reduce the wealth gap" and "Black people are best able to tackle the problem of gender inequality" (adapted from van Zomeren et al., 2008 and Kim et al., 2018). Participants indicated their agreement or disagreement using a 7-point Likert scale (1 = *strongly disagree,* 7 = *strongly agree*; $\alpha = .77$; PCA identified one factor that explains 60% of the variance, factor loadings > .64). One item was reverse-coded, and the scores for four items were averaged such that higher scores indicate higher levels of perceptions of Blacks' collective efficacy.

Mediator 1: Attribution

As a potential cognitive path to ally behavior, individuals' internal and external attributions of the racial wealth gap were measured. A substantial amount of evidence found that attribution is closely related to attitudes toward outgroup and prejudice against socially disadvantaged groups (Crandall et al., 2001; Kim et al., 2018; Morgan et al., 2010; Pettigrew, 1979). In this study, participants' internal and external attributions of current racial disparities in socioeconomic status were assessed.

Adapted from the poverty attribution scale (Cozzarelli et al., 2001; Smith & Stone, 1989), the question stem "There is a racial wealth gap in society because racial minorities…" was provided at the top of the screen. Four items measured external

attribution (e.g., "…experience prejudice and discrimination in hiring."; α = .89; PCA identified one factor that explains 76% of the variance, factor loadings > .80), and four items measured internal attributions (e.g., "…tend to lack drive and perseverance."; α = .76; PCA identified one factor that explains 62% of the variance, factor loadings > .41). Participants indicated their (dis)agreement with each statement using a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). The two types of attribution were correlated at $r = -.61$, $p < .001$, and thus combined to form a single composite index (α = .90; PCA identified one factor that explains 73% of the variance, factor loadings > .77) such that higher scores denote more external attribution and less internal attribution of the racial wealth gap.

Mediator 2: Anger and Empathy

As a potential affective path, participants' emotional reactions to the issue and the disadvantaged group members were measured. Previous research has found that emotions represent a broad range of responses to inequality and efforts to challenge it (Greenaway et al., 2016; Montada & Schneider, 1989). Specifically in the intergroup context, anger and empathy have been found to play a significant role in promoting ally behavior. Previous studies showed that high-status group members' anger towards inequality (Leach et al., 2006) and empathy towards the low-status group (Choma et al., 2020) predict political and prosocial actions for equality. Anger is an approach emotion and associated with a sense of power and direct engagement with the source of anger (Izard, 1991). It has been found to be one of the antecedents of collective action against perceived injustice (Iyer et al., 2007). Taken together, I expected that anger would be positively associated with both sociopolitical self-efficacy and egalitarianism. As for

empathy, it was found to be correlated with egalitarianism (specifically empathy for disadvantaged groups; Lucas & Kteily, 2018), and this study investigated whether its association can be amplified by sense of efficacy.

Participants indicated the extent to which they feel anger about the racial income and wealth gap in society (Iyer & Achia, 2020). Three items were "angry," "outraged," "furious" (1 = *not at all*, 7 = *extremely*; $\alpha = .96$; PCA identified one factor that explains 93% of the variance, factor loadings > .95). Empathy towards racial minorities was measured using three items (Lucas & Kteily, 2018): "compassion," "sympathy," "empathy" (1 = *not at all*, 7 = *extremely*; $\alpha = .94$; PCA identified one factor that explains 89% of the variance, factor loadings > .93). In addition, some positive emotions were included as filler items (e.g., "pleased," "satisfied").

The order of attribution and emotion measures were counterbalanced to eliminate the order effect.

Outcome 1: General Support for Affirmative Action

To replicate the two-way interaction effect on attitudes toward affirmative action (Hypothesis 2), I used two items that measure participants' general support for affirmative action (Wellman et al., 2016): "Affirmative action programs are still needed today to address racial inequality" and "Businesses should increase their efforts to promote racial diversity in the workplace" ($r = .79$, $p < .001$).

Outcome 2: Support for Effective Affirmative Action Policies

To test the three-way interaction effect on effective vs. less effective policies (Hypothesis 3), I conducted a pilot study. The goals of the pilot were twofold: To examine whether participants perceive that policies vary on its effectiveness; and if so, to

identify which policies are considered effective and less effective. In the pilot study, 120 participants completed the survey, and one person who didn't pass the attention check question (same as Study 2) was excluded from analysis. Participants were White Americans who reside in the U.S. (M_{age} = 33.47, SD_{age} = 10.90) and varied on political ideology spectrum (33% liberals, 33% moderates, 33% conservatives).

Participants responded to 12 items, each of which describes a social or public policy that is aimed at reducing the racial wealth gap. For each policy, three questions were asked: "How effective is this policy in increasing Black people's autonomy?" "How effective is this policy in empowering Black people?" and "How effective is this policy in tackling the fundamental cause of the racial wealth gap?" Participants indicated the extent to which they perceive the policy to be effective (1 = *not at all effective*; 7 = *extremely effective*; αs > .90), and their scores were averaged such that high scores reflect high levels of perceived effectiveness of the policy.

Six items described policies that are focused on developing and increasing Blacks' autonomy through more opportunities for higher education and training. Sample items include "To build a center that provides Black people with opportunities to develop job-related skills" and "To create a nationwide network for Black college students to secure academic help and support from peers." I expected these policies are perceived as more effective at reducing group-level inequality compared to the following six policies. The other set of six items described policies are beneficial for Blacks but, compared to autonomy-oriented policies, focused on providing immediate help or releasing the existing burden for Blacks. Sample items include "To implement a program that allows Black college students to complete a less challenging curriculum" and "To provide

additional unemployment payments for Black people who are in between jobs" (Full measures are provided in Appendix D).

To examine whether participants distinguish the autonomy- vs. assistance-oriented policies, I conducted exploratory factor analysis. To ensure the factor structure, two sets of Principal Component Analysis (PCA) were conducted, each maximizing and reducing the factor differentiation (Varimax and Direct Oblimin, respectively). Both analyses extracted two factors from 12 items: Factor 1 representing autonomy-oriented policies, and Factor 2 representing assistance-oriented policies. Full results are reported in Appendix E.

Taken together, Table 9 presents the summary of the perceived effectiveness ratings and the PCA results of the 12 policies. Based on the mean effectiveness and consistency in factor structure, four items were operationalized as effective policies, and three items as less effective.

Table 9. Study 2 – Pilot: Identifying Effective vs. Less Effective Policies

	Perceived Effectiveness		Exploratory Factor Analysis		
Variable	Mean	SD	Varimax	Oblimin	**Category**
Skill development	4.71	1.70	Factor 1	Factor 1	**High**
Nationwide network	4.57	1.52	Factor 1	Factor 1	**High**
Supplemental training	4.45	1.64	Factor 1	Factor 1	**High**
University visit	4.32	1.60	Factor 1	Factor 1	**High**
Student loan	4.17	1.74	*cross-loaded*	Factor 1	
Outreach policy	4.13	1.61	Factor 1	Factor 1	
Subsidized housing	3.69	1.71	*cross-loaded*	*cross-loaded*	
Tie-breaker	3.36	1.80	*cross-loaded*	Factor 2	
Whites' awareness	3.25	1.77	*cross-loaded*	*cross-loaded*	
Minimum qualification	3.04	1.74	Factor 2	Factor 2	**Low**
Unemployment pay	2.84	1.72	Factor 2	Factor 2	**Low**
Less challenging curriculum	2.10	1.60	Factor 2	Factor 2	**Low**

Note. Items are listed in order of perceived effectiveness (high-low). Cross-loaded items are significantly loaded onto both factors at > |.40|.

The same set of 12 policies were used in Study 2. Eight items concern public or institutional policies and measured participants' willingness to pay more taxes in support of the policies. All eight items started with the question stem "How willing would you be to support an increase of 5% in your taxes if that money were used…?" (Abad-Merino et al., 2013). Participants indicated their willingness using a 7-point Likert scale (1 = *not at all willing*, 7 = *extremely willing*).

Four items concerned organizations' hiring process and were asked with a question "To what extent do you oppose or support each policy that could be implemented in U.S. organizations?" (adapted from Ho & Unzueta, 2015). Participants indicated their opposition or endorsement of the policies using a 7-point Likert scale (1 = *strongly oppose*, 7 = *strongly favor*).

Two composite indices were computed for autonomy-focused/effective policies (4 items, $\alpha = .91$; PCA identified one factor that explains 79% of the variance, factor loadings > .67) and assistance-focused/less effective policies (3 items, $\alpha = .74$; PCA identified one factor that explains 66% of the variance, factor loadings > .74), respectively.

Control Variables

Consistent with Study 1, participants' demographic characteristics were measured and controlled in all analyses. Participants' age, gender, educational attainment, and subjective social class (MacArthur Scale of Subjective Social Status; Adler et al., 2000) were assessed at the end of the survey.

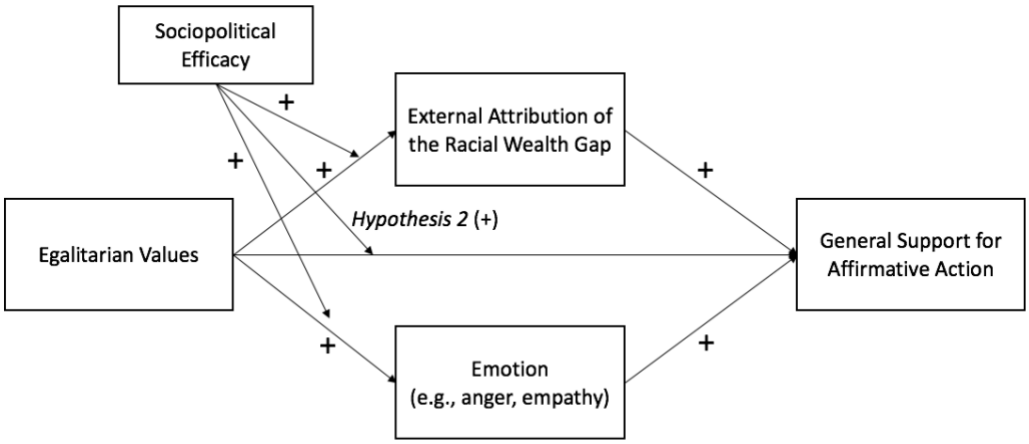
Analysis Plan

Testing Hypothesis 2 and Exploring Mediational Paths

Identical to Study 1, I used PROCESS Model 1 and hierarchical regression analysis to examine the proposed two-way interaction effect. In these analyses, I expected that participants' egalitarian beliefs and sociopolitical efficacy interact to predict their general support for affirmative action. Specifically, it is expected that participants with high levels of egalitarian beliefs and sociopolitical efficacy are more likely to support affirmative action than other counterparts. This effect is expected to be significant while controlling for the covariates.

An additional analysis was conducted to explore the underlying mechanism of the hypothesized interaction effect on support for affirmative action. I used PROCESS to test the moderated mediation model (Model 8). It was expected that sociopolitical efficacy will moderate the relationship between egalitarians beliefs and mediators (attribution and emotional reaction) as well as the relationship between egalitarian beliefs and general support for affirmative action. These indirect effects through attribution and emotion were computed based on 10,000 bootstrap resamples, and 95% CIs of the indirect effects were reported. I expected that CIs will not include zero, suggesting the moderated mediation effects on general support for affirmative action via attribution and/or emotion is significant (see Figure 5 for the expected moderated mediation model).

Figure 5. Study 2: Expected Mediational Model for General Support for Affirmative Action



In addition, following the suggestions for mediational analyses (MacKinnon et al., 2002), I conducted a hierarchical regression analysis using the same set of predictors from the main analysis and using attribution and emotion as the outcome variable. If there is a significant association between the interaction (Egalitarian beliefs $\times$ Self-efficacy) and any of the potential mediators, an additional regression analysis will be conducted to test whether the mediator can predict the ally behavior while controlling for the interaction effect.

Testing Hypothesis 3

I conducted multivariate regression analysis to examine the proposed three-way interaction effect on effective and less effective ally behavior. First, I centered three key predictors (i.e., egalitarian beliefs, sociopolitical efficacy, and perceived collective efficacy) and control variables that were measured on a continuous scale. Then, the two types of ally behavior were regressed onto a set of predictor variables from low to high

order: control variables, three main effects, three two-way interaction terms, and lastly the three-way interaction term were entered as predictors.

For an intuitive interpretation of the three-way interaction, I investigated the two-way interaction effect in two groups (egalitarians who scored high on egalitarian values scale and anti-egalitarians who scored low) and plotted the two-way interaction for each group. I expected that the two-way interaction between sociopolitical efficacy and perceptions of Blacks' collective efficacy to be significant for egalitarians but not for anti-egalitarians. For egalitarians, it is expected that they are most likely to support effective ally behavior when they have high levels of both sociopolitical efficacy *and* perceive that Blacks are efficacious. For anti-egalitarians, there are no specific hypotheses regarding significant effects, but the floor effect might be observed.

Results

Among 332 participants who completed the survey, one participant who answered to fewer than 70% of the questions and two participants who self-identified as non-White to our own demographic question were excluded from analysis. In addition, two participants who failed to pass the attention-check question were also excluded ("What was the topic of the news story that you read in this survey?" and four possible answers were provided). In total, four participants (1%) were excluded from the analysis. Participants' demographic characteristics are presented in Table 10.

Table 10. Study 2: Participant Demographics

	Study 2 (*N* = 328)	
Variable	***n***	**%**
Gender		
Woman	176	54%

Man	144	44%
Genderfluid	2	1%
Other	6	2%
Highest Education Completed		
Elementary school	1	0.3%
High school or equivalent	47	14%
Vocational/Technical school	12	4%
Some college	79	24%
Bachelor's degree	127	39%
Master's or Doctoral degree	51	16%
Professional degree	8	2%
Other	3	1%

Variable	**Mean**	***SD***
Age	37.10	13.62
Subjective social class	5.35	1.74

Note. Subjective social class ranges from 1 = *worst off in my community* and 10 = *best off in my community*.

The following statistical analyses were conducted using PROCESS and SPSS, and graphs were created via R. Data and syntax files are available on OSF project page. Means, standard deviations, ranges, and correlations of the key study variables are provided in Table 11.

Table 11. Study 2: Descriptive Statistics and Correlations Among Main Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Egalitarian beliefs													
2. Sociopolitical self-efficacy	.03												
3. Blacks' collective efficacy	**-.25**	.08											
4. External attribution	**.74**	.10	**-.25**										
5. Anger	**.63**	.05	**-.35**	**.74**									
6. Empathy	**.62**	.05	**-.18**	**.70**	**.66**								
7. General Support for AA	**.77**	.07	**-.29**	**.82**	**.75**	**.71**							
8. Autonomy-focused policies	**.66**	.07	**-.22**	**.69**	**.73**	**.64**	**.78**						
9. Assistance-focused policies	**.46**	.03	**-.24**	**.47**	**.59**	**.47**	**.61**	**.73**					
10. Age	**-.26**	**.25**	*.12*	**-.22**	**-.27**	**-.20**	**-.19**	**-.27**	**-.25**				
11. Gender	**-.19**	-.06	.05	**-.29**	**-.30**	**-.22**	**-.23**	**-.18**	-.08	-.01			
12. Education	*-.11*	*.16*	-.02	-.02	.02	-.04	-.06	-.03	.01	.09	-.03		
13. Social class	-.11	.04	-.07	-.03	-.03	-.02	-.04	-.05	.04	-.03	-.01	**.32**	
N	328	328	328	328	328	328	328	328	328	327	320	325	328
Range	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	18 -76	1,2	1-7	1-10
M	5.36	5.32	5.05	5.18	3.76	4.98	4.77	4.18	2.70	37.10	1.45	4.44	5.35
SD	1.55	1.21	1.24	1.37	2.04	1.71	1.99	1.96	1.60	13.62	0.50	1.30	1.74

Note. For gender, woman is coded as 1, man as 2. Participants who chose neither woman nor man were excluded from the analysis due to the small sample size (3%). For education, "other" was excluded (1%).

Two-Way Interaction Effect (Hypothesis 2) and Mediational Paths

PROCESS revealed that the interaction effect between egalitarian beliefs and sociopolitical efficacy on general support for affirmative action was not significant, ΔR^2 = .003, *B* = .06, *SE* = .04, *p* = .134, *CI* = [-.02, .14]. This result was inconsistent with the findings in Study 1, and I explored the potential indirect effect to gain a better understanding of the result. It is possible that there is a significant indirect effect that went unchecked (Indirect-only model), and some researchers argue that investigating the mediational path is important especially in the absence of a direct effect (Zhao et al., 2010).

To examine the mediational paths, three potential mediators (i.e., external attribution, anger, empathy) were regressed onto the two-way interaction.

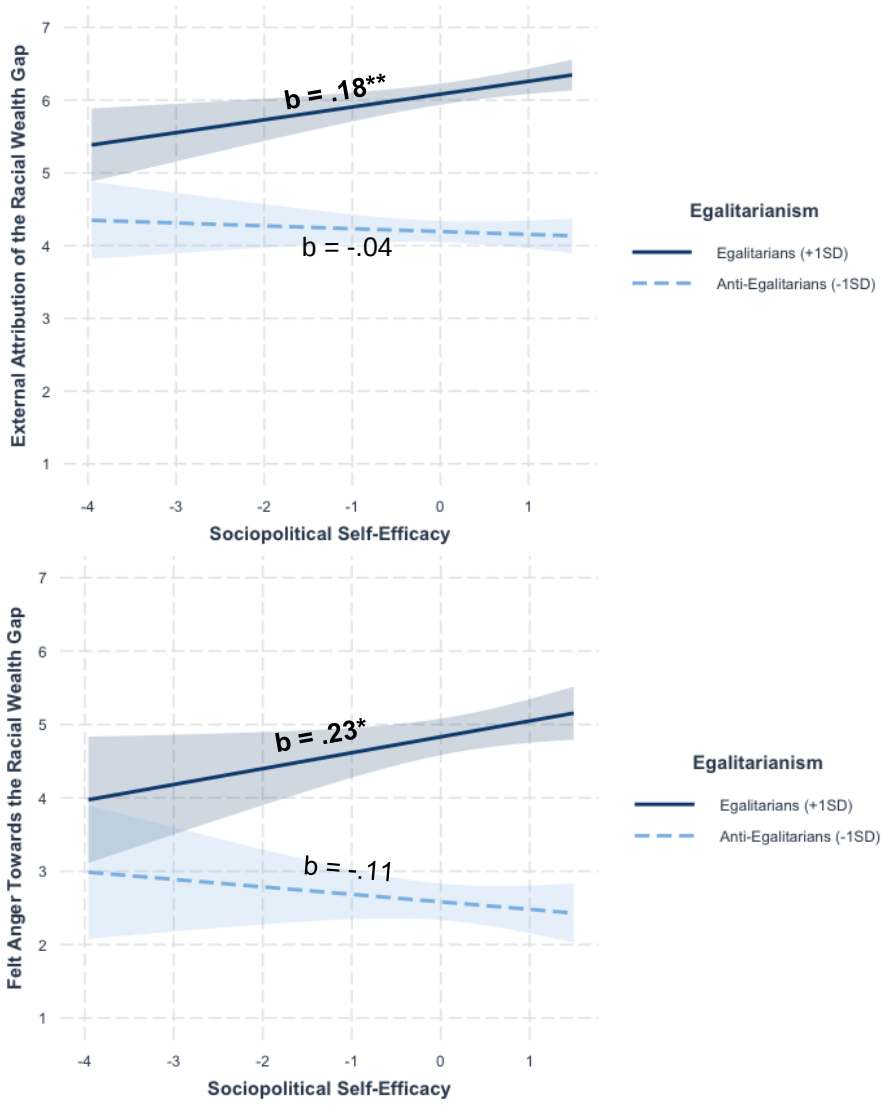
***External attribution*.** Egalitarian beliefs × Political efficacy significantly predicted participants' external attribution of the racial wealth gap, ΔR^2 = .01, *B* = .07, *SE* = .03, *p* = .016, *CI* = [.01, .13]. Simple slope analyses revealed the nature of the interaction. People with strong egalitarian beliefs (+1*SD*; 6.91) were more likely to attribute the cause of the racial wealth gap to external factors when they have higher levels of political efficacy, *B* = .18, *SE* = .06, *p* = .003, *CI* = [.06, .31]. However, political efficacy didn't affect anti-egalitarians' (-1*SD*; 3.81) attribution of the racial wealth gap, *B* = -.04, *SE* = .07, *p* = .515, *CI* = [-.17, .09] (see Figure 6, top panel).

***Anger*.** Egalitarian beliefs × Political efficacy again significantly predicted participants' anger towards the racial wealth gap, ΔR^2 = .01, *B* = .10, *SE* = .05, *p* = .037, *CI* = [.01, .20]. Specifically, people with strong egalitarian beliefs felt more anger when they have higher levels of political efficacy, *B* = .23, *SE* = .11, *p* = .031, *CI* = [.02, .43].

However, political efficacy didn't affect anti-egalitarians' felt anger, B = -.11, SE = .11, p = .342, CI = [-.33, .11] (see Figure 6, bottom panel).

Empathy. For empathy towards racial minorities, the proposed interaction effect was not significant, ΔR^2 = .00, B = .04, SE = .04, p = .360, CI = [-.05, .13].

Figure 6. Study 2: Interaction Effect of Egalitarian Beliefs and Political Efficacy on Mediators

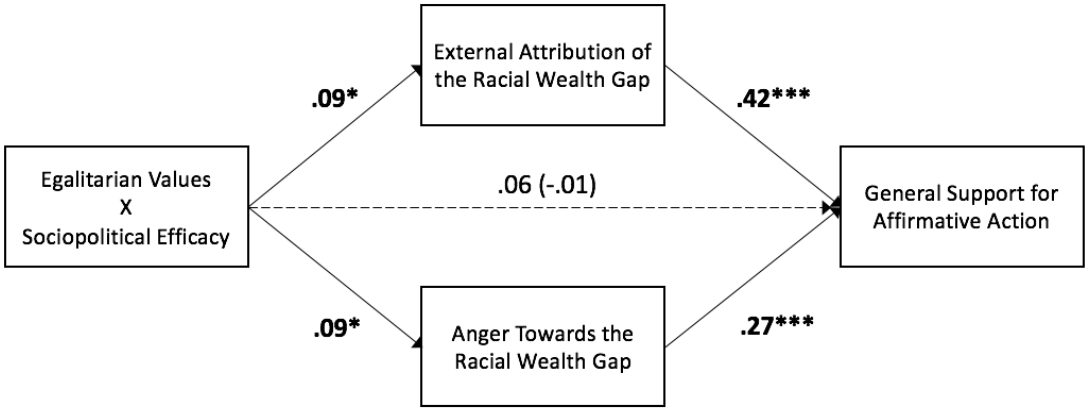


Note. Top panel is the results for participants' external attribution of the racial wealth gap, and the bottom panel is the results for participants' felt anger towards the racial wealth gap. All predictors including egalitarianism and sociopolitical self-efficacy were centered. Significant slopes are marked in bold. $p < .01$** $p < .05$*

Based on these findings, I tested the moderated mediation model (Figure 5) with external attribution and anger as mediators. Analysis using PROCESS Model 8 verified the presence of moderated mediation effects through both attribution (Index = .04, *SE* = .02, CI [.01, .01]) and anger (Index = .03, *SE* = .01, CI [.002, .057]). Specifically, the analysis of conditional indirect effects confirmed that for egalitarians, higher levels of sociopolitical efficacy led to more external attribution (*B* = .11, *SE* = .05, CI = [.02, .21]) and anger towards the racial wealth gap (*B* = .06, *SE* = .03, CI = [.006, .132]), which ultimately predicted more general support for affirmative action. In contrast, both mediational paths via attribution (*B* = -.03, *SE* = .04, CI = [-.11, .05]) and anger (*B* = -.03, *SE* = .03, CI = [-.09, .03]) were not significant for anti-egalitarians.

In addition, I conducted a set of hierarchical regression analyses to further examine the association between the variables. Following suggestions for mediational analyses (McKinnon et al., 2002), I regressed the mediator on the predictor and then regressed the outcome variable on the mediator while accounting for the predictor. In both analyses, control variables were entered into the first step to assess the net effect of the key variables on support for affirmative action. The standardized coefficients of the paths are presented in Figure 7. Full regression analysis results can be found in Table 12.

Figure 7. Study 2: Mediational Pathways of the Proposed Interaction on General Support for Affirmative Action



Note. Standardized coefficients (β) are reported. Coefficients in bold are significant at $p < .001$*** and $p < .05$*

Table 12. Study 2: Summary of Hierarchical Regression Analyses on General Support for Affirmative Action

	Step 1				Step 2				Step 3				Step 4			
Variable	*B*	*SE*	β	*95% CI*	*B*	*SE*	β	*95% CI*	*B*	*SE*	β	*95% CI*	*B*	*SE*	β	*95% CI*
Control variables																
Age	-.03	.01	*-.17*	[-.04, -.01]	.00	.01	.00	[-.01, .01]	.00	.01	.01	[-.01, .01]	.01	.00	.06	[.00, .02]
Gender	-.91	.22	**-.23**	[-1.33, -.48]	-.32	.15	-.08	[-.61, -.03]	-.32	.15	-.08	[-.61, -.04]	.13	.12	.03	[-.10, .37]
Education	-.07	.09	-.05	[-.24, .11]	.00	.06	.00	[-.11, .12]	.00	.06	.00	[-.11, .12]	-.06	.05	-.04	[-.15, .03]
Social class	-.03	.07	-.03	[-.16, .10]	.05	.04	.04	[-.04, .14]	.05	.04	.05	[-.03, .14]	.04	.03	.03	[-.03, .10]
Main effects																
Egalitarian beliefs					.97	.05	**.76**	[.88, 1.07]	.96	.05	.75	[.86, 1.06]	.40	.06	.32	[.30, .51]
Sociopolitical efficacy					.07	.06	.04	[-.06, .19]	.06	.06	.04	[-.06, .18]	.00	.05	.00	[-.09, .09]
Interaction effect																
Egalitarian beliefs x Sociopolitical efficacy									.06	.04	.06	[-.02, .14]	-.01	.03	-.01	[-.07, .06]
Mediators																
Attribution													.60	.07	**.42**	[.46, .74]
Anger													.26	.04	**.27**	[.18, .35]
R^2	.08				.60				.61				.77			
Adjusted R^2	.07				.60				.60				.76			
ΔR^2	**.08**				**.52**				.003				**.16**			

Note. All continuous predictor variables were centered at their means; Standardized coefficients in bold are significant at < .001, and italicized coefficients < .05; R square changes are significant at < .001.

In sum, Hypothesis 2 was partially supported. There was no evidence for a direct effect of the interaction between egalitarian beliefs and sociopolitical efficacy on general support for affirmative action. However, I found significant indirect effects via attribution and anger that afford a better understanding of the underlying mechanism of efficacious egalitarians' higher level of support for affirmative action (compared to inefficacious egalitarians and to anti-egalitarians)

Three-Way Interaction Effect on Support for Two Types of Affirmative Action Policies (Hypothesis 3)

Given the conceptual and empirical association between effective ally behavior and less effective ally behavior ($r = .73$, $p < .001$), I conducted multivariate regression analysis to test the proposed three-way interaction effect. The two types of ally behavior as outcome variables were regressed onto a set of continuous predictor variables (i.e., egalitarianism, sociopolitical efficacy, perceptions of Blacks' collective efficacy) and gender as a categorical variable. Parameter estimates showed that the three-way interaction is significant for assistance-focused policies, $B = -.08$, $SE = .04$, CI = [-.15, -.01], but not for autonomy-focused policies, $B = .07$, $SE = .04$, CI = [-.18, .03] (more results are provided in Table 13).

Table 13. Study 2: Multivariate Regression Analysis Results

	DV1: Support for Autonomy-focused policies				DV2: Support for Assistance-focused policies			
Variable	*B*	*SE*	*t*	*95% CI*	*B*	*SE*	*t*	*95% CI*
Control variables								
Age	-.02	.01	-2.90	[-.03, -.01]	-.02	.01	-2.60	[-.03, -.00]
Woman	.22	.17	1.32	[-.11, .56]	.02	.16	.10	[-.30, .34]
Education	.08	.07	1.23	[-.05, .22]	.07	.07	1.06	[-.06, .20]
Social class	-.03	.05	-.64	[-.13, .07]	.04	.05	.80	[-.06, .13]
Main effects								
Egalitarian beliefs	.75	.06	12.25	[.63, .87]	.38	.06	6.37	[.26, .49]
Sociopolitical efficacy	.12	.08	1.62	[-.03, .27]	.04	.07	.59	[-.10, .19]
Black collective efficacy	-.07	.07	-.95	[-.20, .07]	-.15	.07	-2.17	[-.28, -.01]
Two-way Interaction								
Egalitarian beliefs x Sociopolitical efficacy	.04	.06	.64	[-.07, .15]	.08	.05	1.45	[-.03, .18]
Egalitarian beliefs x Black collective efficacy	.04	.05	.84	[-.05, .13]	.08	.05	1.89	[-.00, .17]
Sociopolitical efficacy x Black collective efficacy	-.08	.05	-1.40	[-.18, .03]	-.05	.05	-.89	[-.15, .06]
Three-way interaction								
Egalitarian beliefs x Sociopolitical efficacy x Black collective efficacy	-.07	.04	-1.78	[-.18, .03]	**-.08**	.04	-2.12	[-.15, -.01]
R^2	.47				.27			
Adjusted R^2	.45				.24			

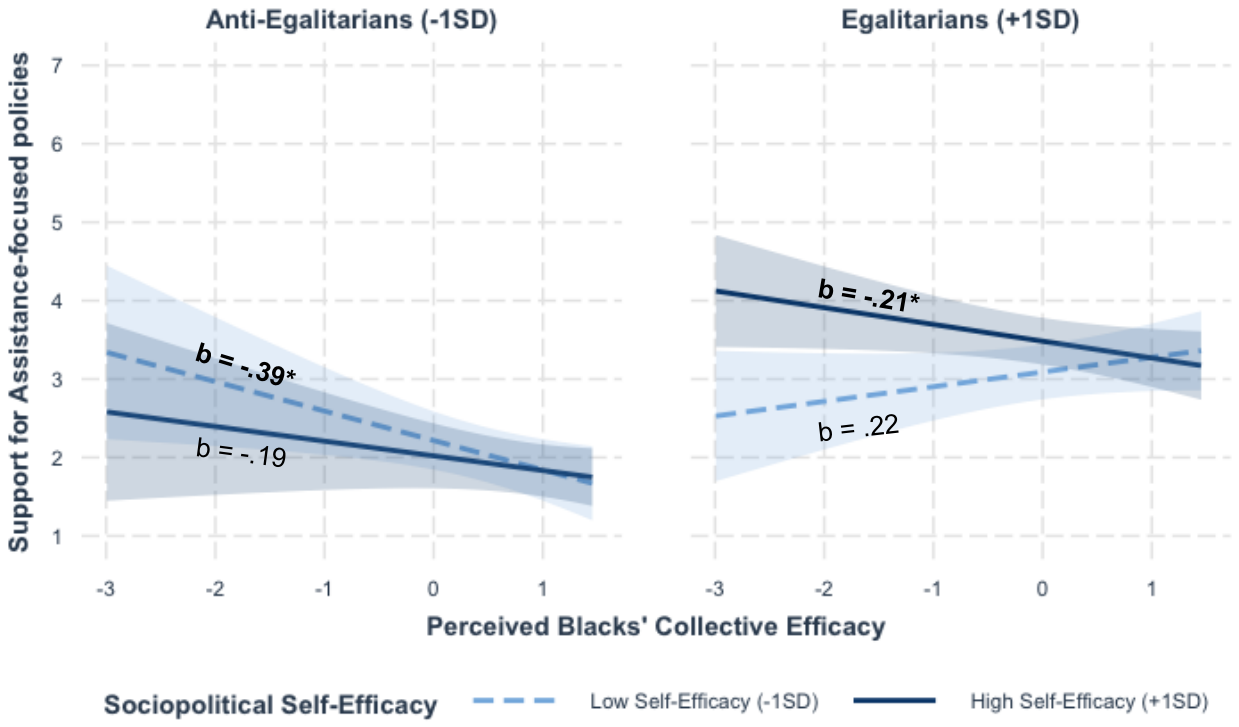
Note. The reference category of woman is man.

Assistance-focused policies.

To fully understand the nature of the significant three-way interaction effect on support for assistance-focused policies, I investigated conditional two-way interaction effects among egalitarians and anti-egalitarians (Figure 8). The interaction between sociopolitical self-efficacy and perceptions of Blacks' collective efficacy was significant

for egalitarians, B = -.17, F(1, 304) = 6.55, p = .011, but non-significant for anti-egalitarians, B = .08, F(1, 304) = .82, p = .367.

Figure 8. Study 2: Interaction between Self-Efficacy and Perceptions of Blacks' Collective Efficacy on Support for Assistance-focused Policies Among Anti-Egalitarians (left panel) and Egalitarians (right panel)



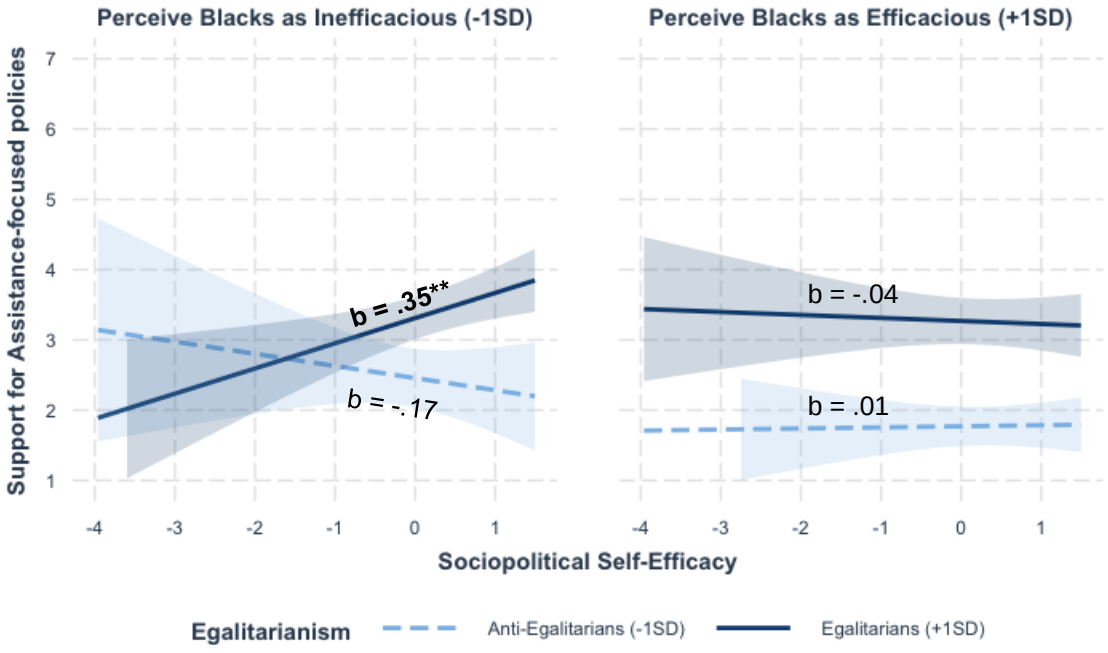
Note. Predictor variables were centered. Significant slope coefficients are in bold. *p < .05

For egalitarians with high levels of sociopolitical efficacy, they were more likely to support assistance-focused policies when they perceived Blacks as inefficacious (vs. efficacious), B = -.21, SE = .08, p = .020, CI = [-.37, -.04]. But for egalitarians with low levels of sociopolitical efficacy, there was no such difference, B = .22, SE = .14, p = .109,

CI = [-.05, .49]. For anti-egalitarians with low self-efficacy, they were less likely to support assistance-focused policies when they perceived Blacks as efficacious (vs. inefficacious), B = -.39, SE = .16, p = .018, CI = [-.71, -.07]. This effect was not significant for anti-egalitarians with high levels of self-efficacy, B = -.19, SE = .14, p = .186, CI = [-.47, .09].

Looking at the interaction from another angle, I investigated conditional interaction effects between egalitarian beliefs and self-efficacy at different levels of perceptions of Blacks' collective efficacy (Figure 9). For those who perceived that Blacks are inefficacious, the interaction effect was significant, B = .16, $F(1, 304)$ = 3.97, p = .047.

Figure 9. Study 2: Interaction between Egalitarian Values and Self-Efficacy on Support for Assistance-focused Policies Among Those with High Black Collective Efficacy (left panel) and with Low Black Collective Efficacy (right panel)



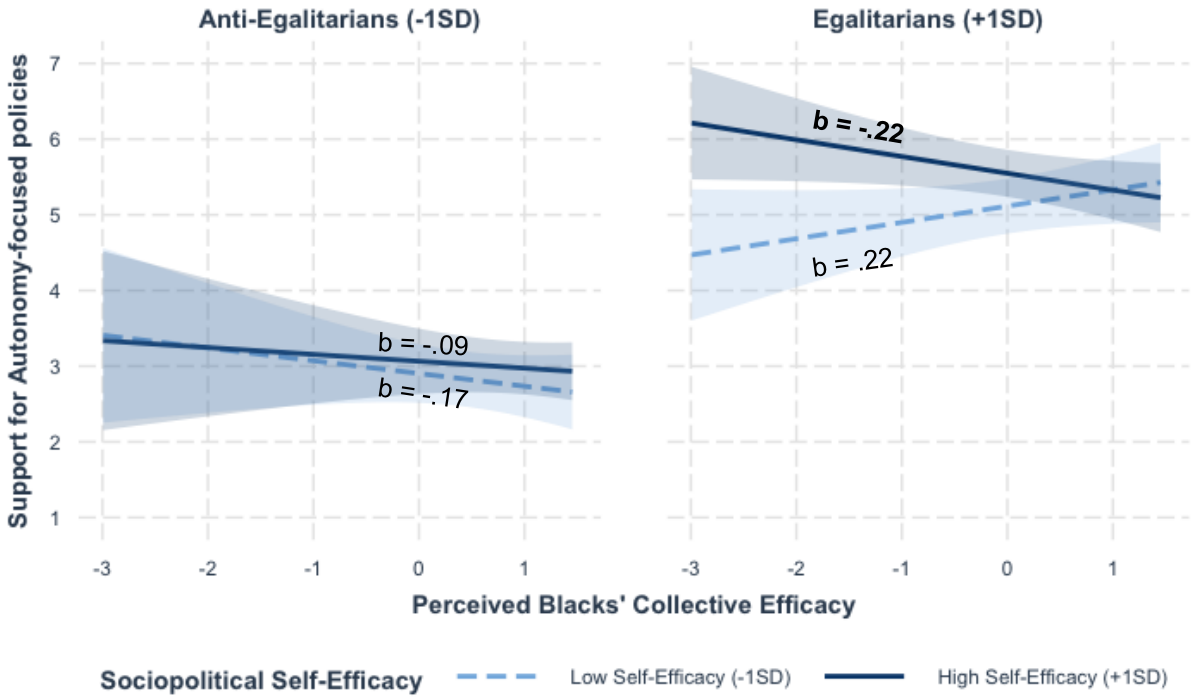
Note. Predictor variables were centered. Significant slope coefficient is in bold. **p < .01

It indicates that when egalitarian White participants perceived that Blacks are inefficacious in reducing the racial wealth gap, they were more likely to support assistance-focused policies when they have high (vs. low) self-efficacy, B = .35, SE = .13, p = .006, CI = [.10, .60]. However, this association was not significant for anti-egalitarians who perceive that Blacks are inefficacious, B = -.17, SE = .19, p = .386, CI = [-.55, .21]. The interaction effect between egalitarian beliefs and self-efficacy was not significant for those who believe that Blacks are collectively efficacious, B = -.02, F(1,304) = .10, p = .754. For those who did not view Blacks as collectively efficacious, support for assistance-focused policies did not vary as a function of their self-efficacy, B = -.04, SE = .12, p = .754, CI = [-.28, .20] for egalitarians and B = .01, SE = .11, p = .386, CI = [-.21, .24] for anti-egalitarians.

Autonomy-focused policies.

Now, I would like to turn to participants' support for autonomy-focused policies. To gain a fuller understanding of the effect of key predictors, the three-way interaction was plotted (Figure 10). With a caveat that the three-way interaction was not significant (p = .077), conditional interaction effects and simple slopes were analyzed. The two-way interaction between self-efficacy and perceptions of Blacks' collective efficacy was conditional depending on participants' egalitarian beliefs. For egalitarians, the interaction was significant, B = -.18, F(1, 304) = 7.00, p = .009, but not for anti-egalitarians, B = .03, F(1, 304) = .120, p = .730.

Figure 10. Study 2: Interaction between Self-Efficacy and Perceptions of Blacks' Collective Efficacy on Support for Autonomy-Focused Policies Among Anti-Egalitarians (left panel) and Egalitarians (right panel)



Note. Predictor variables are centered. Slope coefficient in bold is marginally significant (p = .055).

Simple slope analyses showed that egalitarian White participants who feel self-efficacious tend to be more likely to support autonomy-focused policies when they perceive that Blacks are inefficacious (vs. efficacious) in reducing the racial wealth gap, B = -.22, SE = .12, p = .055, CI = [-.45, .01]. This association between perceptions of Blacks' collective efficacy and support for autonomy-focused policies was not significant for inefficacious egalitarians, B = .22, SE = .13, p = .108, CI = [-.05, .48], inefficacious anti-egalitarians, B = -.17, SE = .16, p = .303, CI = [-.49, .15], and efficacious anti-egalitarians, B = -.09, SE = .15, p = .540, CI = [-.38, .20].

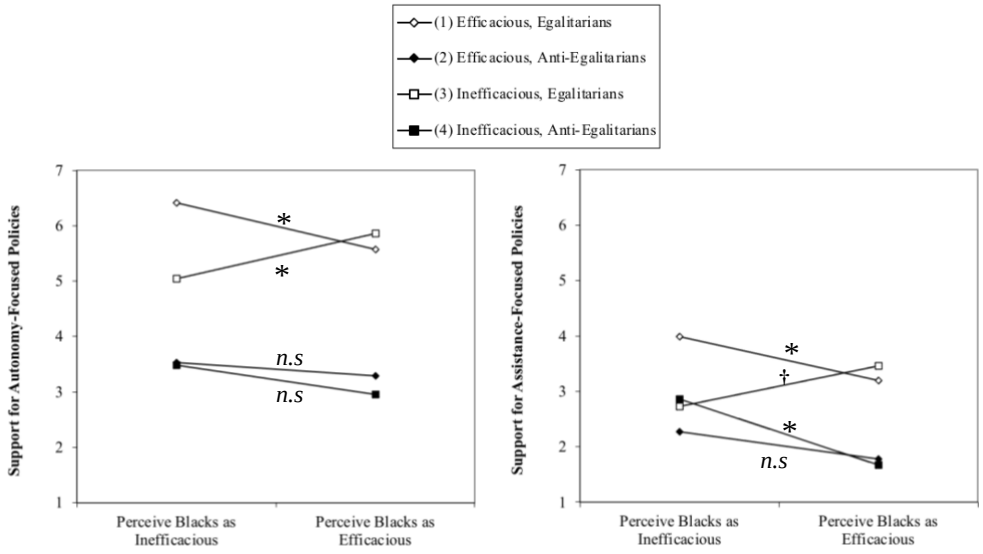
Summary of the Results and Discussion

Here is the summary of the findings on testing Hypotheses 2 and 3. First, although the direct link between the interaction between egalitarian beliefs and self-efficacy was not observed, indirect effects revealed that the interaction has significant effects on anger and attribution, which predicted general support for affirmative action. In other words, efficacious egalitarians (vs. other counterparts) were more likely to feel anger towards the racial wealth gap and make external attribution of the racial disparity, which ultimately led them to support affirmative action more strongly than others (i.e., inefficacious egalitarians and anti-egalitarians). Overall, findings verified the amplifying effect of self-efficacy for egalitarians (Hypothesis 2 supported).

Second, a pilot study showed that people evaluated a variety of affirmative policies differently and that there were some policies perceived as more effective in reducing group-level inequality than others. Policies that focus on developing Black Americans'/racial minorities' autonomy and increasing their sense of empowerment were rated as more effective than the ones focus on providing assistance to Black Americans/racial minorities and fulfilling their immediate needs.

Based on these findings, I tested Hypothesis 3 by investigating the three-way interaction effect on support for autonomy- and assistance-focused policies. The three-way interaction was significant, but the direction of the effect was different from my original hypothesis. In Figure 11, I presented the summary of the results from analyses on the three-way interaction effects.

Figure 11. Study 2: Effects of Three Key Predictors on Support for Autonomy- and Assistance-Focused Policies



	Autonomy-Focused Policies			Assistance-Focused Policies		
Pair of slopes	Slope difference	*p*	95% Confidence Interval	Slope difference	*p*	95% Confidence Interval
(1) and (2)	-0.20	0.346	[-0.61, 0.21]	-0.10	0.629	[-0.51, 0.31]
(1) and (3)	**-0.55**	**< .001**	**[-0.84, -0.26]**	**-0.51**	**0.001**	**[-0.79, -0.22]**
(1) and (4)	-0.10	0.635	[-0.53, 0.32]	0.13	0.548	[-0.30, 0.56]
(2) and (3)	-0.35	0.107	[-0.78, 0.08]	-0.41	0.063	[-0.84, 0.02]
(2) and (4)	0.09	0.739	[-0.46, 0.64]	0.23	0.410	[-0.32, 0.78]
(3) and (4)	**0.45**	**0.033**	**[0.04, 0.86]**	**0.64**	**0.002**	**[0.23, 1.05]**

Note. In the graph, † denotes $p = .052$, and * denotes $p < .05$. In the table, significant differences between slopes are in bold.

I initially expected that efficacious egalitarians who perceive Blacks as an efficacious collective would be more likely to support autonomy-focused policies than would efficacious egalitarians who viewed Blacks as relatively inefficacious. However, findings revealed the opposite effect: efficacious egalitarian White participants were more likely to support autonomy-focused policies when they believed that Blacks are

inefficacious (Slope 1 in the left graph). In addition, this effect was again significant for assistance-focused policies. Altogether, White participants who strongly endorsed egalitarian values, felt efficacious in sociopolitical domains, and perceived that Blacks are *not* capable of tackling the issue of the racial wealth gap were most likely to support both types of policies that are aimed at helping Black Americans (see the differences between Slopes 1 and 3).

Egalitarians who did not feel confident that they can make change in sociopolitical domains (i.e., low sociopolitical self-efficacy) were more likely to support both types of policies when they perceived that Blacks are efficacious as a collective, compared to when they perceived that Blacks are not efficacious (Slope 3 in both graphs). Although it was not a part of an a priori hypothesis, my interpretation is that White participants who believe that they themselves cannot bring a change to society can actually help reduce inequality through supporting Black Americans who are believed to be efficacious in tackling the issue. However, this might be a post-hoc justification of inefficacious egalitarians' inaction for reducing inequality such that they adjust their perception of Blacks' collective efficacy in order to resolve the cognitive dissonance between their values and self-efficacy. Whether it is inefficacious egalitarians' authentic attempt at reducing inequality vicariously through the efficacious agent (i.e., Black people) should be further examined.

As expected, for anti-egalitarians, the moderating effect of perceptions of Blacks' collective efficacy was in general not significant. The only significant effect was found among inefficacious anti-egalitarians: Perceiving that Blacks are efficacious discouraged inefficacious anti-egalitarian Whites from providing assistance to Blacks (Slope 4 in the

right graph). Looking at this slope from a different perspective, those who approve and endorse intergroup hierarchy (i.e., anti-egalitarians) may support assistance-focused policies as a way to maintain the status quo. This might be due to a defensive reaction from feeling threatened by an efficacious, competent outgroup (Cuddy et al., 2007; Nadler & Halabi, 2006). Another possibility is that it could be an active support for a specific type of policies that are likely to perpetuate the existing racial hierarchy (Ho & Unzueta, 2015). Future research should empirically examine the underlying psychological mechanism of the inefficacious anti-egalitarians' attitudes toward affirmative action policies. In sum, Hypothesis 3 was partially supported, and the findings identified the amplifying and dampening effects of Whites' perceptions of Blacks' collective efficacy.

Study 3

Study 2 provided initial evidence of how individuals' beliefs, self-perception, and perceptions of the disadvantaged group are associated with efforts to reduce racial inequality. Study 3 aims to replicate the three-way interaction effect observed in the previous study and to extend it by establishing a causal effect of perceived collective efficacy on ally behavior. In doing so, this experiment will involve manipulation of perception of Blacks' collective efficacy. Additionally, Study 3 will include a behavioral measure to examine the effect on actual ally behavior. Study hypothesis and design were preregistered on OSF in July 2021.

Participants and Design

As in Study 2, White Americans who reside in the U.S. were recruited on Prolific. To increase the generalizability of the findings, I used a quota sampling approach and

recruited liberals, moderates, and conservatives to make up 33% of the sample, respectively. A total of 364 participants were recruited, and the sample size decision was identical to that of Study 2.

The experiment comprised an Egalitarianism (measured; continuous variable) × Sociopolitical efficacy (measured; continuous variable) × Perceived efficacy of Black Americans (manipulated; between-participants; high vs. low) design with different types of ally behavior as the dependent variable.

Procedure

The overall procedure was comparable to that of Study 1. The study was advertised as a survey about contemporary social issues, and Prolific users who consented to participate learned that they will be asked about the economic gap in the U.S. The first part of the questionnaire included measures of egalitarian beliefs and sociopolitical self-efficacy (order counterbalanced). Participants then read the same excerpt from "an article" used in Study 1. In this study, there was an additional short paragraph that described either low or high level of collective efficacy of Black Americans. After reading the excerpt, participants completed the manipulation task and responded to the dependent measures listed below. Participants were fully debriefed and thanked for their participation. Any additional study materials that were not included in Study 2 are provided in the main text.

Perceived Collective Efficacy Manipulation. To manipulate participants' perceptions of Blacks' collective efficacy, I included a three-sentence paragraph that described either how Blacks have made a significant change to society or how they have failed to bring a change to society.

In the *high perceived efficacy* condition (Figure 12, top panel), participants read that Black Americans have been and are working together to reduce racial inequality in society, and that there has been a significant change due to Black Americans' consistent efforts and dedication to the issue. After reading, participants were asked to "share their thoughts on Black Americans' capability of reducing the racial wealth gap" and to write one or two sentences about "how and why they were capable of bringing changes to the society as a collective."

In the *low perceived efficacy* condition (Figure 12, bottom panel), participants read that Black Americans have been and are working together to reduce racial inequality in society, *but* that no significant change has been made despite Black Americans' consistent efforts and dedication to the issue. Following the article, participants were asked to "share their thoughts on Black Americans' failure to reduce the racial wealth gap" and to write one or two sentences about "how and why they were *in*capable of bringing changes to the society as a collective."

Figure 12. Manipulation of Blacks' Collective Efficacy

Pilot Study.

A pilot study was conducted to test the effect of this manipulation task (N = 107; Applied the same set of pre-screens as Studies 2 and 3; M_{age} = 34.10, SD_{age} = 11.53). Participants were randomly assigned to one of the conditions between high vs. low collective efficacy and completed the manipulation task. Upon completion, participants

were asked to report their perceptions of Blacks' and Whites' collective efficacy in reducing the racial wealth gap, self-efficacy in reducing the gap, and perceived seriousness and importance of the issue. Blacks' collective efficacy was measured immediately after the manipulation task, and the other items that measure potential alternative explanations were presented in a random order (Full measures are provided in Appendix F).

Although distinct, these dependent variables are conceptually and empirically correlated with one another (*r*s > .29), and thus multivariate tests were conducted. Results showed that participants in the high collective efficacy condition indeed reported greater perceived collective efficacy (M = 5.38, SE = 0.14) than those in the low collective low collective efficacy condition (M = 4.86, SE = 0.14), $F(1, 105) = 7.20$, $p = .008$, $\eta_p^2 = .064$. Additionally, there was no significant difference in other variables between the two conditions, *p*s ranging from .116 to .702.

For rigorous testing, I conducted another set of multivariate tests to test the manipulation effect while controlling for the same set of control variables that were used in the main study (i.e., age, gender, education, income). Findings again revealed that the manipulation was effective such that participants in the high collective efficacy condition indeed reported greater perceived collective efficacy (M = 5.36, SE = 0.14) than those in the low collective low collective efficacy condition (M = 4.87, SE = 0.14), $F(1, 99) = 5.98$, $p = .016$, $\eta_p^2 = .057$. No significant difference between the two conditions was found in other variables, *p*s ranging from .087 to .763. Full results are provided in Appendix G.

This pilot study provided support for the effectiveness of the collective efficacy manipulation. It is also worth noting that this manipulation did not affect participants' perceptions of Whites' collective efficacy, seriousness/importance of the racial wealth gap, and self-efficacy in reducing the wealth gap, which rules out alternative explanations of potential correlates of the target manipulation variable that may affect participants' ally behavior.

Measures

Predictor 1: Egalitarian Beliefs

I used the same eight item-measure as in Study 2 ($\alpha = .93$; PCA identified one factor that explains 67% of the variance, factor loadings > .76).

Predictor 2: Sociopolitical Self-efficacy

I used the same two items as in Study 2 ($r = .54$, $p < .001$).

Predictor 3: Collective Efficacy Manipulation Check.

In a pilot study, I found the expected manipulation effect using the same four items used in Study 2. Therefore, to gain confidence in the manipulation effectiveness, I used two different items to assess participants' perceived collective efficacy of Blacks (adapted from van Zomeren et al., 2010): "To what extent do you think that Black Americans can collectively tackle the problem of the racial wealth gap?" and "To what extent do you think that Black Americans can reduce the racial wealth gap through their joint effort?" Participants responded to the questions using a 7-point Likert scale (1 = *not at all*, 7 = *extremely*; $r = .84$, $p < .001$)

Outcome 1: Support for Autonomy-Focused Policies

I used the same four items as in Study 2 (α = .91; PCA identified one factor that explains 79% of the variance, factor loadings > .72).

Outcome 2: Support for Assistance-Focused Policies

I used the same three items as in Study 2 (α = .82; PCA identified one factor that explains 74% of the variance, factor loadings > .83).

Outcome 3: Behavior Measure

After completing the measures of predictors, outcomes, and demographic questions, participants were presented with a short statement thanking them for their participation and noting that the completion code for their compensation is provided on the next page. Below this statement, six links were provided for those who "are interested in the issue presented in this survey" to "learn more about the opportunities to participate in the action." Participants also read that they "can click any and all action items below." These six links include "to sign an online petition(s) for racial equality," "to access 'How to be a white ally' toolkit," and "to volunteer online with the United Nations and their anti-racism initiative." These action items include political actions for racial equality (Cohen-Chen & Van Zomeren, 2018) and prosocial actions towards racial minorities (Choma et al., 2019). Participants could move onto the next page without clicking any of the links or stay on the page to click all of the links. For each action item, a valid website address was hyperlinked, and participants' click behavior was logged. Six items were presented in a random order.

Control Variables

Analogous to Studies 1 and 2, participants' age, gender, and education were measured. In Study 3, participants' income was assessed instead of subjective social class

in seeking converging evidence. Participants were asked to choose one among seven income categories (1 = *less than $10,000*, 7 = *$200,000+*) that indicates their total family income. These categories are based on the 2019 household income (U.S. Census Bureau, 2020).

Analysis

Consistent with Study 2, I examined the reliability and the factor structure of the multiple-item scales and computed composite scores for each variable by averaging the items.

The main goal of Study 3 was to replicate and extend the proposed three-way interaction effect (Hypothesis 3). I used PROCESS Model 3 and hierarchical regression analysis. I expected to find a significant three-way interaction effect on outcome variables (i.e., support for assistance- and autonomy-focused policies and the number of clicks) such that the interaction between self-efficacy and perceptions of Blacks' collective efficacy was expected to be significant for egalitarians (+1*SD*), but not for anti-egalitarians (-1*SD*). More specifically, for efficacious egalitarians, beliefs that Blacks are an efficacious collective would have a negative impact on support for affirmative action policies, whereas they have a positive impact for inefficacious egalitarians (Figure 11 from Study 2).

For all analyses, results of significant testing as well as 95% confidence intervals of the effect were reported.

Results

All 364 participants have completed the survey. Among them, 14 participants who did not self-identify themselves as White/Caucasian were excluded from analysis. In

addition, five participants failed to pass the same attention check question used in Study 2 and were excluded. In total, 19 participants (5%) were excluded from the analysis. Participants' demographic characteristics are presented in Table 14.

Table 14. Study 3: Participant Demographics

	Study 3 (*N* = 345)	
Variable	***n***	**%**
Gender		
Woman	181	53%
Man	159	46%
Genderfluid	3	1%
Other	2	1%
Highest Education Completed		
Elementary school	1	0.2%
High school or equivalent	48	14%
Vocational/Technical school	12	4%
Some college	101	29%
Bachelor's degree	111	32%
Master's or Doctoral degree	68	20%
Professional degree	3	1%
Other	1	0.2%
Household Income		
Less than $10,000	16	5%
$10,000 - $19,999	26	8%
$20,000 - $44,999	77	22%
$45,000 - $139,999	179	52%
$140,000 - $149,999	21	6%
$150,000 - $199,999	18	5%
$200,000+	8	2%
Variable	**Mean**	***SD***
Age	36.56	13.04

Note. Subjective social class ranges from 1 = *worst off in my community* and 10 = *best off in my community*.

Descriptive statistics and correlations can be found in Table 15.

Table 15. Study 3: Descriptive Statistics and Correlations Among Main Study Variables

	1	2	3	4	5	6	7	8	9	10
1. Egalitarian beliefs										
2. Sociopolitical self-efficacy	.09									
3. Blacks' collective efficacy	.05	-.01								
4. Support for autonomy-focused policies	**.64**	*.15*	.07							
5. Support for assistance-focused policies	**.42**	.09	.07	**.65**						
6. Ally behavior	**.22**	*.16*	-.00	**.22**	**.21**					
7. Age	**-.18**	**.20**	.00	*-.12*	**-.21**	.02				
8. Gender	-.00	-.01	-.01	.02	.09	-.01	-.10			
9. Education	-.09	*.15*	.11	.08	*.15*	.03	.07	.06		
10. Household income	-.03	.07	.03	.06	.01	.02	-.09	.01	**.34**	
N	345	345	345	345	345	345	344	340	344	345
Range	1-7	1-7	0,1	1-7	1-7	0-5	18 -92	0,1	1-7	1-7
M	5.34	5.09	.	4.31	2.74	0.15	36.56	.	4.42	3.72
SD	1.47	1.33	.	1.84	1.63	0.56	13.04	.	1.28	1.16

Note. For Blacks' collective efficacy, low efficacy condition is coded as 0, high efficacy as 1. For ally behavior, the possible range was 0 click to 6 clicks, but the data ranged from 0 to 5 clicks. For gender, woman is coded as 0, man as 1. Five participants who chose neither woman nor man were excluded from the analysis due to the small sample size (2%). For education, one person who chose "other" was excluded (0.2%). Correlations in bold are significant at $p < .001$, italicized correlations are significant at $p < .05$.

Manipulation check

To check the manipulation of Black Americans' collective efficacy in reducing the racial wealth gap, an independent samples *t*-test was conducted. As predicted, Blacks' collective efficacy was rated higher among participants in the high efficacy condition (M = 5.50, SD = 1.01, n = 168) than among those in the low efficacy condition (M = 4.05, SD = 1.19, n = 177), $t(343) = -12.20$, $p < .001$, CI = [-1.69, -1.22], Cohen's d = 1.11. Additionally, ANCOVA was conducted to assess the manipulation effect while controlling for the covariates. The main effect of manipulation was significant, $F(1, 330) = 148.94$, $p < .001$, $\eta_p^2 = .31$, such that participants in the high efficacy condition evaluated Blacks as more efficacious (M = 5.50, SD = 1.00, n = 165) than those in the low efficacy condition (M = 4.02, SD = 1.19, n = 173). Furthermore, there were no significant differences in participants' egalitarian beliefs (p = .171) and sociopolitical self-efficacy (p = .777) between the two conditions. Taken together, the manipulation was successful.

Testing the Three-Way Interaction Effect (Hypothesis 3)

Consistent with Study 2, I conducted multivariate regression analysis to test the proposed three-way interaction effect on both autonomy- and assistance-focused policies (r = .65, $p < .001$). Support for the two types of affirmative action policies were regressed onto a set of predictor terms including main effects, two-way interactions, and a three-way interaction. Parameter estimates showed that the three-way interaction is significant for both autonomy-focused policies, B = .22, SE = .07, CI = [.08, .36], and assistance-focused policies, B = .17, SE = .08, CI = [.02, .32] (more results are provided in Table 16).

Table 16. Study 3: Multivariate Regression Analysis Results

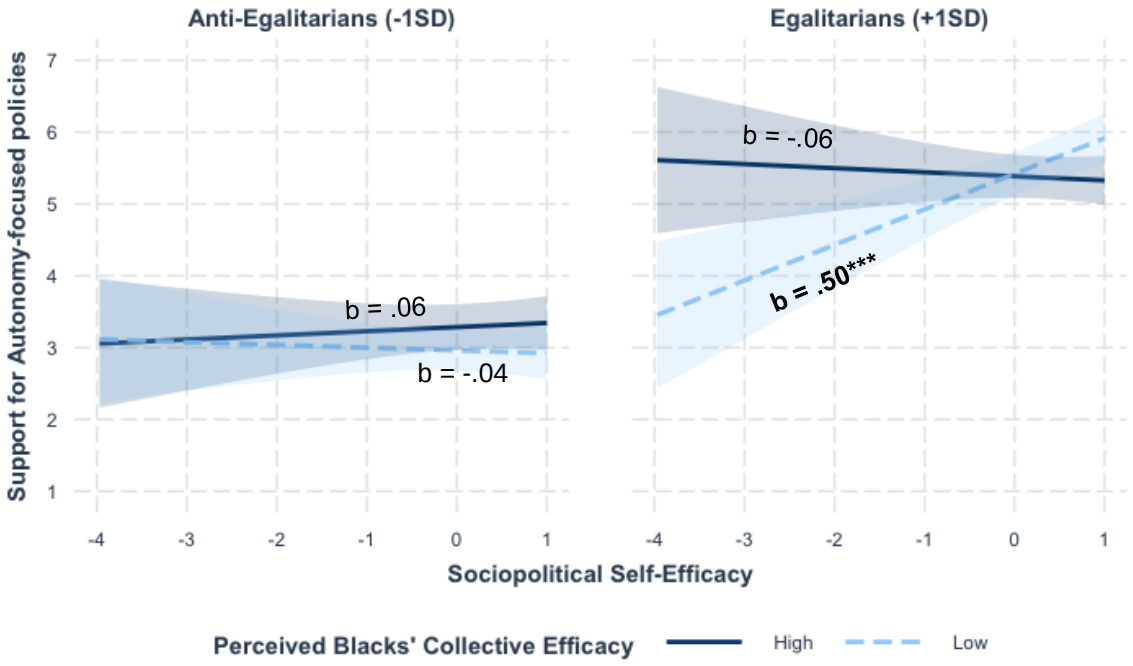
	DV1: Support for Autonomy-focused policies				DV2: Support for Assistance-focused policies			
Variable	*B*	*SE*	*t*	95% CI	*B*	*SE*	*t*	95% CI
Control variables								
Age	-.00	.01	-0.23	[-.01, .01]	-.02	.01	-3.23	[-.03, -.01]
Woman	.00	.15	0.03	[-.29, .30]	-.18	.15	-1.13	[-.48, .13]
Education	.16	.06	2.48	[.03, .28]	.23	.07	3.58	[.11, .36]
Household income	.03	.07	0.39	[-.11, .17]	-.10	.07	-1.47	[-.24, .04]
Main effects								
Egalitarian beliefs	.71	.08	9.10	[.56, .86]	.38	.08	4.73	[.22, .53]
Sociopolitical efficacy	.00	.08	-0.00	[-.16, .16]	.07	.08	0.80	[-.10, .23]
Low Black collective efficacy	-.14	.15	-0.95	[-.44, .15]	-.15	.15	-0.95	[-.45, .16]
Two-way Interactions								
Egalitarian beliefs x Sociopolitical efficacy	-.04	.05	-0.75	[-.14, .06]	-.01	.05	-0.16	[-.11, .10]
Egalitarian beliefs x Low Black collective efficacy	.12	.10	1.17	[-.08, .33]	.06	.11	0.58	[-.15, .27]
Sociopolitical efficacy x Low Black collective efficacy	.23	.11	2.05	[.01, .45]	.06	.12	0.53	[-.17, .29]
Three-way interaction								
Egalitarian beliefs x Sociopolitical efficacy x Low Black collective efficacy	**.22**	.07	2.98	[.08, .36]	**.17**	.08	2.28	[.02, .32]
R^2	.46				.26			
Adjusted R^2	.44				.24			

Note. The reference category of woman is man. The reference category of low Black collective efficacy is high Black collective efficacy. Significant three-way interaction coefficients are marked in bold.

Autonomy-Focused Policies. To further probe the significant three-way interaction effect on autonomy-focused policies, I examined the conditional interactions at low and high levels of egalitarian beliefs, namely, anti-egalitarians (1*SD* below the mean; 3.85) and egalitarians (1*SD* above the mean; 6.81). The interaction between sociopolitical self-efficacy and perceptions of Blacks' collective efficacy was significant for egalitarians, $B = -.55$, $F(1, 326) = 11.23$, $p < .001$, but not significant for anti-

egalitarians, B = .10, $F(1, 326)$ = 0.42, p = .516. Figure 13 illustrates how the interaction between self-efficacy and the two conditions of perceived collective efficacy is different for egalitarians and anti-egalitarians.

Figure 13. Study 3: Interaction Between Self-Efficacy and Perceptions of Blacks' Collective Efficacy on Support for Autonomy-Focused Policies Among Anti-Egalitarians (left panel) and Egalitarians (right panel)



Note. Sociopolitical self-efficacy scores were centered. Significant slope coefficient is in bold. ***p < .001.

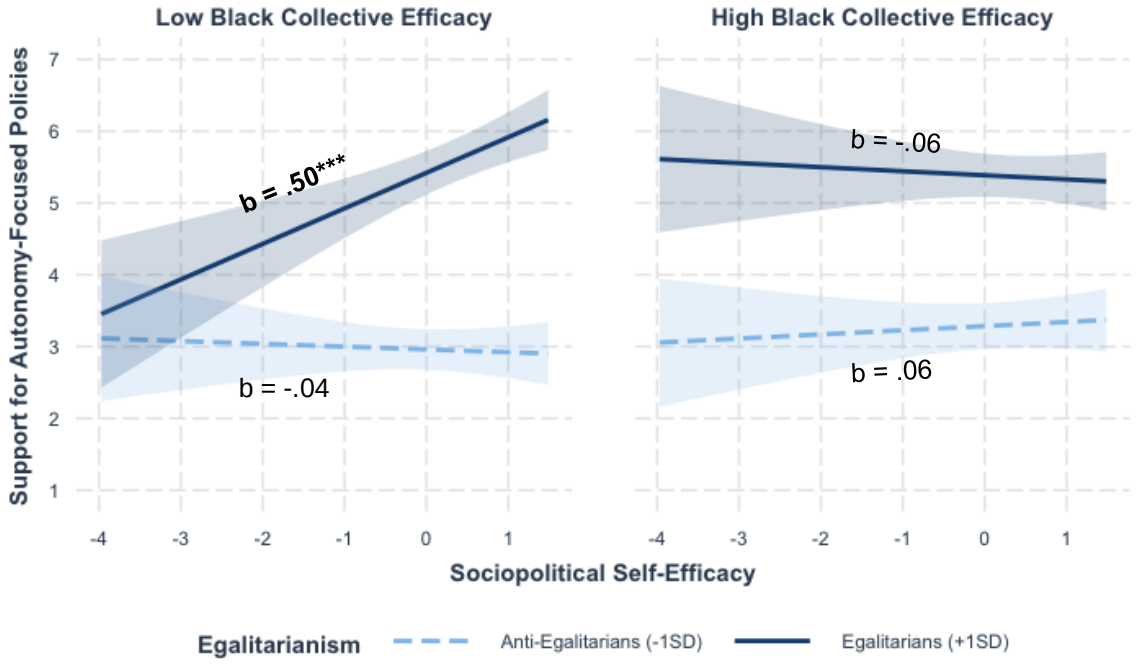
Specifically, simple slope analyses revealed that self-efficacy of the egalitarians in the low Black collective efficacy condition was positively associated with support for autonomy-focused policies, B = .50, SE = .12, p < .001, CI = [.26, .73]. However, this amplifying effect of self-efficacy was not significant for egalitarians in the high Black collective efficacy condition, B = -.06, SE = .12, p = .629, CI = [-.29, .17]. Anti-egalitarians' support for assistance-focused policies did not vary as a function of their

self-efficacy regardless of when they perceive Blacks as inefficacious, B = -.04, SE = .11, p = .717, CI = [-.25, .17] or efficacious, B = .06, SE = .10, p = .583, CI = [-.15, .26].

This pattern of results is consistent with the Study 2 findings in which efficacious egalitarians, compared to inefficacious egalitarians, were more likely to support autonomy-focused policies when they perceive that Blacks are not collectively efficacious. When White egalitarians perceive that Blacks are highly efficacious, there is no significant difference between efficacious and inefficacious egalitarians. As for anti-egalitarians, their perceptions of their own capability in sociopolitical domains and Blacks' capability did not affect their attitudes toward autonomy-focused policies.

Looking at the interaction from a different perspective, I investigated conditional interaction effects between egalitarian beliefs and self-efficacy at different levels in the two experimental conditions, namely, low and high perceptions of Blacks' collective efficacy (Figure 14).

Figure 14. Study 3: Interaction Between Egalitarian Values and Self-Efficacy on Support for Autonomy-Focused Policies in the Low and High Blacks' Collective Efficacy Conditions



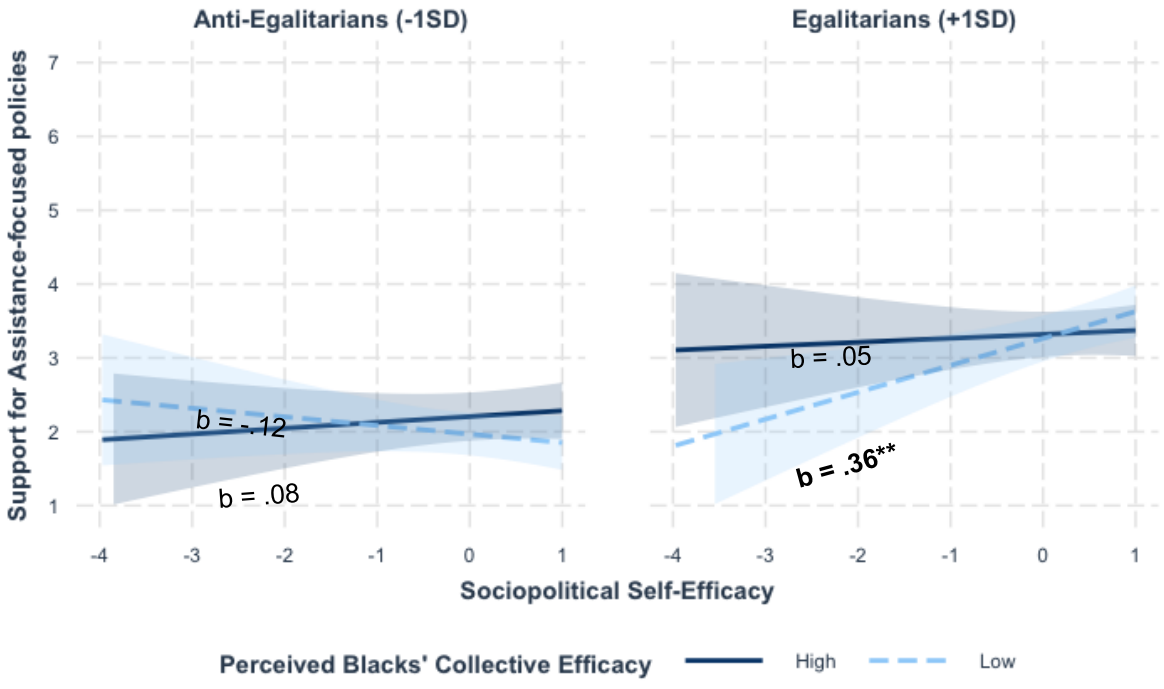
Note. Sociopolitical self-efficacy scores were centered. Significant slope coefficient is in bold. ***$p < .001$

For participants who were led to believe that Blacks are inefficacious (i.e., High Black collective efficacy condition), the interaction effect was significant, $B = .18$, $F(1, 326) = 11.65$, $p < .001$. It means that when egalitarian White participants perceive that Blacks are inefficacious in reducing the racial wealth gap, their self-efficacy was positively associated with support for autonomy-focused policies, $B = .50$, $SE = .12$, $p < .001$, CI = [.26, .73]. However, this association was not significant for anti-egalitarians who perceive that Blacks are inefficacious, $B = -.04$, $SE = .11$, $p = .717$, CI = [-.25, .17]. For those who were led to believe that Blacks are efficacious (i.e., Low Black collective efficacy condition), the interaction effect between egalitarian beliefs and self-efficacy

was not significant, B = -.04, F(1, 326) = .56, p = .455. Both egalitarians' and anti-egalitarians' support for autonomy-focused policies were not affected by their self-efficacy (B = -.06, SE = .12, p = .629, CI = [-.29, .17] for egalitarians and B = .06, SE = .10, p = .583, CI = [-.15, .26] for anti-egalitarians).

Assistance-Focused Policies. Similar to the previous set of analyses, I investigated conditional two-way interaction effects among egalitarians and anti-egalitarians (Figure 15). The interaction between sociopolitical self-efficacy and perceptions of Blacks' collective efficacy was marginally significant for egalitarians, B = -.31, F(1, 326) = 3.42, p = .065, and not significant for anti-egalitarians, B = .20, F(1, 326) = 1.67, p = .197.

Figure 15. Study 2: Interaction Between Self-Efficacy and Perceptions of Blacks' Collective Efficacy on Support for Assistance-Focused Policies for Anti-Egalitarians (left panel) and Egalitarians (right panel)

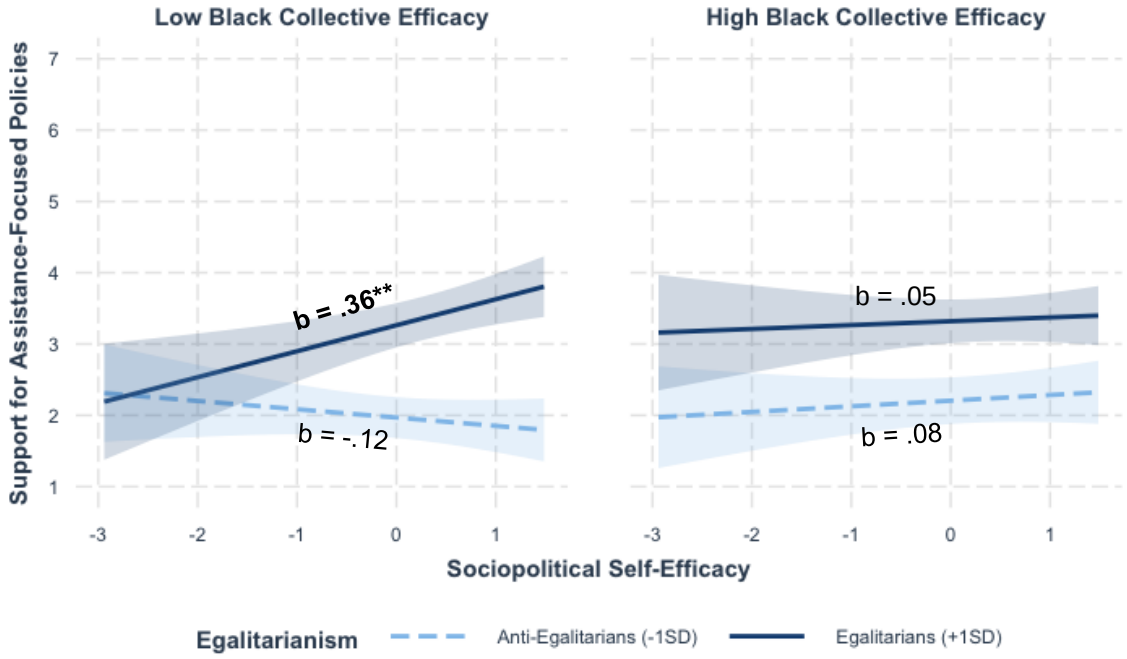


Note. Predictor variables were centered. Significant slope coefficient is in bold. **p < .01

To better understand the findings, I investigated the simple slopes with a caveat that the simple two-way interaction was not significant at $p < .05$. To interpret the visualized patterns, egalitarians in the low Black efficacy condition were more likely to support assistance-focused policies when they feel self-efficacious (vs. -inefficacious), $B = .36$, $SE = .12$, $p = .003$, CI = [.13, .60]. However, for egalitarians in the high Black efficacy condition, their self-efficacy was not significantly associated with their support for assistance-focused policies, $B = .05$, $SE = .12$, $p = .653$, CI = [-.18, .29]. Anti-egalitarians' support for assistance-focused policies did not differ as a function of their self-efficacy regardless of whether they perceive Blacks to be efficacious, $B = .08$, $SE = .11$, $p = .460$, CI = [-.13, .29], or inefficacious, $B = -.12$, $SE = .11$, $p = .288$, CI = [-.33, .10], respectively.

Looking at the interaction from another angle, I investigated conditional interaction effects between egalitarian beliefs and self-efficacy in two experimental conditions (Figure 16).

Figure 16. Study 3: Interaction Between Egalitarian Beliefs and Self-Efficacy on Support for Assistance-focused policies in the Low (left panel) and High (right panel) Blacks' Collective Efficacy Conditions.



Note. Predictor variables were centered. Significant slope coefficient is in bold. **$p < .01$

Participants in the low Black collective efficacy condition, the interaction effect was significant, $B = .16$, $F(1, 326) = 9.08$, $p = .003$. It means that when egalitarian White participants perceived that Blacks are inefficacious in reducing the racial wealth gap, their self-efficacy was positively associated with support for assistance-focused policies, $B = .36$, $SE = .12$, $p = .003$, CI = [.13, .60]. However, this association was not significant for anti-egalitarians who perceived that Blacks are inefficacious, $B = -.12$, $SE = .11$, $p = .288$, CI = [-.33, .10]. The interaction effect between egalitarian beliefs and self-efficacy was not significant for those who believed that Blacks are collectively efficacious, $B = -.01$, $F(1, 326) = .03$, $p = .871$. Both egalitarians' and anti-egalitarians' support for assistance-focused policies were not affected by their self-efficacy, $B = .05$,

SE = .12, *p* = .653, CI = [-.18, .29] for egalitarians and *B* = .08, *SE* = .11, *p* = .460, CI = [-.13, .29] for anti-egalitarians.

Online Ally Behavior

Participants' behavior to get involved in ally actions was logged. There were six possible action items, and the majority of participants (90%) moved onto the next screen without clicking any link that is related to reducing racial inequality (see more results in Table 17).

Table 17. Frequency of Click Behavior

Number of Action Clicked	Frequency	Percent
0	311	90.1%
1	24	7.0%
2	6	1.7%
3	2	0.6%
4	0	0.0%
5	2	0.6%
Total	345	100%

The six action items are presented in order of frequency (Table 18).

Table 18. Frequency of Clicking Behavior Items

Action Item	Frequency	Percent
To sign an online petition(s) for racial equality	14	27%
To access 'How to Be a White Ally' toolkit	14	27%
To learn more about the racial wealth gap	8	15%
To volunteer online with the United Nations and their anti-racism initiative	8	15%
To connect with national organizations for racial equity	4	8%
To donate to Racial Justice Network	4	8%
Total	52	100%

Note. Each action item is coded as 0 (no click) or 1 (click). Participants were allowed to click multiple action items.

The outcome variable (i.e., number of click) is a count variable, and descriptive statistics revealed that it follows a Poisson distribution. Accordingly, to ensure the validity of the inference made by regression analysis (Afifi et al., 2007) a Poisson regression was performed using the *pscl* package (Jackman et al., 2015) in R.

Unstandardized coefficients from the moderated Poisson regression model are reported in Table 19. Results revealed that the three-way interaction was significant, B = -3.58, SE = 1.04, p = .001.

Table 19. Study 3: Results from the Poisson Regression Model

Variable	*B*	*SE*	*p*
Control variables			
Age	0.01	0.02	0.752
Gender	0.99	0.47	**0.035**
Education	-0.23	0.17	0.191
Household income	-0.13	0.31	0.672
Main effects			
Egalitarian beliefs	-1.88	1.29	0.146
Sociopolitical efficacy	-0.80	1.18	0.497
Black collective efficacy	0.49	1.80	0.786
Two-way Interaction			
Egalitarian beliefs x Sociopolitical efficacy	1.27	0.81	0.117
Egalitarian beliefs x Black collective efficacy	1.11	1.33	0.405
Sociopolitical efficacy x Black collective efficacy	3.62	1.48	**0.015**
Three-way interaction			
Egalitarian beliefs x Sociopolitical efficacy x Black collective efficacy	-3.58	1.04	**0.001**

Note. Significant coefficients are marked in bold.

Simple slope analyses revealed that when egalitarians were led to believe that Blacks are not efficacious at reducing the racial wealth gap, their self-efficacy predicted more action for racial inequality, $B = .22$, $SE = .05$, $p < .001$, CI = [.12, .31]. It suggests that efficacious egalitarians were more likely to get involved in online ally behavior than inefficacious egalitarians when they perceived that Blacks are inefficacious. The association between self-efficacy and ally behavior was not significant for egalitarians in the high Black collective efficacy condition, $B = -.03$, $SE = .05$, $p = .478$, CI = [-.12, .06] as well as anti-egalitarians in both low ($B = .02$, $SE = .04$, $p = .670$, CI = [-.07, .10]) and high ($B = .02$, $SE = .04$, $p = .630$, CI = [-.06, .10]) Black collective efficacy conditions.

In addition, I probed how the interaction between self-efficacy and egalitarian beliefs depends on the experimental condition. The two-way interaction was significant in the low Black collective efficacy condition, $B = .07$, $F(1, 326) = 10.34$, $p = .001$, but not in the high Black collective efficacy condition, $B = -.02$, $F(1, 326) = 0.77$, $p = .382$.

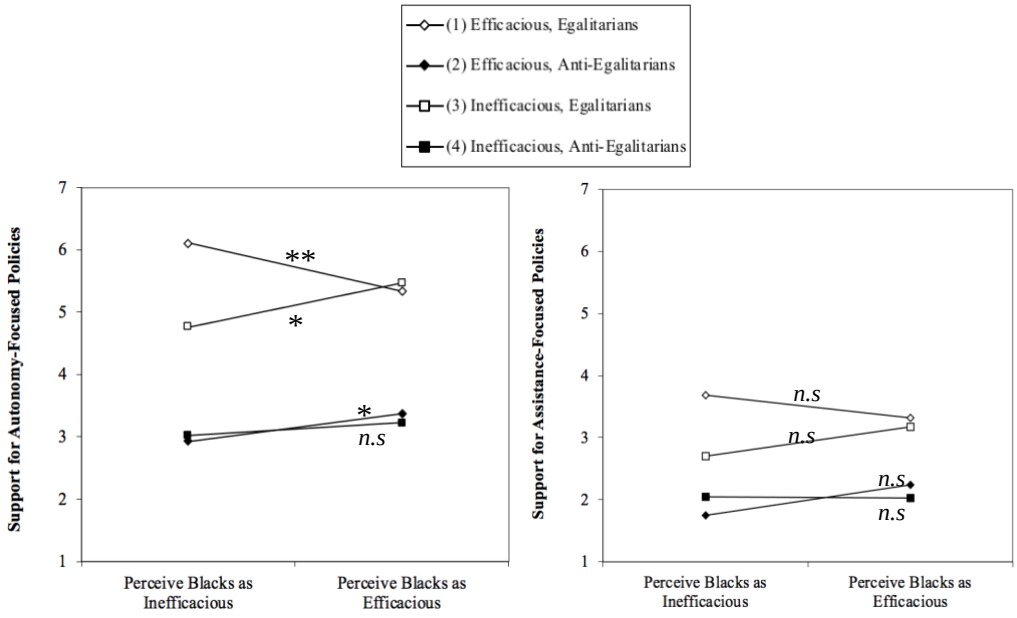
In the condition where participants were led to believe that Blacks are not efficacious at reducing the racial wealth gap, egalitarians' self-efficacy positively predicted more action for racial inequality, $B = .23$, $SE = .05$, $p < .001$, CI = [.13, .33], but not for anti-egalitarians, $B = .01$, $SE = .04$, $p = .800$, CI = [-.07, .10]. In the other condition where participants were led to believe that Blacks are highly efficacious at reducing the racial wealth gap, their self-efficacy was not significantly associated with the number of clicks for ally behavior (for both egalitarians, $B = -.04$, $SE = .05$, $p = .462$, CI = [-.13, .06], anti-egalitarians, $B = .02$, $SE = .04$, $p = .610$, CI = [-.06, .11].

Summary of the Results and Discussion

Study 3 revealed two main findings: First, the proposed three-way interaction effect was replicated when White participants' perceptions of Black people's collective efficacy was manipulated. This successful manipulation is worth noting because it suggests the malleability of perception of Black people's collective efficacy. Furthermore, this perception may affect the extent to which White people support affirmative action policies. Second, the three-way interaction effect significantly predicted actual ally behavior, and the pattern of results was consistent with the results found for support for autonomy-focused policies. Overall, efficacious egalitarians who perceive Blacks as inefficacious were most likely to get involved in actions that are aimed at reducing racial inequality. In addition to hypothesis-testing, a general low level of participation in ally behavior again points to the need for more research on allyship.

To delve into the significant three-way interaction effects, below I presented the summary of the results on the two main dependent variables in Figure 17.

Figure 17. Effects of the Three Key Predictors on Support for Autonomy- and Assistance-Focused Policies



	Autonomy-Focused Policies			Assistance-Focused Policies		
Pair of slopes	Slope difference	*p*	95% Confidence Interval	Slope difference	*p*	95% Confidence Interval
(1) and (2)	**-1.22**	**< .001**	**[-1.72, -0.72]**	**-0.85**	**0.024**	**[-1.59, -0.11]**
(1) and (3)	**-1.48**	**< .001**	**[-2.18, -0.77]**	-0.83	0.068	[-1.72, 0.06]
(1) and (4)	-0.98	0.060	[-1.99, 0.04]	-0.34	0.414	[-1.15, 0.47]
(2) and (3)	-0.26	0.438	[-0.91, 0.39]	0.02	0.965	[-0.87, 0.90]
(2) and (4)	0.24	0.408	[-0.33, 0.82]	0.51	0.207	[-0.28, 1.31]
(3) and (4)	0.50	0.207	[-0.28, 1.28]	0.49	0.310	[-0.46, 1.44]

Note. In the graph, *n.s.* denotes $p > .05$, * denotes $p < .05$, ** denotes $p < .01$. In the table, significant differences between slopes are in bold.

Based on the visual interpretation, the overall pattern of results for egalitarians (+1*SD*) seems to be consistent with that of Study 2. Efficacious egalitarian White participants were more likely to support autonomy-focused policies when they believed

that Blacks are inefficacious (Slope 1 in the left graph; replicated Study 2 findings). But this effect was not significant for assistance-focused policies (Slope 1 in the right graph; inconsistent with Study 2).

Inefficacious egalitarians were more likely to support autonomy-focused policies when they perceived that Blacks are efficacious as a collective, compared to when they perceived that Blacks are not efficacious (Slope 1 in the left graph; replicated Study 2 findings). However, this positive effect was not significant for assistance-focused policies (Slope 3 in the right graph; inconsistent with Study 2).

Taken together, egalitarians' support for autonomy-oriented policies were shaped by their values, self-efficacy, and how they perceive the disadvantaged group. Taking account of the fact that perceptions of Blacks' collective efficacy were manipulated and temporally preceded dependent measures, it may suggest that efficacious egalitarians were more supportive of autonomy-focused policies *because* they perceived that Blacks lack the capability of bringing change to society. And this was observed only for egalitarians who felt personally efficacious in the sociopolitical domain.

The results for anti-egalitarians (-1*SD*) were, in general, consistent with findings from Study 2. Participants who endorsed intergroup hierarchy were least likely to support both types of affirmative action policies, and their attitudes toward the policies were not affected by how they perceived Blacks' collective efficacy. Compared with the previous findings, the only discrepancy was the results for inefficacious anti-egalitarians (Slope 4 in the right graph). In Study 2, inefficacious anti-egalitarian White participants were more supportive of assistance-focused policies when they perceived that Blacks are inefficacious (vs. efficacious). However, this slope was not significant in Study 3.

Altogether, anti-egalitarians, compared to egalitarians, were less supportive of affirmative action policies in general, and their self-efficacy and outgroup perception did not affect their policy attitudes and ally behavior.

In sum, Study 3 findings showed that the moderating effect of perceptions of Blacks' collective efficacy was especially robust for egalitarians' attitudes toward autonomy-focused policies.

General Discussion

Although previous work on intergroup attitudes/behavior has examined the antecedents of ally behavior, little work has been done to distinguish different types of ally behavior that vary on its effectiveness and to identify unique sets of predictors for each type of behavior. Studies that attempted to specify the predictors of ally behavior had mainly focused on one type of ally behavior, which meant that the current research first needed to show that ally behaviors vary on the spectrum of effectiveness and, more specifically, that different types of policies benefit the disadvantaged group in distinctive ways. The current research showed that policies and programs aimed at reducing racial inequality can indeed be divided into those that are more effective at creating a group-level change (i.e., autonomy-focused affirmative action policies) and those that are less effective (i.e., assistance-focused affirmative action policies).

Additionally, the current research identified a unique set of predictors of these ally behaviors. First, I found that egalitarian values and sociopolitical efficacy create a synergistic effect to predict ally behavior. In other words, efficacious egalitarians were most likely to support affirmative action policies compared to inefficacious egalitarians and to anti-egalitarians. Second, the results revealed that perceptions of the low-status

group as an efficacious collective can be a double-edged sword for high-status group members who seek intergroup equality. When efficacious egalitarian White Americans perceived that Black Americans are efficacious in reducing the racial inequality, they were *less* likely to support effective ally behavior. In contrast, when inefficacious egalitarian Whites perceived that Blacks are efficacious, they were *more* likely to support effective ally behavior. These amplifying and dampening effects of perceptions of Blacks' collective efficacy were not consistently significant for less effective ally behaviors (significant in Study 2, but not in Study 3; see Figures 11 and 17).

It is also important to note that the results from three studies were consistent with the initial prediction for anti-egalitarians: First, anti-egalitarian Whites, on average, opposed affirmative action policies (their mean scores were below the midpoint). Second, their perceptions of their own sociopolitical efficacy and the disadvantaged group's efficacy did not significantly affect their (dis-)engagement with ally behavior, which may point to the role of values as the pre-condition for ally behavior.

The present research carries wide-ranging implications for theories in social psychology in general, and intergroup relations specifically. First, psychologists have documented and are increasingly studying the predictors of ally behavior. However, to the best of my knowledge, this research is the first to test the synergistic effect of egalitarian values combined with sociopolitical efficacy on ally behavior. It is a simple but novel approach because the positive effects of the two variables have been studied separately in prior work. However, the current research revealed that the positive effect of egalitarian values on intergroup behavior and that of sociopolitical efficacy on political participation are not independent of one another and can interact to predict ally behavior.

This finding suggests that simultaneously taking account of both motivation and ability may better predict an action (intention) in the context of intergroup relations.

Although the current research focused on advantaged group members' beliefs, perceptions, and behavior, this two-way interaction has interesting implications for disadvantaged group members' efforts to reduce intergroup inequality. Prior research has documented positive effects of individuals' sense of agency and self-efficacy especially among disadvantaged group members. For example, socially disadvantaged group members' high levels of self-efficacy or sense of agency operated as a buffer against harmful effects of discrimination and facilitated the restoration of psychological well-being (e.g., Shnabel & Nadler, 2015; Stroebe et al., 2010). The current research shed light on another positive effect of self-efficacy, that is, to encourage political actions among advantaged group members, and future research should examine whether the observed effect can be extended to explain disadvantaged group members' efforts to promote ingroup status and to help fellow ingroup members. Additionally, the positive effect of active participation in sociopolitical issues on personal well-being among disadvantaged group members is an interesting and important avenue for future research (Sanders, 2001).

The current research investigated the effect of internal sociopolitical efficacy, that is, individuals' sense of their ability to participate in the political process and to exert influence in political affairs. This is different from external efficacy that is defined as individuals' perceptions of political institutions and figures' responsiveness to their needs and views (Acock et al., 1985). These two types of political efficacy are interrelated but distinct (Balch, 1974), and future research can explore the potential moderating effect of

external efficacy. One possibility is that internally efficacious egalitarians who lack external efficacy might engage in more ally behavior, given that high internal efficacy combined with low external efficacy was most likely to lead to political actions (Ennis & Schrener, 1987; Shingles, 1981).

Second, the current research went beyond showing the proposed two-way interaction between egalitarian values and sociopolitical efficacy and shed light on the underlying mechanisms of the effect on ally behavior. In Study 2, analyses using bootstrapping samples and regression analyses provided support for the moderated mediation model involving cognitive *and* affective paths to ally behavior. For egalitarian White Americans, feeling efficacious in the sociopolitical domain amplified their anger towards the racial wealth gap and led them to account for situational factors in explaining the racial wealth gap, which resulted in more support for affirmative action.

Of note, efficacious egalitarians did not report more empathy towards racial minorities compared to their counterparts, but the main effect of egalitarianism was significant, indicating that egalitarians reported more empathy compared to anti-egalitarians. Although numerous studies reported positive effects of empathy, sympathy, and perspective-taking on intergroup behavior (Dovidio et al., 2010), several studies have reported the negative effects under certain conditions (Galinsky & Ku, 2004; Vorauer & Ssaki, 2012). These mixed findings in the literature could be one way to explain the non-significant link between empathy and the interaction of egalitarianism and sociopolitical efficacy. Another way to interpret the findings is to consider the possibility that empathy is more strongly associated with prosocial behaviors than with political actions that attempt to challenge the status quo (e.g., Barth et al., 2015). Empathy as a prosocial

emotion may better predict helping and cooperation when these behaviors do not have negative implications for ingroup (parochial empathy; Bruneau et al., 2017). Altogether, findings of Study 2 support the idea that sociopolitical efficacy provides an affordance for ally behavior, and that may explain the strong association between action-oriented emotion (i.e., anger) and the proposed two-way interaction.

With that said, I acknowledge that there might be other emotions that can explain the mediational pathways in the model. For example, White Americans' guilt about the racial inequality (e.g., Swim & Miller, 1999; Mallett et al., 2008) and hope about social change (Greenaway et al., 2016) may be associated with both predictor (i.e., two-way interaction) and the outcome (i.e., ally behavior) in the model. Additional experiment that involves manipulation of anger and attribution will provide a stringent test of the underlying mechanism.

Third, the current research is one of the early attempts to distinguish different types of ally behavior that vary on effectiveness at reducing intergroup inequality. Specifically focusing on affirmative action policies (Studies 2 and 3) and political actions (Study 3), findings showed that White Americans acknowledge the different natures of policies that focus on developing racial minorities' capabilities and independence versus those that focus on providing direct assistance to racial minorities, and that the latter is less effective at tackling the fundamental cause of the racial wealth gap. These findings are aligned with previous research that compared autonomy- vs. dependency-oriented help (Nadler & Halabi, 2006) and system-attenuating vs. -maintaining policies (Ho & Unzueta, 2015). It is worth noting that these behaviors were mainly studied in different fields to explain different phenomena. For example, autonomy- vs. dependency-oriented

help was investigated mainly in the context of individual-level helping toward a single outgroup member, whereas support for different types of policies were examined with generalized attitudes toward marginalized social groups. However, I argue that these behaviors are similar in the sense that they can reduce inequality and that their effectiveness at dismantling the group-level inequality might vary. Focusing on this variability, the present research provides a parsimonious distinction between more effective and less effective ally behaviors. Granted, the effective ally behavior operationalized in the current research should be converged with disadvantaged group members' perceptions and actual benefits on the disadvantaged group. Cheng and colleagues (2019) have examined this question for male allies who fight against sexism, and future research should examine the evaluation and experience of people of color regarding White allies' behavior. Investigating both advantaged and disadvantaged groups' perspectives will provide stronger support for operationalization of effective ally behavior and help minimize the potential intergroup conflict stemmed from different valuations of behavior.

One possible domain to which this distinction can be applied is support for low- vs. high-status group leadership. As is true for almost all collectives, there is a subgroup of people that plays a leading role in social justice movements. Instead of assuming that all movements are equally effective, *who* leads the movement can determine the effectiveness of ally behavior. Iyer and colleagues (2020) found that low-status group members were more likely to prefer and trust the movements led by low-status group members than those led by high-status group members. In addition, low-status group members were more likely to feel marginalized and prevented from taking a central role

in the movement when it was led by high-status group members than by low-status group members. This is important because the movements cannot be successful without the affected group members' trust, participation, and support. Thus, the observed effects from the current research can be examined to predict support for different leadership. This investigation is expected to shed light on the antecedents of effective ally behavior that provides the low-status group with opportunities to exercise power and lead a change in society.

Lastly, this research used an understudied construct, perceptions of outgroup's collective efficacy, and offered a causal explanation of what shapes allies' behavior. There is extensive research on collective efficacy demonstrating its predictive power in low-status groups. For example, disadvantaged group members are more willing to participate in actions to reduce inequality when they believe that their group as a whole can successfully achieve the desired goal (e.g., Cohen-Chen & Zomeren, 2018; McNamara et al., 2013). Put differently, the ingroup-advancement aspect of collective efficacy (i.e., low-status group members' efforts to enhance or protect their ingroup status) was extensively studied in the existing literature. This research contributed to the literature by demonstrating how *perceptions* of outgroup's collective efficacy can have a considerable impact on shaping advantaged group members' behavior towards the disadvantaged group.

What is interesting is that advantaged group members' perceptions of the disadvantaged group as an efficacious collective may not always bring about positive effects. As findings from Studies 2 and 3 revealed, efficacious egalitarian Whites were *less* likely to engage in effective ally behavior when they believed that Blacks were

efficacious (vs. inefficacious). This poses an irony for disadvantaged group members: Beliefs that their ingroup is efficacious prompt them to engage in actions aimed at reducing the intergroup disparity, but if their group is actually seen as efficacious to the eyes of efficacious egalitarian Whites, they are less likely to get effective help from those Whites. But it is equally important to consider the positive effect of seeing Blacks' as an efficacious collective for inefficacious egalitarian Whites. When these Whites who aspire to achieve intergroup equality but who lack the sense of sociopolitical efficacy perceive that Blacks are efficacious (vs. inefficacious), they are more likely to engage in effective ally behavior. One interpretation of these findings is consistent with my initial prediction and previous findings: seeing an outgroup as an efficacious collective leads to helping outgroup members in a way that they can develop autonomy and independence. And the current research contributed to the literature by specifying the boundary condition for this effect. Future research should further investigate the underlying psychological processes of these two types of egalitarians (i.e., efficacious vs. inefficacious egalitarians).

There are both strengths and weaknesses to the studies described herein. First, measures in three studies showed acceptable reliabilities and factor structures. However, some measures should be improved in future research. For example, sociopolitical efficacy scale used in Studies 2 and 3 were originally validated as a one-factor scale, but the current datasets extracted three factors, and one of the three factors was used in my analyses. Second, the current research utilized various methods such as analyzing a large-scale nation-wide survey data and examining the proposed effects in both correlational and experimental manners. Studies 1 and 2 were based on cross-sectional, correlational data, and enhanced by the experimental design of Study 3. Next step may involve

reinforcing the three studies with further experimentation. For instance, participants could be primed with egalitarian values and sociopolitical efficacy to confirm their causal effects on ally behavior. To manipulate egalitarian values, participants can engage in a task to make their egalitarian values salient. For example, participants could read a prompt advocating intergroup equality and explain how they would convince other people to take action that likely reduces inequality in society (adapted from Lai et al., 2016). Sociopolitical efficacy can also be increased in a laboratory experiment (e.g., Morrell, 2005). For example, participants could complete a task in which they make decisions about social and political issues in a hypothetical situation and then receive positive or negative feedback on their performance. I expect that positive feedback will increase participants' state sociopolitical efficacy, whereas negative feedback will decrease it. These experiments will provide causal support for the interaction effect of egalitarian values and sociopolitical efficacy on ally behavior.

The current research also provides practical contributions to the understanding and resolution of important social problems. The findings of this research explained why some high-status group members are less likely to engage in ally behavior than others, despite aspiring an egalitarian society. Egalitarian values as a directional motivation were more likely to be materialized in an actual action when people felt they are efficacious in the sociopolitical domain. This has significant implications not only for adults but also for youth civic development. In education and socialization for youth, teaching egalitarian values is accepted as one of the most fundamental goals in higher education institutions. However, less focus is on developing a sense of self-efficacy for sociopolitical behaviors. Efforts should be made to educate and socialize young people

such that they can develop beliefs that they are capable of impacting sociopolitical decisions (Christens et al., 2012) and that their actions can have an impact on important social issues including intergroup relations.

One potential caveat associated with promoting high-level of sociopolitical efficacy should be noted. Especially among high-status group members, sense of efficacy in sociopolitical domain may be accompanied by a sense of superiority. Self-efficacy is distinguished from a sense of power (Anderson et al., 2012), such that the former focuses on the perceived controllability of one's own outcomes, whereas the latter focuses on influence over other individuals. However, increased sociopolitical efficacy might be correlated with increased sense of sociopolitical power. Given the potential negative impact of high sense of power on intergroup attitudes/behavior (Galinsky et al., 2006), further research is warranted to tease out the effect of power on ally behavior.

It is also important to empirically investigate the generalizability of the findings from this research. Specifically, it will be a fruitful arena to examine whether the observed findings expand to other types of social inequalities. One potential domain is gender inequality in the workplace such as payment gap and biases in promotion. I plan to explore whether the economic gap between races can be translated into that between genders, which will offer insights on how to increase effective male ally behavior.

In response to intergroup inequalities, progressive policies and targeted programming are proposed and put into practice. It is also recognized that people who are not disadvantaged by their ingroup affiliations (e.g., Whites, men, non-LGBT) should assume an active role in developing anti-inequality policies and participating in equality-promoting programs (e.g., Edström et al., 2015). More people and campaigns start to

adopt effective ally behavior. This research helps us understand which others are more likely to be allies, and why they might advocate for structural changes that empower low-status groups.

References

Abad-Merino, S., Newheiser, A.-K., Dovidio, J. F., Tabernero, C., & González, I. (2013). The dynamics of intergroup helping: The case of subtle bias against Latinos. *Cultural Diversity and Ethnic Minority Psychology*, *19*(4), 445–452. https://doi.org/10.1037/ a0032658

Aberson, C. L., & Haag, S. C. (2003). Beliefs about affirmative action and diversity and their relationship to support for hiring policies. *Analyses of Social Issues and Public Policy*, *3*(1), 121-138. https://doi.org/10.1111/j.1530-2415.2003.00018.x

Acock, A., Clarke, H. D., & Stewart, M. C. (1985). A new model for old measures: A covariance structure analysis of political efficacy. *The Journal of Politics, 47*(4), 1062-1084.

Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy, White women. *Health Psychology, 19*(6), 586-592.

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control* (pp. 11-39). Springer.

Anderson, C., John, O. P., & Keltner, D. (2012). The personal sense of power. *Journal of Personality*, *80*(2), 313-344. https://doi.org/10.1111/j.1467-6494.2011.00734.x

Balch, G. I. (1974). Multiple indicators in survey research: The concept "Sense of Political Efficacy." *Political Methodology, 1*, 1–43.

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191- 215. https://doi.org/10.1037/0033-295X.84.2.191

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37*(2), 122-147. https://doi.org/10.1037/0003-066X.37.2.122

Bandura, A. (2000). Exercise of human agency through collective efficacy. *Current Directions in Psychological Science, 9*(3), 75–78. https://doi.org/10.1111/1467-8721.00064

Barth, M., Jugert, P., Wutzler, M., & Fritsche, I. (2015). Absolute moral standards and global identity as independent predictors of collective action against global injustice. *European Journal of Social Psychology, 45*(7), 918-930. https://doi.org/10.1002/ejsp.2160

Beissinger, M. R. (2002). *Nationalist mobilization and the collapse of the Soviet State*. Cambridge University Press.

Bell, M. P., Harrison, D. A., & McLaughlin, M. E. (1997). Asian American attitudes toward affirmative action in employment: Implications for the model minority myth. *The Journal of Applied Behavioral Science, 33*(3), 356-377. https://doi.org/10.1177/ 0021886397333006

Bhutta, N., Chang, A. C., Dettling, L. J., & Hsu, J. W. (2020, Sep 28). *Disparities in Wealth by Race and Ethnicity in the 2019 Survey of Consumer Finances*. Board of Governors of the Federal Reserve System. https://www.federalreserve.gov/econres/notes/feds-notes/disparities-in-wealth-by-race-and-ethnicity-in-the-2019-survey-of-consumer-finances-20200928.htm

Bialik, K. (2019, Feb 8). *For the fifth time in a row, the new Congress is the most racially and ethnically diverse ever*. Pew Research Center. https://www.pewresearch.org/fact-tank/2019/02/08/for-the-fifth-time-in-a-row-the-new-congress-is-the-most-racially-and-ethnically-diverse-ever/

Bobo, L., & Smith, R. A. (1994). Antipoverty policy, affirmative action, and racial attitudes. *Confronting poverty: Prescriptions for change*, 365-395.

Brown, A. (2019, Apr 9). *Key findings on Americans' views of race in 2019*. Pew Research Center. https://www.pewresearch.org/fact-tank/2019/04/09/key-findings-on-americans-views-of-race-in-2019/

Brown, K. T., & Ostrove, J. M. (2013). What does it mean to be an ally?: The perception of allies from the perspective of people of color. *Journal of Applied Social Psychology*, *43*(11), 2211-2222. https://doi.org/10.1111/jasp.12172

Bruneau, E. G., Cikara, M., & Saxe, R. (2017). Parochial empathy predicts reduced altruism and the endorsement of passive harm. *Social Psychological and Personality Science, 8*, 934-942. https://doi.org/10.1177/1948550617693064

Buchanan, L., Bui, Q., & Patel, J. K. (2020, Jul 3). *Black Lives Matter may be the largest movement in U.S. history*. The New York Times. https://www.nytimes.com/interactive/ 2020/07/03/us/george-floyd-protests-crowd-size.html

Burstein, P., & Linton, A. (2002). The impact of political parties, interest groups, and social movement organizations on public policy: Some recent evidence and theoretical concerns. *Social Forces, 81*(2), 380-408. https://doi.org/10.1353/sof.2003.0004

Branscombe, N. R., & Wann, D. L. (1994). Collective self-esteem consequences of outgroup derogation when a valued social identity is on trial. *European Journal of Social Psychology, 24*(6), 641-657. https://doi.org/10.1002/ejsp.2420240603

Caprara, G. V., Vecchione, M., Capanna, C., & Mebane, M. (2009). Perceived political self-efficacy: Theory, assessment, and applications. *European Journal of Social Psychology*, *39*(6), 1002–1020. https://doi.org/10.1002/ejsp.604

Chang, E. H., Milkman, K. L., Chugh, D., & Akinola, M. (2019). Diversity thresholds: How social norms, visibility, and scrutiny relate to group composition. *Academy of Management Journal, 62*(1), 144-171. https://doi.org 10.5465/amj.2017.0440

Chen, T-P. (2020). Why are there still so few Black CEOs? *The Wall Street Journal*. https://www.wsj.com/articles/why-are-there-still-so-few-black-ceos-11601302601

Cheng, S., Ng, L., Traylor, A., & King, E. (2019). Helping or hurting?: Understanding women's perceptions of male allies. *Personnel Assessment and Decisions*, *5*(2). https://doi.org/ 10.25035/pad.2019.02.006

Choma, B., Hodson, G., Jagayat, A., & Hoffarth, M. R. (2020). Right-wing ideology as a predictor of collective action: A test across four political issue domains. *Political Psychology*, *41*(2), 303–322. https://doi.org/10.1111/pops.12615

Christens, B. D., Peterson, N. A., Reid, R. J., & Garcia-Reid, P. (2015). Adolescents' perceived control in the sociopolitical domain: A latent class analysis. *Youth & Society*, *47*(4), 443–461. https://doi.org/10.1177/0044118X12467656

Cohen-Chen, S., & Van Zomeren, M. (2018). Yes we can? Group efficacy beliefs predict collective action, but only when hope is high. *Journal of Experimental Social Psychology*, *77*, 50–59. https://doi.org/10.1016/j.jesp.2018.03.016

Cole, R. L. (1973). Toward as model of political trust: A causal analysis. *American Journal of Political Science, 17*(4), 809-817.

Condiotte, M. M., & Lichtenstein, E. (1981). Self-efficacy and relapse in smoking cessation programs. *Journal of Consulting and Clinical Psychology, 49*(5), 648-658. https:// doi.org/10.1037/0022-006X.49.5.648

Cotterill, S., Sidanius, J., Bhardwaj, A., & Kumar, V. (2014). Ideological support for the Indian caste system: Social dominance orientation, right-wing authoritarianism and karma. *Journal of Social and Political Psychology, 2*(1), 98-116. https://doi.org/10.5964/ jspp.v2i1.171

Cozzarelli, C., Wilkinson, A. V., & Tagler, M. J. (2001). Attitudes toward the poor and attributions for poverty. *Journal of Social Issues, 57*(2), 207–227. https://doi.org/10.1111/0022-4537.00209

Crandall, C. S., D'Anello, S., Sakalli, N., Lazarus, E., Nejtardt, G. W., & Feather, N. T. (2001). An attribution-value model of prejudice: Anti-fat attitudes in six nations. *Personality and Social Psychology Bulletin, 27*(1), 30-37. https://doi.org/10.1177/0146167201271003

Crosby, F. J., Iyer, A., & Sincharoen, S. (2006). Understanding affirmative action. *Annual Review of Psychology, 57*, 585–611. https://doi.org/10.1207/s15324834basp1501&2_2

Cuddy, A. J., Fiske, S. T., & Glick, P. (2007). The BIAS map: behaviors from intergroup affect and stereotypes. *Journal of Personality and Social Psychology, 92*(4), 631-648. https://doi.org/10.1037/0022-3514.92.4.631

David, N., Newen, A., & Vogeley, K. (2008). The "sense of agency" and its underlying cognitive and neural mechanisms. *Consciousness and Cognition, 17*(2), 523-534. https://doi.org/ 10.1016/j.concog.2008.03.004

Dhont, K., Hodson, G., Costello, K., & MacInnis, C. C. (2014). Social dominance orientation connects prejudicial human–human and human–animal relations. *Personality and Individual Differences, 61*, 105-108. https://doi.org/10.1016/j.paid.2013.12.020

Diemer, M. A., & Li, C. H. (2011). Critical consciousness development and political participation among marginalized youth. *Child Development, 82*(6), 1815-1833. https://doi.org/10.1111/j.1467-8624.2011.01650.x

DiTomaso, N. (2013). *The American non-dilemma: Racial inequality without racism*. Russell Sage Foundation.

Dixon, J., Tropp, L. R., Durrheim, K., & Tredoux, C. (2010). "Let them eat harmony" prejudice-reduction strategies and attitudes of historically disadvantaged groups. *Current Directions in Psychological Science, 19*(2), 76-80. https://doi.org/10.1177/ 0963721410363366

Doosje, B. E., Branscombe, N. R., Spears, R., & Manstead, A. S. (2006). Antecedents and consequences of group-based guilt: The effects of ingroup identification. *Group Processes & Intergroup Relations, 9*(3), 325-338. https://doi.org/10.1177/ 1368430206064637

Dovidio, J. F., Johnson, J. D., Gaertner, S. L., Pearson, A. R., Saguy, T., & Ashburn-Nardo, L. (2010). Empathy and intergroup relations. In M. Mikulincer & P. R. Shaver (Eds.), *Prosocial motives, emotions, and behavior: The better angels of*

our nature (pp. 393–408). American Psychological Association. https://doi.org./10.1037/12061-020

Drury, B. J., & Kaiser, C. R. (2014). Allies against sexism: The role of men in confronting sexism. *Journal of Social Issues, 70*(4), 637-652. https://doi.org/10.1111/josi.12083

Duncan, L. E. (2012). The Psychology of Collective Action. In K. Deaux & M. Snyder (Eds.), *The Oxford Handbook of Personality and Social Psychology* (Vol. 1). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780195398991.013.0031

Edström, J., Hassink, A., Shahrokh, T., & Stern, E. (2015). *EMERGE engendering men: A collaborative review of evidence on men and boys in social change and gender equality*. Institute of Development Studies.

Einwohner, R. L. (2007). Leadership, authority, and collective action: Jewish resistance in the ghettos of Warsaw and Vilna. *American Behavioral Scientist*, *50*(10), 1306-1326. https://doi.org/10.1177/0002764207300160

Ennis, J. G., & Schreuer, R. (1987). Mobilizing weak support for social movements: The role of grievance, efficacy, and cost. *Social Forces*, *66*(2), 390-409. https://doi.org/10.1093/sf/66.2.390

Estevan-Reina, L., de Lemus, S., & Megías, J. L. (2020). Feminist or paternalistic: Understanding men's motivations to confront sexism. *Frontiers in Psychology*, *10*, 2988. https://doi.org/10.3389/fpsyg.2019.02988

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*(4), 1149–1160. https://doi.org/10.3758/BRM.41.4.1149

Federico, C. M., & Sidanius, J. (2002). Sophistication and the antecedents of Whites' racial policy attitudes: Racism, ideology, and affirmative action in America. *Public Opinion Quarterly, 66*(2), 145-176. https://doi.org/10.1086/339848

Feldman, G., Chandrashekar, S. P., & Wong, K. F. E. (2016). The freedom to excel: Belief in free will predicts better academic performance. *Personality and Individual Differences, 90,* 377-383. https://doi.org/10.1016/j.paid.2015.11.043

Fine, T. S. (1992). The impact of issue framing on public opinion: Toward affirmative action programs. *The Social Science Journal, 29*(3), 323-334. https://doi.org/10.1016/0362-3319(92)90025-D

Fingerhut, A. W. (2011). Straight allies: What predicts heterosexuals' alliance with the LGBT community?. *Journal of Applied Social Psychology, 41*(9), 2230-2248. https://doi. org/10.1111/j.1559-1816.2011.00807.x

Foster-Fishman, P. G., Nowell, B., & Yang, H. (2007). Putting the system back into systems change: A framework for understanding and changing organizational and community systems. *American Journal of Community Psychology, 39*(3-4), 197-215. http://doi.org/ 10.1007/s10464-007-9109-0

Galinsky, A. D., & Ku, G. (2004). The effects of perspective-taking on prejudice: The moderating role of self-evaluation. *Personality and Social Psychology Bulletin, 30*(5), 594-604. https://doi.org/ 10.1177/0146167203262802

Galinsky, A. D., Magee, J. C., Inesi, M. E., & Gruenfeld, D. H. (2006). Power and perspectives not taken. *Psychological Science, 17*(12), 1068-1074. https://doi.org/10.1111/j.1467-9280.2006.01824.x

Gallagher, S. (2000). Philosophical conceptions of the self: implications for cognitive science. *Trends in Cognitive Sciences*, *4*(1), 14-21. https://doi.org/10.1016/S1364-6613(99)01417-5

Gamson, W. A. (1995). Constructing social protest. *Social Movements and Culture*, *4*, 85-106.

Gentsch, A., & Synofzik, M. (2014). Affective coding: the emotional dimension of agency. *Frontiers in Human Neuroscience*, *8*, 608. https://doi.org/10.3389/fnhum.2014.00608

Glenn, S., Mells, S., & Withers, L. (2009, Mar). *Gender (in)equality in the labour market: An overview of global trends and developments*. International Trade Union Confederation. https://www.ituc-csi.org/IMG/pdf/GAP-09_EN.pdf

Glick, P. (2014). Commentary: Encouraging confrontation. *Journal of Social Issues*, *70*(4), 779-791. https://doi.org/10.1111/josi.12091

Goldberg, R. A. (1991). *Grassroots resistance: Social movements in twentieth century America*. Wadsworth Publishing Company.

Golden, H., Hinkle, S., & Crosby, F. (2001). Reactions to affirmative action: Substance and semantics. *Journal of Applied Social Psychology*, *31*(1), 73-88. https://doi.org/10.1111/ j.1559-1816.2001.tb02483.x

Goodman, D. (2001). *Promoting diversity and social justice: Educating people from privileged groups*. Sage.

Gootnick, A. T. (1974). Locus of control and political participation of college students: A comparison of unidimensional and multidimensional approaches. *Journal of Consulting and Clinical Psychology, 42*(1), 54–58. https://doi.org/10.1037/h0035997

Gordijn, E. H., Yzerbyt, V., Wigboldus, D., & Dumont, M. (2006). Emotional reactions to harmful intergroup behavior. *European Journal of Social Psychology*, *36*(1), 15–30. https://doi.org/10.1002/ejsp.296

Gore, P. M., & Rotter, J. B. (1963). A personality correlate of social action. *Journal of Personality*. *31*(1), 58–64. https://doi.org/10.1111/j.1467-6494.1963.tb01840.x

Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology, 96*(5), 1029-1046. http://doi.org/10.1037/a0015141

Greenaway, K. H., Cichocka, A., van Veelen, R., Likki, T., & Branscombe, N. R. (2016). Feeling hopeful inspires support for social change: Hope and social change. *Political Psychology, 37*(1), 89–107. https://doi.org/10.1111/pops.12225

Haslam, S. A., Reicher, S. D., & Platow, M. J. (2011). *The new psychology of leadership: Identity, influence and power*. Psychology Press.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York: The Guilford Press. https://doi.org/10.1111/jedm.12050

Ho, A. K., Sidanius, J., Kteily, N., Sheehy-Skeffington, J., Pratto, F., Henkel, K. E., ... & Stewart, A. L. (2015). The nature of social dominance orientation: Theorizing and measuring preferences for intergroup inequality using the new SDO7

scale. *Journal of Personality and Social Psychology*, *109*(6), 1003-1028. http://doi.org/10.1037/ pspi0000033

Ho, A. K., Sidanius, J., Pratto, F., Levin, S., Thomsen, L., Kteily, N., & Sheehy-Skeffington, J. (2012). Social dominance orientation: Revisiting the structure and function of a variable predicting social and political attitudes. *Personality and Social Psychology Bulletin*, *38*(5), 583-606. https://doi.org/10.1177/0146167211432765

Ho, G. C., & Unzueta, M. M. (2015). Antiegalitarians for affirmative action? When social dominance orientation is positively related to support for egalitarian social policies. *Journal of Applied Social Psychology*, *45*(8), 451–460. https://doi.org/10.1111/ jasp.12311

Hogg, M. A., & Hains, S. C. (1996). Intergroup relations and group solidarity: Effects of group identification and social beliefs on depersonalized attraction. *Journal of Personality and Social Psychology*, *70*(2), 295–309. https://doi.org/10.1037/0022-3514.70.2.295

Horberg, E. J., Kraus, M. W., & Keltner, D. (2013). Pride displays communicate self-interest and support for meritocracy. *Journal of Personality and Social Psychology*, *105*(1), 24–37. https://doi.org/10.1037/a0032849

Horowitz, J. M. & Livingston, G. (2016, Jul 8). *How Americans view the Black Lives Matter movement.* Pew Research Center. https://www.pewresearch.org/fact-tank/2016/07/08/how-americans-view-the-black-lives-matter-movement/

James, E. H., Brief, A. P., Dietz, J., & Cohen, R. R. (2001). Prejudice matters: Understanding the reactions of Whites to affirmative action programs targeted to

benefit Blacks. *Journal of Applied Psychology*, *86*(6), 1120–1128. https://doi.org/10.1037/0021-9010.86.6.1120

International Labour Organization. (2016, Dec 15). *Global wage report 2016/17: Wage inequality in the workplace*. https://www.ilo.org/global/research/global-reports/global-wage-report/2016/WCMS_537846/lang--en/index.htm

Israel, B. A., Checkoway, B., Schulz, A., & Zimmerman, M. (1994). Health education and community empowerment: Conceptualizing and measuring perceptions of individual, organizational, and community control. *Health Education Quarterly*, *21*(2), 149–170. https://doi.org/10.1177/109019819402100203

Iyer, A., & Achia, T. (2020). Mobilized or marginalized? Understanding low-status groups' responses to social justice efforts led by high-status groups. *Journal of Personality and Social Psychology.* Advance online publication. https://doi.org/10.1037/pspi0000325

Iyer, A., & Leach, C. W. (2010). Helping disadvantaged out-groups challenge unjust inequality: The role of group-based emotions. In S. Stürmer & M. Snyder (Eds.), *New directions in the psychology of helping: Group-level perspectives on motivation, consequences and interventions* (pp. 337– 353). Oxford: Blackwell.

Iyer, A., & Ryan, M. K. (2009). Why do men and women challenge gender discrimination in the workplace? The role of group status and in-group identification in predicting pathways to collective action. *Journal of Social Issues*, *65*(4), 791-814. https://doi.org/10.1111/j.1540-4560.2009.01625.x

Iyer, A., Schmader, T., & Lickel, B. (2007). Why individuals protest the perceived transgressions of their country: The role of anger, shame, and guilt. *Personality*

and Social Psychology Bulletin, *33*(4), 572–587. https://doi.org/10.1177/0146167206297402

Izard, C. E. (1991). *The psychology of emotions*. Plenum.

Jackman, S., Tahk, A., Zeileis, A., Maimone, C., Fearon, J., Meers, Z., ... & Imports, M. A. S. S. (2015). *Package 'pscl'*. Political Science Computational Laboratory, 18(04.2017).

Jackson, L. M., & Esses, V. M. (2000). Effects of perceived economic competition on people's willingness to help empower immigrants. *Group Processes & Intergroup Relations*, *3*(4), 419–435. https://doi.org/10.1177/1368430200003004006

Jetten, J., Mols, F., Healy, N., & Spears, R. (2017). "Fear of falling": Economic instability enhances collective angst among societies' wealthy class. *Journal of Social Issues*, *73*(1), 61-79. https://doi.org/10.1111/josi.12204

Jung, N., Kim, Y., & Gil de Zúniga, H. (2011). The mediating role of knowledge and efficacy in the effects of communication on political participation. *Mass Communication and Society*, 14(4), 407–430. https://doi.org/10.1080/15205436.2010.496135

Kemmelmeier, M. (2003). Individualism and attitudes toward affirmative action: Evidence from priming experiments. *Basic and Applied Social Psychology*, *25*(2), 111–119. https://doi.org/10.1207/S15324834BASP2502_2

Keppel, G. (1991). *Design and Analysis: A researcher's handbook*. Prentice Hall.

Kieffer, C. H. (1984). Citizen empowerment: A developmental perspective. *Prevention in Human Services*, *3*(2–3), 9–36. https://doi.org/10.1300/J293v03n02_03

Kim, J. Y., Fitzsimons, G. M., & Kay, A. C. (2018). Lean in messages increase attributions of women's responsibility for gender inequality. *Journal of Personality and Social Psychology*, *115*(6), 974–1001. http://dx.doi.org/10.1037/pspa0000129

Klineberg, S. L., & Kravitz, D. A. (2003). Ethnic differences in predictors of support for municipal affirmative action contracting. *Social Science Quarterly*, *84*(2), 425-440. https://doi.org/10.1111/1540-6237.8402013

Kluegel, J. R. (1990). Trends in Whites' explanations of the Black-White gap in socioeconomic status, 1977-1989. *American Sociological Review*, 512-525. http://doi.org/10.2307/ 2095804

Knowles, E. D., & Lowery, B. S. (2012). Meritocracy, Self-Concerns, and Whites' Denial of Racial Inequity. *Self and Identity*, *11*(2), 202–222. https://doi.org/10.1080/15298868. 2010.542015

Knowles, E. D., Lowery, B. S., Chow, R. M., & Unzueta, M. M. (2014). Deny, distance, or dismantle? How White Americans manage a privileged Identity. *Perspectives on Psychological Science*, *9*(6), 594–609. https://doi.org/10.1177/1745691614554658

Konrad, A. M., & Linnehan, F. (1995). Formalized HRM structures: coordinating equal employment opportunity or concealing organizational practices?. *Academy of Management Journal*, *38*(3), 787-820. https://doi.org/10.5465/256746

Kravitz, D. A., Klineberg, S. L., Avery, D. R., Nguyen, A. K., Lund, C., & Fu, E. J. (2000). Attitudes toward affirmative action: Correlations with demographic variables and with beliefs about targets, actions, and economic effects. *Journal of*

Applied Social Psychology, *30*(6), 1109–1136. https://doi.org/10.1111/j.1559-1816.2000.tb02513.x

Krysan, M. & Moberg, S. P. (2016, August 25). *Trends in racial attitudes*. University of Illinois Institute of Government and Public Affairs. https://igpa.uillinois.edu/programs/ racial-attitudes/

Kteily, N., Ho, A. K., & Sidanius, J. (2012). Hierarchy in the mind: The predictive power of social dominance orientation across social contexts and domains. *Journal of Experimental Social Psychology*, *48*(2), 543-549. https://doi.org/10.1016/j.jesp.2011.11.007

Kteily, N. S., Sheehy-Skeffington, J., & Ho, A. K. (2017). Hierarchy in the eye of the beholder: (Anti-)egalitarianism shapes perceived levels of social inequality. *Journal of Personality and Social Psychology*, *112*(1), 136–159. https://doi.org/10.1037/pspp0000097

Kugler, M., Jost, J. T., & Noorbaloochi, S. (2014). Another look at moral foundations theory: Do authoritarianism and social dominance orientation explain liberal-conservative differences in "moral" intuitions?. *Social Justice Research*, *27*(4), 413-431. https:// doi.org/10.1007/s11211-014-0223-5

Kurdi, B., Seitchik, A. E., Axt, J. R., Carroll, T. J., Karapetyan, A., Kaushik, N., ... & Banaji, M. R. (2019). Relationship between the Implicit Association Test and intergroup behavior: A meta-analysis. *American psychologist, 74*(5), 569-586. https://doi.org/http://dx.doi.org/10.1037/amp0000364

Lai, C. K., Marini, M., Lehr, S. A., Cerruti, C., Shin, J. E. L., Joy-Gaba, J. A., ... & Frazier, R. S. (2014). Reducing implicit racial preferences: A comparative

investigation of 17 interventions. *Journal of Experimental Psychology: General*, *143*(4), 1765-1785. http://doi.org/10.1037/a0036260

Laird, P. G. (2003). Bridging the divide: The role of perceived control in mediating reasoning and activism. *Journal of moral education*, *32*(1), 35-49. https://doi.org/10.1080/ 0305724022000073329

Lakens, D. (2013). Calculating and reporting effect sizes to facilitate cumulative science: a practical primer for t-tests and ANOVAs. *Frontiers in psychology*, *4*, 863.

Leach, C. W., Iyer, A., & Pedersen, A. (2006). Anger and guilt about ingroup advantage explain the willingness for political action. *Personality and Social Psychology Bulletin*, *32*(9), 1232–1245. https://doi.org/10.1177/0146167206289729

Leach, C. W., Ellemers, N., & Barreto, M. (2007). Group virtue: The importance of morality (vs. competence and sociability) in the positive evaluation of in-groups. *Journal of Personality and Social Psychology*, *93*(2), 234-249. https://doi.org/10.1037/0022-3514.93.2.234

Leach, C. W., van Zomeren, M., Zebel, S., Vliek, M. L. W., Pennekamp, S. F., Doosje, B., Ouwerkerk, J. W., & Spears, R. (2008). Group-level self-definition and self-investment: A hierarchical (multicomponent) model of in-group identification. *Journal of Personality and Social Psychology*, *95*(1), 144–165. https://doi.org/10.1037/0022-3514.95.1.144

Lefcourt, H. M. (1976). Locus of control and the response to aversive events. *Canadian Psychological Review/Psychologie Canadienne*, *17*(3), 202-209. https://doi.org/10.1037/ h0081839

Lehman, B. J., & Crano, W. D. (2002). The pervasive effects of vested interest on attitude–criterion consistency in political judgment. *Journal of Experimental Social Psychology*, *38*(2), 101-112. https://doi.org/10.1006/jesp.2001.1489

Levenson, H. (1974). Activism and Powerful Others: Distinctions within the Concept of Internal-External Control. *Journal of Personality Assessment, 38*(4), 377–383. https://doi. org/10.1080/00223891.1974.10119988

Lickel, B., Schmader, T., Curtis, M., Scarnier, M., & Ames, D. R. (2005). Vicarious shame and guilt. *Group Processes & Intergroup Relations, 8*(2), 145-157. https://doi.org/10.1177/ 1368430205051064

Little, B. L., Murry, W. D., & Wimbush, J. C. (1998). Perceptions of workplace affirmative action plans: A psychological perspective. *Group & Organization Management, 23*(1), 27-47. https://doi.org/10.1177/1059601198231003

Lowery, B. S., Unzueta, M. M., Knowles, E. D., & Goff, P. A. (2006). Concern for the in-group and opposition to affirmative action. *Journal of Personality and Social Psychology*, *90*(6), 961–974. https://doi.org/10.1037/0022-3514.90.6.961

Lucas, B. J., & Kteily, N. S. (2018). (Anti-)egalitarianism differentially predicts empathy for members of advantaged versus disadvantaged groups. *Journal of Personality and Social Psychology*, *114*(5), 665–692. https://doi.org/10.1037/pspa0000112

Mack, D. A., Johnson, C. D., Green, T. D., Parisi, A. G., & Thomas, K. M. (2002). Motivation to Control Prejudice as a Mediator of Identity and Affirmative Action Attitudes. *Journal of Applied Social Psychology, 32*(5), 934-964.https://doi.org/10.1111/j.1559-1816.2002.tb00249.x

MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological methods*, *7*(1), 83 -104. http://doi.org/10.1037/1082-989X.7.1.83

Major, B., Gramzow, R. H., McCoy, S. K., Levin, S., Schmader, T., & Sidanius, J. (2002). Perceiving personal discrimination: The role of group status and legitimizing ideology. *Journal of Personality and Social Psychology*, *82*(3), 269–282. https://doi.org/10.1037/0022-3514.82.3.269

Mallett, R. K., Huntsinger, J. R., Sinclair, S., & Swim, J. K. (2008). Seeing through their eyes: When majority group members take collective action on behalf of an outgroup. *Group Processes & Intergroup Relations*, *11*(4), 451–470. https://doi.org/10.1177/ 1368430208095400

Marques, J. M., & Yzerbyt, V. Y. (1988). The black sheep effect: Judgmental extremity towards ingroup members in inter-and intra-group situations. *European Journal of Social Psychology*, *18*(3), 287-292. https://doi.org/10.1002/ejsp.2420180308

McCarty, J. A., & Shrum, L. J. (2001). The Influence of individualism, collectivism, and locus of control on environmental beliefs and behavior. *Journal of Public Policy & Marketing*, *20*(1), 93–104. https://doi.org/10.1509/jppm.20.1.93.17291

McConahay, J. B. (1986). *Modern racism, ambivalence, and the Modern Racism Scale.* In J. F. Dovidio & S. L. Gaertner (Eds.), *Prejudice, discrimination, and racism* (pp. 91–125). Academic Press.

McFarland, S., Hackett, J., Hamer, K., Katzarska-Miller, I., Malsch, A., Reese, G., & Reysen, S. (2019). Global Human Identification and Citizenship: A Review of

Psychological Studies. *Political Psychology*, *40*(S1), 141–171. https://doi.org/10.1111/pops.12572

McGarry, J., & Hendrick, C. (1974). Communicator credibility and persuasion. *Memory & Cognition*, *2*(1), 82–86. https://doi.org/10.3758/BF03197496

McGarty, C., Bliuc, A. M., Thomas, E. F., & Bongiorno, R. (2009). Collective action as the material expression of opinion-based group membership. *Journal of Social Issues*, *65*(4), 839-857. https://doi.org/10.1111/j.1540-4560.2009.01627.x

McNamara, N., Stevenson, C., & Muldoon, O. T. (2013). Community identity as resource and context: A mixed method investigation of coping and collective action in a disadvantaged community. *European Journal of Social Psychology*, *43*(5), 393-403. https://doi.org /10.1002/ejsp.1953

Mead, N. L., Baumeister, R. F., Stuppy, A., & Vohs, K. D. (2018). Power increases the socially toxic component of narcissism among individuals with high baseline testosterone. *Journal of Experimental Psychology: General, 147*(4), 591-596. http://doi.org/ 10.1037/xge0000427

Montada, L., & Schneider, A. (1989). Justice and emotional reactions to the disadvantaged. *Social Justice Research, 3*(4), 313-344. https://doi.org/10.1007/ BF01048081

Morgan, G. S., Mullen, E., & Skitka, L. J. (2010). When values and attributions collide: Liberals' and conservatives' values motivate attributions for alleged misdeeds. *Personality and Social Psychology Bulletin*, *36*(9), 1241–1254. https://doi.org/10.1177/ 0146167210380605

Morrell, M. E. (2005). Deliberation, democratic decision-making and internal political efficacy. *Political Behavior*, *27*(1), 49–69. https://doi.org/10.1007/s11109-005-3076-7

Moskowitz, G.B. (1996). The mediational effects of attributions and information processing in minority social influence. *British Journal of Social Psychology, 35,* 47-66. https://doi.org/ 10.1111/j.2044-8309.1996.tb01082.x

Nadler, A. (2016). Intergroup helping relations. *Current Opinion in Psychology*, *11*, 64–68. https://doi.org/10.1016/j.copsyc.2016.05.016

Nadler, A., & Halabi, S. (2006). Intergroup helping as status relations: Effects of status stability, identification, and type of help on receptivity to high-status group's help. *Journal of Personality and Social Psychology*, *91*(1), 97–110. https://doi.org/10.1037/0022-3514.91.1.97

National Center for Education Statistics. (2020). *College Enrollment Rates*. The condition of Education 2020. https://nces.ed.gov/programs/coe/pdf/coe_cpb.pdf

Nie, N.H., Junn, J. & Stehlik-Barry, K. (1996). *Education and democratic citizenship in America*. University of Chicago Press.

Niemann, Y. F., & Dovidio, J. F. (1998). Tenure, race/ethnicity and attitudes toward affirmative action: A matter of self-interest?. *Sociological Perspectives, 41*(4), 783-796. https://doi. org/10.2307/1389670

Niemi, R. G., Craig, S. C., & Mattei, F. (1991). Measuring internal political efficacy in the 1988 National Election Study. *American Political Science Review, 85*(4), 1407-1413.

Paulhus, D. (1983). Sphere-specific measures of perceived control. *Journal of personality and social psychology*, *44*(6), 1253–1265. https://doi.org/10.1037/0022-3514.44.6.1253

Palan, S., & Schitter, C. (2018). Prolific.ac—A subject pool for online experiments. *Journal of Behavioral and Experimental Finance*, *17*, 22-27. https://doi.org/10.1016/j.jbef.2017. 12.004

Patton, L. D. & Bondi, S. (2015). Nice White men or social justice allies?: Using critical race theory to examine how White male faculty and administrators engage in ally work. *Race Ethnicity and Education*, 18(4), 488–514.

Peer, E., Brandimarte, L., Samat, S., & Acquisti, A. (2017). Beyond the Turk: Alternative platforms for crowdsourcing behavioral research. *Journal of Experimental Social Psychology*, *70*, 153-163. https://doi.org/10.1016/j.jesp.2017.01.006

Perry, R., Priest, N., Paradies, Y., Barlow, F. K., & Sibley, C. G. (2018). Barriers to multiculturalism: In-group favoritism and out-group hostility are independently associated with policy opposition. *Social Psychological and Personality Science*, *9*(1), 89–98. https://doi.org/10.1177/1948550617703169

Pettigrew, T. F. (1979). The ultimate attribution error: Extending Allport's cognitive analysis of prejudice. *Personality and social psychology bulletin*, *5*(4), 461-476. https://doi.org/ 10.1177/014616727900500407

Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90*(5), 751-783. http:// doi.org/0.1037/0022-3514.90.5.751

Pew Research Center. (2016, Jun 27). *On view of race and inequality, Blacks and Whites are worlds apart: Demographic trends and economic well-being*. https://www.pewsocialtrends.org/2016/06/27/1-demographic-trends-and-economic-well-being/

Phillips, L. T., & Lowery, B. S. (2018). Herd invisibility: The psychology of racial privilege. *Current Directions in Psychological Science*, *27*(3), 156-162. https://doi.org/10.1177/0963721417753600

Phinney, J. S., & Ong, A. D. (2007). Conceptualization and measurement of ethnic identity: Current status and future directions. *Journal of counseling Psychology*, *54*(3), 271-281. http://doi.org/10.1037/0022-0167.54.3.271

Piff, P. K., Kraus, M. W., Côté, S., Cheng, B. H., & Keltner, D. (2010). Having less, giving more: The influence of social class on prosocial behavior. *Journal of Personality and Social Psychology, 99*(5), 771 -784. https://doi.org/10.1037/a0020092

Pratto, F., Sidanius, J., & Levin, S. (2006). Social dominance theory and the dynamics of intergroup relations: Taking stock and looking forward. *European Review of Social Psychology*, *17*(1), 271–320. https://doi.org/10.1080/10463280601055772

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological monographs: General and applied*, *80*(1), 1-28. https://doi.org/10.1037/h0092976

Russell, G. M., & Bohan, J. S. (2016). Institutional allyship for LGBT equality: Underlying processes and potentials for change. *Journal of Social Issues*, *72*(2), 335-354. https:// doi.org/10.1111/josi.12169

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68-78. https://doi.org/10.1037/0003-066X.55.1.68

Ryan, R. M., & Deci, E. L. (2004). Autonomy is no illusion: Self-determination theory and the empirical study of authenticity, awareness, and will. In J. Greenberg, S. L. Koole, & T. Pyszczynski (Eds.), *Handbook of Experimental Existential Psychology* (pp. 449–479). Guilford Press.

Sabat, I. E., Martinez, L. R., & Wessel, J. L. (2013). Neo-activism: Engaging allies in modern workplace discrimination reduction. *Industrial and Organizational Psychology*, *6*(4), 480-485. https://doi.org/10.1111/iops.12089

Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, *277*(5328), 918-924. http://doi.org/ 10.1126/science.277.5328.918

Sanders, L. (2001). *The psychological benefits of political participation*. Paper presented at the annual meeting of the American Political Science Association, San Francisco, CA.

Sawires, J. N., & Peacock, M. J. (2000). Symbolic racism and voting behavior on proposition 209. *Journal of Applied Social Psychology, 30*(10), 2092-2099. https://doi.org/10.1111/ j.1559-1816.2000.tb02426.x

Schmitt, M. T., & Wirth, J. H. (2009). Evidence that gender differences in social dominance orientation result from gendered self-stereotyping and group-interested responses to patriarchy. Psychology of Women Quarterly, 33(4), 429-436. https://doi.org/ 10.1111/j.1471-6402.2009.01520.xß

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology, Vol. 25* (pp. 1–65). Academic Press. https://doi.org/10.1016/S0065-2601(08)60281-6

Sears, D., Van Laar, C., Carrillo, M., & Kosterman, R. (1997). Is it really racism?: The origins of White Americans' opposition to race-targeted policies. *The Public Opinion Quarterly, 61*(1), 16-53.

Selvanathan, H. P., Techakesari, P., Tropp, L. R., & Barlow, F. K. (2018). Whites for racial justice: How contact with Black Americans predicts support for collective action among White Americans. *Group Processes & Intergroup Relations, 21*(6), 893–912. https://doi. org/10.1177/1368430217690908

Shavin, N. (2017, Jan 22). *Men at the Women's March? You bet. Here's why they came*. Vox. https://www.vox.com/identities/2017/1/22/14347710/men-womens-march

Shingles, R. D. (1981). Black Consciousness and Political Participation: The Missing Link. *American Political Science Review 75*, 76–91. https://doi.org/10.2307/1962160

Shnabel, N., & Nadler, A. (2008). A needs-based model of reconciliation: Satisfying the differential emotional needs of victim and perpetrator as a key to promoting reconciliation. *Journal of Personality and Social Psychology, 94*(1), 116-132. https:// doi.org/10.1037/0022-3514.94.1.116

Shnabel, N., & Nadler, A. (2015). The role of agency and morality in reconciliation processes: The perspective of the needs-based Model. *Current Directions in*

Psychological Science, *24*(6), 477–483. https://doi.org/10.1177/0963721415601625

Shnabel, N., Ullrich, J., Nadler, A., Dovidio, J. F., & Aydin, A. L. (2013). Warm or competent? Improving intergroup relations by addressing threatened identities of advantaged and disadvantaged groups. *European Journal of Social Psychology*, *43*(6), 482-492. https:// doi.org/10.1002/ejsp.1975

Sibley, C. G., Wilson, M. S., & Duckitt, J. (2007). Antecedents of men's hostile and benevolent sexism: The dual roles of social dominance orientation and right-wing authoritarianism. *Personality and Social Psychology Bulletin*, *33*(2), 160-172. https:// doi.org/10.1177/0146167206294745

Sidanius, J., & Pratto, F. (1999). *Social dominance: An intergroup theory of social hierarchy and oppression*. Cambridge University Press.

Sidanius, J., Pratto, F., & Bobo, L. (1996). Racism, conservatism, affirmative action, and intellectual sophistication: A matter of principled conservatism or group dominance?. *Journal of Personality and Social Psychology, 70*(3), 476-490. http:// doi.org/10.1037/0022-3514.70.3.476

Siem, B., Von Oettingen, M., Mummendey, A., & Nadler, A. (2013). When status differences are illegitimate, groups' needs diverge: Testing the needs-based model of reconciliation in contexts of status inequality. *European Journal of Social Psychology*, *43*(2), 137-148. https://doi.org/10.1002/ejsp.1929

Silva, F. (2018). The strength of Whites' ties: How employers reward the referrals of Black and White jobseekers. *Social Forces*, *97*(2), 741–768. https://doi.org/10.1093/sf/soy051

Silvern, L. E., & Nakamura, C. Y. (1971). Powerlessness, social-political action, social-political views: Their interrelation among college students. *Journal of Social Issues*, *27*(4), 137-157. https://doi.org/10.1111/j.1540-4560.1971.tb00682.x

Simon, B., & Klandermans, B. (2001). Politicized collective identity: A social psychological analysis. *American psychologist*, *56*(4), 319–331. https://doi.org/10.1037/0003-066X.56.4.319

Smith, K. B., & Stone, L. H. (1989). Rags, riches, and bootstraps: Beliefs about the causes of wealth and poverty. *Sociological Quarterly*, *30*(1), 93-107. https://doi.org/10.1111/ j.1533-8525.1989.tb01513.x

Snyder, M., & Kendzierski, D. (1982). Acting on one's attitudes: Procedures for linking attitude and behavior. *Journal of Experimental Social Psychology*, *18*(2), 165–183. https://doi. org/10.1016/0022-1031(82)90048-8

Snyder, M. & Omoto, A. M. (2007). Social action. In A. W. Kruglanski & E. T. Higgins (Eds.), *Social psychology: A handbook of basic principles* (2nd ed., pp. 940-961). Guilford.

Stanley, M. A., & Maddux, J. E. (1986). Cognitive processes in health enhancement: Investigation of a combined protection motivation and self-efficacy model. *Basic and Applied Social Psychology*, *7*(2), 101-113. https://doi.org/10.1207/s15324834basp0702_2

Strickland, B. R. (1965). The prediction of social action from a dimension of internal-external control. *The Journal of Social Psychology*, *66*(2), 353-358. https://doi.org/10.1080/ 00224545.1965.9919655

Stroebe, K., Barreto, M., & Ellemers, N. (2010). Experiencing discrimination: How members of disadvantaged groups can be helped to cope with discrimination. *Social Issues and Policy Review*, *4*(1), 181–213. https://doi.org/10.1111/j.1751-2409.2010.01021.x

Stürmer, S. & Snyder, M. (2010). The psychology of prosocial behavior: Group processes, intergroup relations, and helping. Wiley-Blackwell. https://doi.org/10.1002/9781444307948

Subašić, E., & Reynolds, K. J. (2009). Beyond "practical" reconciliation: Intergroup inequality and the meaning of non-indigenous identity. *Political Psychology*, *30*(2), 243-267. https://doi.org/10.1111/j.1467-9221.2008.00690.x

Subašić, E., Reynolds, K. J., & Turner, J. C. (2008). The political solidarity model of social change: Dynamics of self-categorization in intergroup power relations. *Personality and Social Psychology Review*, *12*(4), 330–352. https://doi.org/10.1177/1088868308323223

Summers, R. J. (1995). Attitudes toward different methods of affirmative action. *Journal of Applied Social Psychology*, *25*(12), 1090-1104. https://doi.org/10.1111/j.1559-1816.1995.tb00619.x

Sweetser, K. D. (2014). Partisan personality: The psychological differences between Democrats and Republicans, and Independents somewhere in between. *American Behavioral Scientist*, *58*(9), 1183–1194. https://doi.org/10.1177/0002764213506215

Swim, J. K., & Miller, D. L. (1999). White guilt: Its antecedents and consequences for attitudes toward affirmative action. *Personality and Social Psychology Bulletin, 25*(4), 500-514. https://doi.org/10.1177/0146167299025004008

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Brooks-Cole.

Tarrant, M., Branscombe, N. R., Warner, R. H., & Weston, D. (2012). Social identity and perceptions of torture: It's moral when we do it. *Journal of Experimental Social Psychology, 48*(2), 513-518. https://doi.org/10.1016/j.jesp.2011.10.017

Thomas, L-E. (1970). The I-E scale, ideological bias, and political participation. *Journal of Personality, 38*, 273-286. https://doi.org/10.1111/j.1467-6494.1970.tb00009.x

Tilly, Charles. 1978. *From Mobilization to Revolution*. Prentice Hall.

Tougas, F., Crosby, F., Joly, S., & Pelchat, D. (1995). Men's attitudes toward affirmative action: Justice and intergroup relations at the crossroads. *Social Justice Research, 8*(1), 57-71. https://doi.org/10.1007/BF02334826

Tougas, F., & Veilleux, F. (1990). The response of men to affirmative action strategies for women: The study of a predictive model. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement, 22*(4), 424-432. https://doi.org/10.1037/h0078946

Truxillo, D. M., & Bauer, T. N. (2000). The roles of gender and affirmative action attitude in reactions to test score use methods. *Journal of Applied Social Psychology, 30*(9), 1812-1828. https://doi.org/10.1111/j.1559-1816.2000.tb02469.x

Tuch, S. A., & Hughes, M. (1996). Whites' racial policy attitudes. *Social Science Quarterly*, 723-745.

U.S. Bureau of Labor Statistics. (2010). *Highlights of women's earnings in 2009*. http://www. bls.gov/cps/cpswom2009.pdf

U.S. Census Bureau. (2020). *Household Income: 2019*. https://www.census.gov/content/dam/Census/library/publications/2020/acs/acsbr20-03.pdf

U.S. Equal Employment Opportunity Commission. (n.d.). *Employment Statistics.* https://www.eeoc.gov/statistics/employment

U.S. House of Representatives Press Gallery. (n.d.). *Demographics of congress member*. https:// pressgallery.house.gov/member-data/demographics

Uslaner, E. M., & Brown, M. (2005). Inequality, trust, and civic engagement. *American Politics Research, 33*(6), 868–894. https://doi.org/10.1177/1532673x04271903

van Zomeren, M., Postmes, T., & Spears, R. (2008). Toward an integrative social identity model of collective action: A quantitative research synthesis of three socio-psychological perspectives. *Psychological Bulletin*, *134*(4), 504–535. https://doi.org/10.1037/0033-2909.134.4.504

van Zomeren, M., Kutlaca, M., & Turner-Zwinkels, F. (2018). Integrating who "we" are with what "we" (will not) stand for: A further extension of the social identity model of collective action. *European Review of Social Psychology*, *29*(1), 122–160. https://doi.org/10.1080/10463283.2018.1479347

van Zomeren, M., Spears, R., & Leach, C. W. (2010). Experimental evidence for a dual pathway model analysis of coping with the climate crisis. *Journal of*

Environmental Psychology, *30*(4), 339–346. https://doi.org/10.1016/j.jenvp.2010.02.006

Vorauer, J. D., & Sasaki, S. J. (2012). The pitfalls of empathy as a default intergroup interaction strategy: Distinct effects of trying to empathize with a lower status outgroup member who does versus does not express distress. *Journal of Experimental Social Psychology, 48*(2), 519–524. https://doi.org/10.1016/j.jesp.2011.11.001

Waldman, D. A., Viney, W., Bell, P. A., Bennett, J. B., & Hess, S. (1983). Internal and external locus of control in relation to beliefs in free will and determinism. *Psychological Reports*, *53*(2), 631–634. https://doi.org/10.2466/pr0.1983.53.2.631

Walkey, F. H. (1979). Internal control, powerful others, and chance: A confirmation of Levenson's factor structure. *Journal of Personality Assessment*, *43*(5), 532-535. https://doi.org/10.1207/s15327752jpa4305_17

Warner, J., Ellmann, N., & Boesch, D. (2018, Nov 20). *The women's leadership gap*. Center for American Progress. https://www.americanprogress.org/issues/women/reports/2018/11/20/461273/womens-leadership-gap-2/

Washburn, A. N., & Skitka, L. J. (2018, April 7). *Promoting strong inferences in political psychology*. https://doi.org/10.31234/osf.io/c4wv5

Wellman, J. D., Liu, X., & Wilkins, C. L. (2016). Priming status-legitimizing beliefs: Examining the impact on perceived anti-White bias, zero-sum beliefs, and support for Affirmative Action among White people. *British Journal of Social Psychology*, *55*(3), 426–437. https://doi.org/10.1111/bjso.12133

Williams, D. R., Jackson, J. S., Brown, T. N., Torres, M., Forman, T. A., & Brown, K. (1999). Traditional and contemporary prejudice and urban Whites' support for affirmative action and government help. *Social Problems*, *46*(4), 503-527. https://doi.org/10.2307/3097073

Wright, S. C., Taylor, D. M., & Moghaddam, F. M. (1990). The relationship of perceptions and emotions to behavior in the face of collective inequality. *Social Justice Research*, *4*(3), 229-250. https://doi.org/10.1007/BF01048399

Wright, S., & Tropp, L. (2001). Collective action in response to disadvantage: Intergroup perceptions, social identification, and social change. In I. Walker & H. Smith (Eds.), *Relative Deprivation: Specification, Development, and Integration* (pp. 200-236). Cambridge: Cambridge University Press. http://doi.org/10.1017/CBO9780511527753. 010

Zanna, M. P., Olson, J. M., & Fazio, R. H. (1980). Attitude–behavior consistency: An individual difference perspective. *Journal of Personality and Social Psychology, 38*(3), 432–440. https://doi.org/10.1037/0022-3514.38.3.432

Zimmerman, M. A., & Rappaport, J. (1988). Citizen participation, perceived control, and psychological empowerment. *American Journal of community psychology*, *16*(5), 725-750. https://doi.org/10.1007/BF00930023

Zimmerman, M. A. (1989). The relationship between political efficacy and citizen participation: Construct validation studies. *Journal of Personality Assessment*, *53*(3), 554-566. https://doi.org/10.1207/s15327752jpa5303_12

Zimmerman, M. A., & Zahniser, J. H. (1991). Refinements of sphere-specific measures of perceived control: Development of a sociopolitical control scale. *Journal of*

Community Psychology, *19*, 189-204. https://doi.org/10.1002/1520-6629(199104)19:2<189::AID-JCOP2290190210>3.0.CO;2-6

Appendices

Appendix A. Study 1b: Full List of Items

Egalitarianism

Variable code (2016 / 2020)	Item
V162243 V202260	1. Our society should do whatever is necessary to make sure that everyone has an equal opportunity to succeed.
V162244 V202261	2. This country would be better off if we worried less about how equal people are.
V162245 V202262	3. It is not really that big a problem if some people have more of a chance in life than others.
V162246 V202263	4. If people were treated more equally in this country, we would have many fewer problems.

Response scale
1 = Agree strongly, 2 = Agree somewhat, 3 = Neither agree nor disagree,
4 = Disagree somewhat, 5 = Disagree strongly

Political Efficacy

Variable code (2016 / 2020)	Item
External efficacy	
V162215 V202212	1. Public officials don't care much what people like me think.
V162216 V202213	2. People like me don't have any say about what the government does.

Response scale for External efficacy items
1 = Agree strongly, 2 = Agree somewhat, 3 = Neither agree nor disagree,
4 = Disagree somewhat, 5 = Disagree strongly

Internal efficacy	
V162217 V202214	1. How often do politics and government seem so complicated that you can't really understand what's going on?

Response scale
1 = Always, 2 = Most of the time, 3 = About half the time,
4 = Some of the time, 5 = Never

V162218 V202215	2. How well do you understand the important political issues facing our country?

Response scale
1 = Extremely well, 2 = Very well, 3 = Moderately well, 4 = Slightly well,
5 = Not well at all

Attitudes toward Affirmative Action

Variable code (2016 / 2020)	Item
V162238x V202252x	What about your opinion—are you for or against preferential hiring and promotion of blacks?

Response scale for External efficacy items
1 = Strongly for preferential hiring/promotion of blacks,
2 = Not strongly for preferential hiring/promotion of blacks,
3 = Not strongly against preferential hiring/promotion of blacks,
4 = Strongly against preferential hiring/promotion of blacks

Demographic Variables

Variable code (2016 / 2020)	Item
Age	
V161267 V201507x	Respondent age

Note. Age 80 or older are coded as 80.

Sex	
V161342 V201600	What is your sex?

Response scale
1 = Male, 2 = Female

Race/Ethnicity

V161310x
V201549x

I am going to read you a list of five race categories. You may choose one or more races. For this survey, Hispanic origin is not a race. Are you White; Black or African American; American Indian or Alaska Native; Asian; or Native Hawaiian or Other Pacific Islander?

Response scale

1 = White, non-Hispanic
2 = Black, non-Hispanic
3 = Hispanic
4 = Asian or Native Hawaiian/other Pacific Islander, non-Hispanic alone
5 = Native American/Alaska Native or other race, non-Hispanic alone
6 = Multiple races, non-Hispanic

Highest level of education

V161270
V201510

What is the highest level of school you have completed or the highest degree you have received?

Response scale

1 = Less than high school
2 = High school graduate - High school diploma or equivalent (e.g. GED)
3 = Some college but no degree
4 = Associate degree in college - occupational/vocational
5 = Associate degree in college - academic
6 = Bachelor's degree (e.g. BA, AB, BS)
7 = Master's degree (e.g. MA, MS, MEng, MEd, MSW, MBA)
8 = Professional school degree (e.g. MD, DDS, DVM, LLB, JD)/Doctoral degree (e.g. PHD, EDD)
95 = Other {SPECIFY}

Subjective social class

V161307
V202352

How would you describe your social class? Are you in the lower class, the working class, the middle class, or the upper class?

Response scale

1 = Lower class
2 = Working class
3 = Middle class
4 = Upper class

Political Knowledge

Variable code (2016 / 2020)	Item

V162072 V202138y	Joe Biden: What job or political office does he now hold? Mike Pence: What job or political office does he now hold?
V162073a V202139y1	Paul Ryan: What job or political office does he now hold? Nancy Pelosi: What job or political office does she now hold?
V162076b V202142y2	John Roberts. What job or political office does he now hold?

Response scale for External efficacy items
0 = Incorrect
1 = Correct

Appendix B. Study 2: Full Measures

Introduction

Survey on Contemporary Social Issues (SCSI) taps onto social issues such as spending priorities, crime and punishment, race relations, quality of life, public health, and social media, among others. To maximize the effectiveness of the survey and to minimize the respondents' fatigue, we randomly assign participants to one of the modules. Please proceed to the next page to see the selected topic.

Topic Selection

You will be asked to read about the economic gap in the U.S.

Please click 'next' to proceed.

Introduction before participants respond to individual difference measures

Before we delve into the assigned topic, we would like to ask you some questions about yourself. Individuals have different ways of living and develop different worldviews. What we are interested in is *your* principles and beliefs. Thus, there are no right or wrong answers to the questions that you will be reading on the next page.

Egalitarian values

Social Dominance Orientation: Antiegalitarianism (Ho et al., 2015)

Please show how much you agree with each idea below by selecting a number from 1 to 7 on the scale provided. You can work quickly; your first feeling is generally best.

1 = Strongly disagree; 2 = Somewhat disagree; 3 = Slightly disagree; 4 = Neutral; 5 = Slightly agree; 6 = Somewhat agree; 7 = Strongly agree

Pro-trait dominance

1. Some groups of people must be kept in their place.
2. It's probably a good thing that certain groups are at the top and other groups are at the bottom.
3. An ideal society requires some groups to be on top and others to be on the bottom.*

4. Some groups of people are simply inferior to other groups.*

Con-trait dominance

5. Groups at the bottom are just as deserving as groups at the top.*
6. No one group should dominate in society.*
7. Groups at the bottom should not have to stay in their place.
8. Group dominance is a poor principle.

Pro-trait antiegalitarianism

9. We should not push for group equality.
10. We shouldn't try to guarantee that every group has the same quality of life.
11. It is unjust to try to make groups equal.*
12. Group equality should not be our primary goal.*

Con-trait antiegalitarianism

13. We should work to give all groups an equal chance to succeed.*
14. We should do what we can to equalize conditions for different groups.*
15. No matter how much effort it takes, we ought to strive to ensure that all groups have the same chance in life.
16. Group equality should be our ideal.

*Items for a brief scale

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

Sociopolitical efficacy

Sociopolitical control scale—policy control subscale (Zimmerman & Zahniser, 1991)

Please choose a number that best describes how much you agree or disagree with each statement.

1 = Strongly disagree; 2 = Somewhat disagree; 3 = Slightly disagree; 4 = Neutral; 5 = Slightly agree; 6 = Somewhat agree; 7 = Strongly agree

1. I enjoy political participation because I want to have as much say in running government as possible.

2. Sometimes politics and government seem so complicated that a person like me can't really understand what's going on. (*Reverse-coded*)
3. I feel like I have a pretty good understanding of the important political issues which confront our society.
4. People like me are generally well qualified to participate in the political activity and decision making in our country.
5. It hardly makes any difference who I vote for because whoever gets elected does whatever he wants to do anyway. (*Reverse-coded*)
6. There are plenty of ways for people like me to have a say in what our government does.
7. So many other people are active in local issues and organizations that it doesn't matter much to me whether I participate or not. (*Reverse-coded*)
8. Most public officials wouldn't listen to me no matter what I did. (*Reverse-coded*)
9. A good many local elections aren't important enough to bother with. (*Reverse-coded*)

Zimmerman, M. A., & Zahniser, J. H. (1991). Refinements of sphere-specific measures of perceived control: Development of a sociopolitical control scale. *Journal of Community Psychology, 19*, 189-204. https://doi.org/10.1002/1520-6629(199104)19:2<189::AID-JCOP2290190210>3.0.CO;2-6

Introduction before participants read a vignette

As we told you earlier, we are interested in your thoughts about the economic gap in the United States. To help you better understand what we mean by the economic gap, we would like to provide you with an excerpt from a news story.

On the next page, you will find a short story that describes the racial wealth gap in the United States. Please pay attention because we will ask you questions about the excerpt.

Description of racial inequality

Source

https://www.census.gov/housing/hvs/files/currenthvspress.pdf
https://www.imf.org/external/pubs/ft/fandd/2020/09/race-and-racism-in-economics-IMF.htm
https://nces.ed.gov/programs/coe/pdf/coe_cpb.pdf
https://www.nytimes.com/interactive/2020/06/24/magazine/reparations-slavery.html
https://www.shrm.org/resourcesandtools/hr-topics/compensation/pages/racial-wage-gaps-persistence-poses-challenge.aspx
https://socialequity.duke.edu/wp-content/uploads/2019/10/what-we-get-wrong.pdf
https://www.washingtonpost.com/business/2020/06/04/economic-divide-black-households/

Perceived Black Americans' collective efficacy (adapted from Kim et al., 2018; van Zomeren et al., 2008)

To what extent do you agree or disagree with the following statements?

1 = Strongly disagree; 2 = Somewhat disagree; 3 = Slightly disagree; 4 = Neutral; 5 = Slightly agree; 6 = Somewhat agree; 7 = Strongly agree

1. Black people, working together as a group, can reduce the wealth gap.
2. Black people have potential to reduce the racial wealth gap.
3. Black people are best able to tackle the problem of racial wealth gap.
4. Black people are not capable of dealing with the problem of racial wealth gap. (*reverse-coded*)

Kim, J. Y., Fitzsimons, G. M., & Kay, A. C. (2018). Lean in messages increase attributions of women's responsibility for gender inequality. *Journal of Personality and Social Psychology*, *115*(6), 974–1001. http://dx.doi.org/10.1037/pspa0000129

van Zomeren, M., Postmes, T., & Spears, R. (2008). Toward an integrative social identity model of collective action: A quantitative research synthesis of three socio-psychological perspectives. *Psychological Bulletin*, *134*(4), 504–535. https://doi.org/10.1037/0033-2909.134.4.504

Attribution

Adapted from Poverty Attribution Scale (Cozzarelli et al., 2001)

To what extent do you agree or disagree with the following statements?

1 = Strongly disagree; 2 = Somewhat disagree; 3 = Slightly disagree; 4 = Neutral; 5 = Slightly agree; 6 = Somewhat agree; 7 = Strongly agree

There is a racial wealth gap in society because racial minorities…

External Attribution

1. …experience prejudice and discrimination in hiring.
2. …experience prejudice and discrimination in promotions and wages.
3. …need to deal with the government that is insensitive to their plight.
4. …confront an inadequate welfare system.

Internal Attribution

1. …tend to lack drive and perseverance.
2. …don't make enough efforts to improve their life.
3. …, on average, lack the talent to succeed.
4. … lack the ability to get a high-paying job.

Cozzarelli, C., Wilkinson, A. V., & Tagler, M. J. (2001). Attitudes toward the poor and attributions for poverty. *Journal of Social Issues*, *57*(2), 207–227. https://doi.org/10.1111/0022-4537.00209

Emotion

Adapted from multiple sources (Anger from Iyer & Achia, 2020; Empathy from Lucas & Kteily, 2018)

Please indicate the extent to which you feel each emotion about the racial income and wealth gap in society.

1 = not at all; 2 = little; 3 = slightly; 4 = somewhat; 5 = moderately; 6 = very; 7 = extremely

Anger

1. angry
2. outraged
3. furious

Filler—Positive emotions

1. pleased
2. satisfied

Please indicate the extent to which you feel each emotion toward racial minorities.

Empathy

1. compassion
2. sympathy
3. empathy
4. resentment *(filler)*

Iyer, A., & Achia, T. (2020). Mobilized or marginalized? Understanding low-status groups' responses to social justice efforts led by high-status groups. *Journal of Personality and Social Psychology.* Advance online publication. https://doi.org/10.1037/pspi0000325

Lucas, B. J., & Kteily, N. S. (2018). (Anti-)egalitarianism differentially predicts empathy for members of advantaged versus disadvantaged groups. *Journal of Personality and Social Psychology*, *114*(5), 665–692. https://doi.org/10.1037/pspa0000112

Ally Behavior

Adapted from multiple sources (Abad-Merino et al., 2013; Estevan-Reina et al., 2020)

Please read the statements below carefully and choose the number that best describes your feelings and thoughts.

How willing would you be to support an increase of 5% in your taxes if that money were used to …

1 = not at all willing; 2 = little willing; 3 = slightly willing; 4 = somewhat willing; 5 = moderately willing; 6 = very willing; 7 = extremely willing

Support for autonomy- vs. dependency-oriented help

Autonomy-oriented help

1. … support universities to provide more opportunities for young Black students to visit?
2. … create a nationwide network for Black college students to secure academic help and support from peers?
3. … build a center that provides Black people with opportunities to develop job-related skills?
4. … develop a workplace program to raise Whites' awareness of subtle biases and teach them how to reduce those biases?

Dependency-oriented help

1. …develop a program that provides loans to help Black students to pay for the first year of college?
2. … implement a program that allows Black college students to complete a less challenging curriculum?
3. …provide subsidized housing for Black people who are seeking jobs?
4. …provide additional unemployment payments for Blacks who are in between jobs?

Support for different types of affirmative action policies (in order of strongly hierarchy-attenuating to weakly hierarchy-attenuating)

To what extent do you oppose or support each policy that could be implemented in U.S. organizations?

1 = Strongly oppose; 2 = Somewhat oppose; 3 = Slightly oppose; 4 = Neutral; 5 = Slightly favor; 6 = Somewhat favor; 7 = Strongly favor

1. Outreach policy (Organizations put in extra efforts to get members from minority groups to apply for jobs)
2. Supplemental training policy (Minority group members can receive supplemental training to prepare themselves for successful job applications)
3. Tie-breaker policy (A minority applicant is selected over a White applicant when the two applicants are equally qualified)

4. Minimum qualification policy (A minority group member can be hired over a White applicant so long as the minority group member meets minimal qualifications)

Support for general affirmative action policies

To what extent do you agree or disagree with the following statements?

1. Affirmative action programs are still needed today to address racial inequality.
2. Businesses should increase their efforts to promote racial diversity in the workplace.

Ho, G. C., & Unzueta, M. M. (2015). Antiegalitarians for affirmative action? When social dominance orientation is positively related to support for egalitarian social policies. *Journal of Applied Social Psychology*, *45*(8), 451–460. https://doi.org/10.1111/jasp.12311

Abad-Merino, S., Newheiser, A.-K., Dovidio, J. F., Tabernero, C., & González, I. (2013). The dynamics of intergroup helping: The case of subtle bias against Latinos. *Cultural Diversity and Ethnic Minority Psychology*, *19*(4), 445–452. https://doi.org/10.1037/ a0032658

Wellman, J. D., Liu, X., & Wilkins, C. L. (2016). Priming status-legitimizing beliefs: Examining the impact on perceived anti-White bias, zero-sum beliefs, and support for Affirmative Action among White people. British Journal of Social Psychology, 55(3), 426-437. https://doi.org/10.1111/bjso.12133

Attention check

What was the topic of the news story that you read in this survey?

1 = medical bias
2 = political divide in the U.S.
3 = anti-vaccination movement
4 = racial wealth gap

Demographic questions

Finally, we would like you to tell us a little information about yourself in this final portion of our survey. Please know that demographic information will be collected for statistical purposes only.

1. Please indicate your gender identity:
   - Woman
   - Man
   - Genderfluid

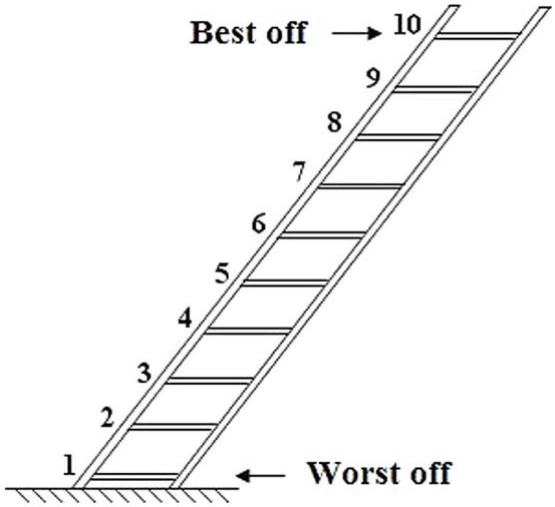
- Other ( )

2. How old are you?
   - ( ) years old

3. What is the highest level of education you have completed?
   - Elementary school
   - High school or equivalent
   - Vocational/technical school
   - Some college
   - Bachelor's degree
   - Master's or Doctoral degree
   - Professional degree (M.D., J.D., etc.)
   - Other ( )

4. Please indicate your race/ethnicity (you may select more than one option).
   - Latinx/Hispanic
   - Black/African American/African
   - Asian/Asian American
   - White/Caucasian
   - Native/Indigenous
   - Other ( )

5. Think of this ladder as representing where people stand in their communities.



People define community in different ways; please define it in whatever way is most meaningful to you. At the **top** of the ladder are the people who have the highest standing in their community. At the **bottom** are the people who have the lowest standing in their community.

Where would you place yourself on this ladder?

Please choose the number of the rung where you think you stand at this time in your life, relative to other people in your community.

- 1 - 10

6. We hear a lot of talk these days about liberals and conservatives. Here is a seven-point scale on which the political views that people might hold are arranged from extremely liberal to extremely conservative. Where would you place yourself on this scale?

1 = Extremely liberal; 2 = Liberal; 3 = Slightly liberal; 4 = Moderate (middle of the road); 5 = Slightly conservative; 6 = Conservative; 7 = Extremely conservative

Appendix C. Study 2: Self-Efficacy Scale – Factor Analysis

Descriptive statistics of individual item

	Item	Mean	SD
1.	I enjoy political participation because I want to have as much say in running government as possible.	4.63	1.76
2.	Sometimes politics and government seem so complicated that a person like me can't really understand what's going on. (*Reverse-coded*)	4.38	1.85
3.	I feel like I have a pretty good understanding of the important political issues which confront our society.	5.45	1.29
4.	People like me are generally well qualified to participate in the political activity and decision making in our country.	5.20	1.44
5.	It hardly makes any difference who I vote for because whoever gets elected does whatever he wants to do anyway. (*Reverse-coded*)	4.18	2.01
6.	There are plenty of ways for people like me to have a say in what our government does.	4.37	1.72
7.	So many other people are active in local issues and organizations that it doesn't matter much to me whether I participate or not. (*Reverse-coded*)	4.93	1.71
8.	Most public officials wouldn't listen to me no matter what I did. (*Reverse-coded*)	3.42	1.81
9.	A good many local elections aren't important enough to bother with. (*Reverse-coded*)	5.46	1.69

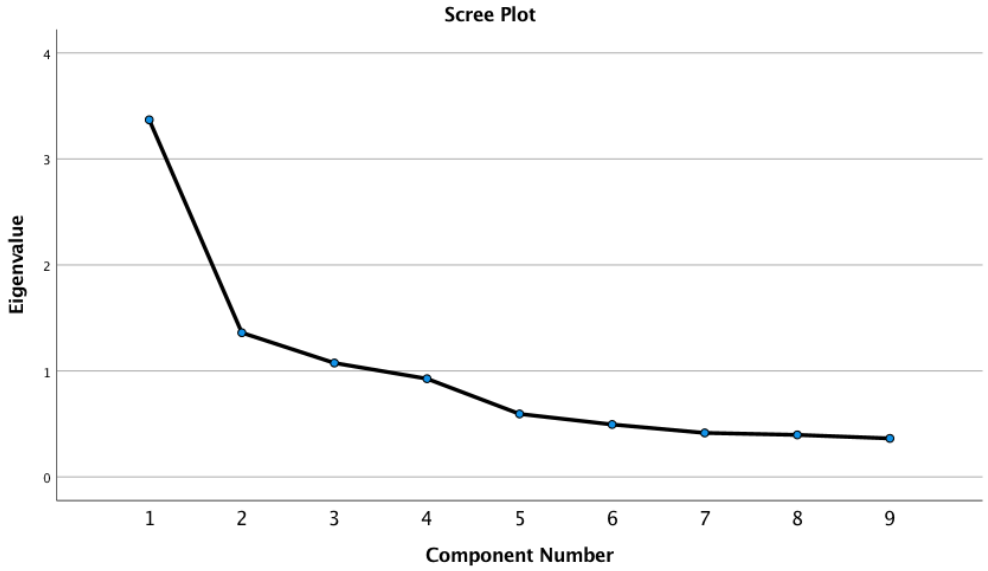
Note. $N = 328$

Principal Component Analysis with Varimax Rotation Results

Total Variance Explained

	Initial Eigenvalues			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.37	37	37	2.02	22	22
2	1.36	15	53	1.96	22	44
3	1.08	12	65	1.83	20	65
4	0.93	10	75			
5	0.56	7	81			

Note. Extraction method was Principal Component Analysis with Varimax rotation.



Rotated Component Matrix

	Factor 1	Factor 2	Factor 3
Efficacy_4	**0.87**	0.09	0.08
Efficacy_3	**0.83**	0.03	0.22
Efficacy_1	0.57	0.45	0.22
Efficacy_6	0.32	**0.81**	-0.10
Efficacy 8_R	-0.01	**0.71**	0.22
Efficacy 5_R	-0.01	0.69	0.38
Efficacy 7_R	0.13	0.17	**0.79**
Efficacy 9_R	0.09	0.30	**0.78**
Efficacy 2_R	0.36	-0.02	0.55

Note. Items 2,5,7,8,9 are reverse-coded. Item was color-coded when its loading is > |.40|. Item in bold indicates that it is cleanly loaded onto one factor.

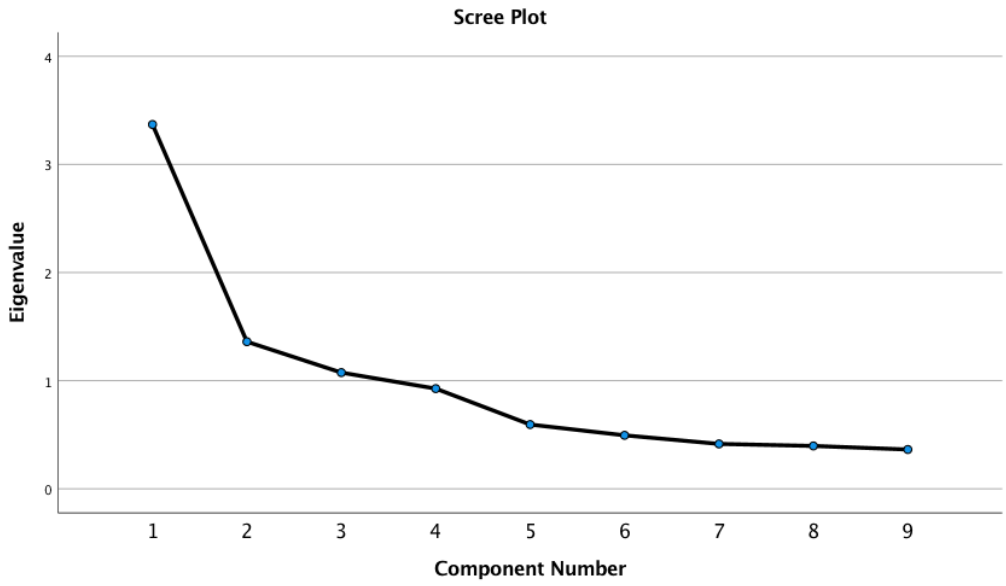
Principal Component Analysis with Direct Oblimin Rotation Results

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %

1	3.37	37	37	3.37	37	37
2	1.36	15	53	1.36	15	53
3	1.08	12	65	1.08	12	65
4	0.93	10	75			
5	0.60	7	81			

Note. Extraction method was Principal Component Analysis with Direct Oblimin rotation.



Pattern Matrix

	Factor 1	Factor 2	Factor 3
Efficacy_6	**0.84**	-0.27	-0.24
Efficacy 8_R	**0.71**	0.09	0.14
Efficacy 5_R	**0.66**	0.11	0.31
Efficacy_4	0.03	**-0.88**	-0.03
Efficacy_3	-0.06	**-0.83**	0.13
Efficacy_1	0.40	-0.52	0.11
Efficacy 7_R	0.05	-0.01	**0.80**
Efficacy 9_R	0.19	0.04	**0.77**
Efficacy 2_R	-0.13	-0.30	**0.55**

Note. Items 2,5,7,8,9 are reverse-coded. Item was color-coded when its loading is > |.40|. Item in bold indicates that it is cleanly loaded onto one factor.

Component Correlation Matrix

	Factor 1	Factor 2	Factor 3
Factor 1	1		
Factor 2	-0.19	1	
Factor 3	0.29	-0.26	1

Appendix D. Study 2: Policy Effectiveness Pilot – Full Measures and Descriptive Statistics

Below three questions were asked for each policy (A total of 12 policies were presented to participants).

- How effective is this policy in empowering Black students?
- How effective is this policy in increasing Black students' autonomy?
- How effective is this policy in tackling the fundamental cause of the racial wealth gap?

  (1 = Not at all effective, 2 = Little effective, 3 = Slightly effective, 4 = Somewhat effective, 5 = Moderately effective, 6 = Very effective, 7 = Extremely effective)

1. University visit
: To support universities to provide more opportunities for young Black students to visit.

2. Nationwide network
: To create a nationwide network for Black college students to secure academic help and support from peers.

3. Skill development
: To build a center that provides Black people with opportunities to develop job-related skills.

4. Whites' awareness
: To develop a workplace program to raise Whites' awareness of subtle biases and teach them how to reduce those biases.

5. Student loan
: To develop a program that provides loans to help Black students to pay for the first year of college.

6. Less challenging curriculum
: To implement a program that allows Black college students to complete a less challenging curriculum.

7. Subsidized housing
: To provide subsidized housing for Black people who are seeking jobs.

8. Unemployment pay
: To provide additional unemployment payments for Black people who are in between jobs.

9. Outreach policy
: Organizations put in extra efforts to get members from minority groups to apply for jobs.

10. Supplemental training
: Minority group members can receive supplemental training to prepare themselves for successful job applications.

11. Tie-breaker
: A minority applicant is selected over a White applicant when the two applicants are equally qualified.

12. Minimum qualification
: A minority group member can be hired over a White applicant so long as the minority group member meets minimal qualifications.

Scale Reliability and Descriptive Statistics

Variable	Reliability	Mean	SD	N
1. University visit	.94	4.32	1.60	119
2. Nationwide network	.91	4.57	1.52	119
3. Skill development	.94	4.71	1.70	119
4. Whites' awareness	.91	3.25	1.77	118
5. Student loan	.94	4.17	1.74	119
6. Less challenging curriculum	.96	2.10	1.60	118
7. Subsidized housing	.92	3.69	1.71	118
8. Unemployment pay	.90	2.84	1.72	119
9. Outreach policy	.91	4.13	1.61	119
10. Supplemental training	.93	4.45	1.64	118
11. Tie-breaker	.93	3.36	1.80	119
12. Minimum qualification	.94	3.04	1.74	119

Below table presents the statistics in order of perceived effectiveness

Variable	Reliability	Mean	SD	N
3. Skill development	**0.94**	**4.71**	**1.70**	**119**
2. Nationwide network	**0.91**	**4.57**	**1.52**	**119**
10. Supplemental training	**0.93**	**4.45**	**1.64**	**118**
1. University visit	0.94	4.32	1.60	119
5. Student loan	0.94	4.17	1.74	119
9. Outreach policy	0.91	4.13	1.61	119
7. Subsidized housing	0.92	3.69	1.71	118
11. Tie-breaker	0.93	3.36	1.80	119
4. Whites' awareness	0.91	3.25	1.77	118
12. Minimum qualification	**0.94**	**3.04**	**1.74**	**119**
8. Unemployment pay	**0.90**	**2.84**	**1.72**	**119**
6. Less challenging curriculum	**0.96**	**2.10**	**1.60**	**118**

Note. Top 3 and bottom 3 items in perceived effectiveness are marked in bold.

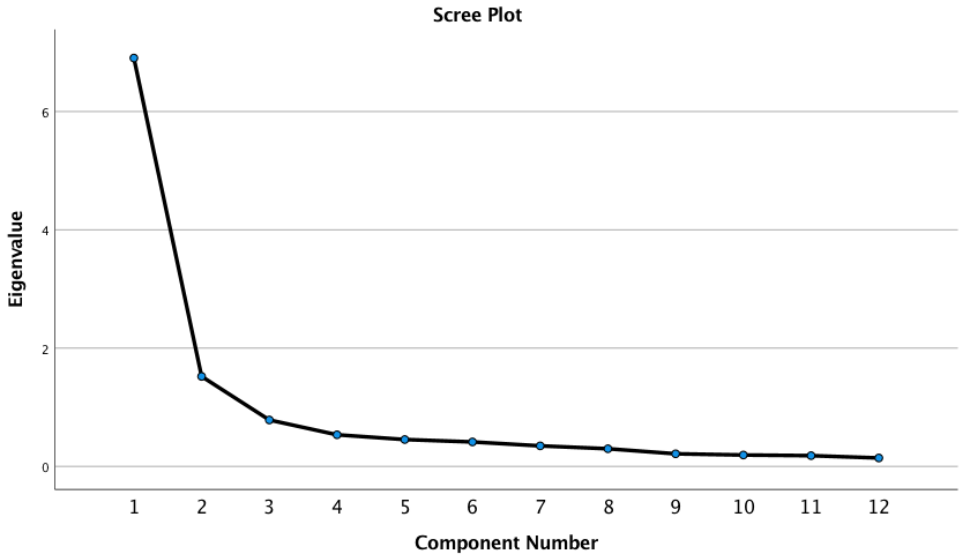
Appendix E. Study 2: Policy Effectiveness Pilot – Factor Analysis

Principal Component Analysis with Varimax Rotation Results

Total Variance Explained

	Initial Eigenvalues			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.91	58	58	4.66	39	39
2	1.52	13	70	3.77	31	70
3	0.79	7	77			
4	0.54	4	81			
5	0.46	4	85			

Note. Extraction method was Principal Component Analysis with Varimax rotation.



Rotated Component Matrix

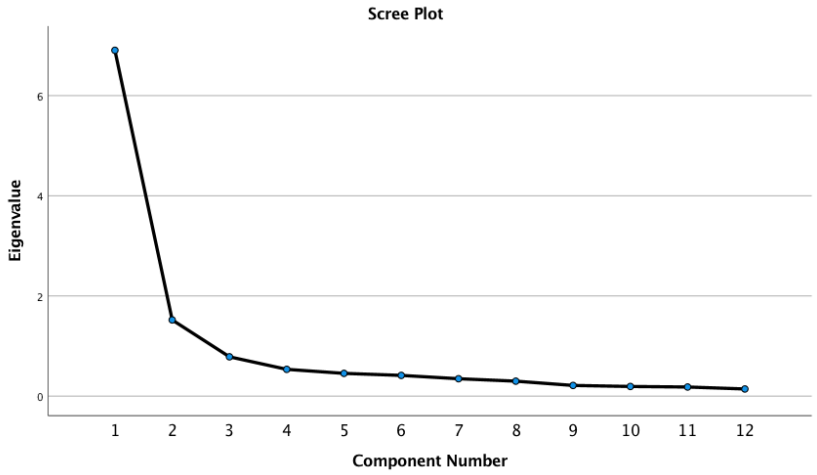
	Factor 1	Factor 2
3. Skill development	**0.82**	0.22
1. University visit	**0.82**	0.29
10. Supplemental training	**0.81**	0.20
2. Nationwide network	**0.80**	0.29
9. Outreach policy	**0.77**	0.23
5. Student loan	0.77	0.35
6. Less challenging curriculum	0.08	**0.85**
8. Unemployment pay	0.24	**0.82**
12. Minimum qualification	0.29	**0.81**
11. Tie-breaker	0.40	0.74
7. Subsidized housing	0.54	0.65
4. Whites' awareness	0.48	0.56

Note. Rotation converged in 3 iterations. Two factors correlated at .55. Item was color-coded when its loading is > |.4|. Item in bold indicates that it is cleanly loaded onto one factor.

Principal Component Analysis with Direct Oblimin Rotation Results

	Initial Eigenvalues		
Component	Total	% of Variance	Cumulative %
1	6.91	58	58
2	1.52	13	70
3	0.79	7	77
4	0.54	4	81
5	0.46	4	85

Note. Extraction method was Principal Component Analysis with Direct Oblimin rotation.



Pattern Matrix

	Factor 1	Factor 2
3. Skill development	**0.88**	-0.05
10. Supplemental training	**0.87**	-0.06
1. University visit	**0.85**	0.03
2. Nationwide network	**0.82**	0.05
9. Outreach policy	**0.81**	-0.01
5. Student loan	**0.77**	0.13
6. Less challenging curriculum	-0.19	**0.94**
8. Unemployment pay	0.00	**0.85**
12. Minimum qualification	0.07	**0.82**
11. Tie-breaker	0.21	**0.70**
7. Subsidized housing	0.40	0.56
4. Whites' awareness	0.37	0.47

Note. Rotation converged in 7 iterations. Two factors correlated at .55. Item was color-coded when its loading is > |.4|. Item in bold indicates that it is cleanly loaded onto one factor.

Appendix F. Study 3: Collective Efficacy Manipulation Pilot – Full Measures and Descriptive Statistics

Measures

1. Blacks' collective efficacy scale (4 items)

"To what extent do you agree or disagree with the following statements?"
Black people, working together as a group, can reduce the wealth gap.
Black people have potential to reduce the racial wealth gap.
Black people are best able to tackle the problem of racial wealth gap.
Black people are not capable of dealing with the problem of racial wealth gap. (R)

- 1 = Strongly disagree; 2 = Somewhat disagree; 3 = Slightly disagree; 4 = Neutral; 5 = Slightly agree; 6 = Somewhat agree; 7 = Strongly agree
- Cronbach's alpha .68

2. Whites' collective efficacy (4 items)

"To what extent do you agree or disagree with the following statements?"
White people, working together as a group, can reduce the wealth gap.
White people have potential to reduce the racial wealth gap.
White people are best able to tackle the problem of racial wealth gap.
White people are not capable of dealing with the problem of racial wealth gap. (R)

- 1 = Strongly disagree; 2 = Somewhat disagree; 3 = Slightly disagree; 4 = Neutral; 5 = Slightly agree; 6 = Somewhat agree; 7 = Strongly agree
- Cronbach's alpha .80

3. Perceived seriousness of the issue

"Do you personally think the racial wealth gap is a serious social issue?"

- 1 = Not at all serious; 2 = Little serious; 3 = Slightly serious; 4 = Somewhat serious; 5 = Moderately serious; 6 = Very serious; 7 = Extremely serious

4. Importance of the issue

"How important is it to you personally to reduce the racial wealth gap?"

- 1 = Not at all important to me; 2 = Little important to me; 3 = Slightly important to me; 4 = Somewhat important to me; 5 = Moderately important to me; 6 = Very important to me; 7 = Extremely important to me

5. Self-efficacy in reducing the racial wealth gap

"How confident do you feel about your ability to reduce the racial wealth gap?"

- 1 = Not at all confident; 2 = Little confident; 3 = Slightly confident; 4 = Somewhat confident; 5 = Moderately confident; 6 = Very confident; 7 = Extremely confident

Descriptive Statistics and Correlations

Variable	Mean	*SD*	*N*
Blacks' collective efficacy	5.12	1.04	107
Whites' collective efficacy	4.78	1.20	107
Seriousness of the issue	4.84	1.68	107
Importance of the issue	4.11	1.73	107
Self-efficacy	2.76	1.49	107

	Whites' collective efficacy	Seriousness of the issue	Importance of the issue	Self-efficacy
Blacks' collective efficacy	-.02	-.15	-.11	.11
Whites' collective efficacy	1	**.43****	**.37****	.16
Seriousness of the issue		1	**.73****	**.29***
Importance of the issue			1	**.41****

Note. $N = 107$. **$p < .001$, * $p < .01$

Appendix G. Study 3: Collective Efficacy Manipulation Pilot – Results

Multivariate Tests Without Control Variables in the Model

Estimated Marginal Means

Dependent Variable	Condition (Blacks' Collective Efficacy)	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Blacks' collective efficacy	Low	4.86	0.14	4.58	5.13
	High	5.38	0.14	5.11	5.66
Whites' collective efficacy	Low	4.83	0.17	4.50	5.15
	High	4.74	0.16	4.41	5.06
Seriousness of the issue	Low	5.08	0.23	4.62	5.53
	High	4.61	0.23	4.16	5.06
Importance of the issue	Low	4.38	0.24	3.91	4.85
	High	3.85	0.23	3.39	4.32
Self-efficacy	Low	2.83	0.21	2.42	3.24
	High	2.69	0.20	2.28	3.09

Note. Low Blacks Collective Efficacy condition, n = 53. High Blacks Collective Efficacy condition, n = 54.

Multivariate Tests

Dependent Variable	*F*	*p*	η_p^2
Blacks' collective efficacy	7.20	0.008	0.064
Whites' collective efficacy	0.15	0.702	0.001
Seriousness of the issue	2.06	0.155	0.019
Importance of the issue	2.51	0.116	0.023
Self-efficacy	0.25	0.617	0.002

Multivariate Tests with Participants' Age, Gender, Education, and Household Income Controlled

Estimated Marginal Means

Dependent Variable	Condition (Blacks' Collective Efficacy)	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Blacks' collective efficacy	Low	4.87	0.14	4.58	5.15
	High	5.36	0.14	5.08	5.65
Whites' collective efficacy	Low	4.79	0.16	4.48	5.11
	High	4.73	0.16	4.40	5.05
Seriousness of the issue	Low	5.09	0.23	4.63	5.54
	High	4.55	0.23	4.09	5.00
Importance of the issue	Low	4.37	0.24	3.91	4.84
	High	3.79	0.24	3.32	4.26
Self-efficacy	Low	2.83	0.21	2.42	3.25
	High	2.73	0.21	2.31	3.15

Note. Low Blacks Collective Efficacy condition, n = 53. High Blacks Collective Efficacy condition, n = 52. Covariates are evaluated at the following values: Age = 34.20, Gender = 1.60 (1 = Woman, 2 = Man), Education = 4.37, Household Income = 3.76.

Multivariate Tests

Dependent Variable	*F*	*p*	η_p^2
Blacks' collective efficacy	5.98	0.016	0.057
Whites' collective efficacy	0.09	0.763	0.001
Seriousness of the issue	2.73	0.102	0.027
Importance of the issue	2.99	0.087	0.029
Self-efficacy	0.13	0.722	0.001