

# The racial composition of students' friendship networks predicts perceptions of injustice and involvement in collective action

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## Abstract

Integrating previous findings on intergroup contact and collective action, the present research investigated how the race/ethnicity of close friendships formed during students' transition to college related to their perceptions of intergroup relations on campus and involvement in collective action. Results revealed that, overall, having a greater percentage of underrepresented minority (URM) friends was positively associated with perceived injustice and reported involvement in collective action. Conversely, having a greater percentage of White friends was negatively associated with perceived injustice and reported involvement in collective action. In subgroup analyses, similar patterns were observed among students who had *at least* one White or URM friend. Implications for the importance of creating intergroup friendships that inspire shared responsibility among marginalized and dominant group members to advocate for social justice are discussed.

## 1 | INTRODUCTION

What motivates a person to participate in collective action in the interest of others? From the Civil Rights Movement's fight for racial and economic justice, to the Stonewall uprising that demanded an equal place in society for members of the LGBTQ+ community, to the Women's March that advocated for human rights legislation, recent history is peppered with examples of how people from marginalized groups stood together in the face of injustice to effect change. People's social identities, and the discriminatory experiences thereof, were a potent catalyst for involvement in collective action. But as we look at historic photos taken on the days of these marches, listen to testimonials of protesters, and read stories about important friendships that contributed to such social movements,

it is clear that not *all* those who participate in collective action are members of the targeted groups such action seeks to correct.

Drawing together research from several social psychological perspectives on intergroup relations, the Social Identity Model of Collective Action (SIMCA, van Zomeren et al., 2008) identified critical factors that drive participation in collective action. Specifically, people who are members of a group facing individual and structural disadvantages (i.e., group identification) and those who are aware that such disadvantages exist relative to other groups (i.e., perceived injustice) are more likely to be involved in collective action.<sup>1</sup> And, indeed, marginalized group members (e.g., racial/ethnic minority individuals) are often at the heart of collective action, as seen in the aforementioned anecdotes and supported by empirical evidence.

Yet, marginalized group members cannot, and should not, be expected to combat discrimination alone. People from

This paper analyzes data from a larger dataset collected by the College Transition Collaborative focused on understanding college students' experiences through their transition to college. The research was made possible through methods and data systems created by the Project for Education Research That Scales (PERTS). We are grateful for the assistance of Juan Pablo Ospina.

<sup>1</sup> The model also describes the role that perceived efficacy, or one's expectations that their actions will effect change, plays in predicting collective action. However, the present research focuses on social identity and perceived injustice.

marginalized groups manage countless daily stressors as a result of individual discrimination and structural inequality. These identity-based stressors threaten psychological and physical health (Clark, Anderson, Clark, & Williams, 1999; Jones, Peddie, Gilrane, King, & Gray, 2016); undermine academic and workplace performance (Emerson & Murphy, 2014; Levy, Heissel, Richeson, & Adam, 2016); and consume precious cognitive resources (Crocker & Major, 1989; Murphy, Richeson, Shelton, Rheinschmidt, & Bergsieker, 2013). These experiences, combined with the need to manage emotional responses to avoid social and professional sanction, contribute to the experience of “racial battle fatigue” (Smith, Allen, & Danley, 2007) that leaves marginalized group members emotionally, physically, and psychologically spent. Allies—people who are not themselves members of the marginalized group (i.e., do not share the gender, race, or other socially stigmatized identity), but who nevertheless work to dismantle systems of oppression (Tatum, 1994)—are an integral component of advancing any social justice cause; if change is to occur, the participation of these people is imperative.<sup>2</sup>

In fact, people from dominant groups (e.g., racial/ethnic majority individuals) enjoy privileges that make them especially well-positioned as advocates for intergroup equality. First, because of structural inequity, dominant group members are more likely to hold positions of power—and more powerful positions—than those from marginalized groups. Moreover, whereas marginalized group members who bring forward discrimination claims are dismissed as oversensitive complainers (Kaiser & Miller, 2001), dominant group members face less backlash when they point out that their marginalized peers experience discrimination (e.g., Eliezer & Major, 2012). This and other studies demonstrate that dominant group members who speak up against bias are viewed more favorably and are more effective at achieving their aims (Rasinski & Czopp, 2010). These understandings lead us to examine the factors that predict participation in collective action among dominant group members—and these factors begin with understanding how dominant group members come to perceive injustice against marginalized group members.

## 2 | WHAT MAKES DOMINANT GROUP MEMBERS PARTICIPATE IN COLLECTIVE ACTION?

History includes many examples of dominant group members protesting and marching alongside their marginalized counterparts.

<sup>2</sup> Recent theorizing by Droogendyk and colleagues prescribes ideal ways for dominant group members to engage in collective action so as to support, and not stifle or overshadow, the collective action efforts of marginalized group members (Droogendyk, Wright, Lubensky, & Louis, 2016). Their suggestions include that dominant group members should unambiguously communicate their disdain for social inequity, be aware of their privileged status, and augment marginalized group members' efforts in an autonomy-supportive way. While a full discussion of the myriad ways in which dominant group members may participate in collective action is outside the scope of the present article, we acknowledge and agree that ally involvement in collective action that upholds these ideals is the standard toward which to strive.

For these individuals, membership in the marginalized group in question does not appear to be the prime motivator to engage in collective action. What, then, prompts allies' participation in these social movements? Drawing on the SIMCA model, one possibility is that *perceived injustice* plays a role in prompting dominant group members to participate in collective action on behalf of marginalized groups (van Zomeren et al., 2008). Intergroup friendships may be one factor that heightens awareness of inequality and increases perceptions of injustice among dominant group members. Specifically, friendships with marginalized group members may foster a greater understanding and awareness of perceived injustice among dominant group members, thus inspiring engagement in collective action to create a more equitable society.

Building on past research on the effects of intergroup contact on collective action (e.g., Wright & Lubensky, 2009), the present study explores how intergroup friendship shapes Whites' perceptions of injustice and their involvement in collective action. In particular, the study explores the relationship between the racial/ethnic composition of college students' friendship networks and their perceptions of injustice against marginalized students. It examines whether this relationship, in turn, is associated with more involvement in collective action.

The study focuses on college students because college campuses often serve as sites of activism around pertinent, contemporary political and social issues. Indeed, in recent years, a resurgence of activism on college campuses has led some to speculate about whether we are in a “golden age of student activism” (e.g., Smith, 2017). Because college campuses are prime settings for intergroup contact and social engagement at a formative moment in students' lives, it is imperative that we have a deeper understanding of who gets involved in these efforts, and the factors associated with this involvement.

### 2.1 | Do Dominant Group Members Perceive Injustice Against Marginalized Group Members?

Although research demonstrates that perceiving injustice is related to greater involvement in collective action (Crosby, 1976; Smith & Ortiz, 2002; van Zomeren & Iyer, 2009), extant research also points to disparities in the extent to which marginalized group members and dominant group members detect discrimination and group-based inequity (for a review, see Carter & Murphy, 2015). This means that, despite their potential efficacy in the fight for social equality, dominant group members often lack crucial understanding of the injustices that marginalized group members face. Because dominant group members are less knowledgeable about and are less attuned to the—often subtle—ways that bias manifests, they may be less likely than marginalized group members to perceive injustice against marginalized group members (Nelson, Adams, & Salter, 2013). Indeed, these intergroup differences in bias detection impact how dominant group members react to discrimination claims from marginalized group members as well as their attitudes toward policy initiatives to address bias

and discrimination (Schultz & Maddox, 2013; Son Hing, Bobocel, & Zanna, 2002). Thus, without the awareness that a problem exists, dominant group members may not participate in collective action efforts to change that problem.

Given that perceived injustice impacts collective action, but dominant group members perceive less injustice than marginalized group members, a crucial question is whether it is possible to increase dominant group members' perceived injustice, which might then bolster their collective action efforts. There exist a few promising avenues toward closing this gap in perceived injustice. For example, increasing dominant group members' awareness of the individual and structural discrimination that marginalized group members face may be an effective strategy. Recent research demonstrated that high-income White Americans are more likely than low-income White Americans and Black Americans from all income levels to overestimate progress made toward racial equality across many indices of social welfare (Kraus, Rucker, & Richeson, 2017). This overestimation was tempered, however, when White participants were asked to reflect on the impact that structural discrimination (i.e., discrimination ranging in domains from voting rights, to education and employment, to interactions with law enforcement) might have on current racial/ethnic group standings. These studies join others (e.g., Adams, Edkins, Lacka, Pickett, & Cheryan, 2008) that emphasize how increasing the salience of structural barriers to equality can shape Whites' perceptions of injustice.

Other research demonstrates that dominant group members' may perceive more injustice when their eyes are opened to the pervasive discrimination that marginalized group members experience. In a series of studies by Carter and Murphy (2017), White participants read short vignettes from different Black individuals about instances of subtle bias they had experienced. Although participants who read *one* such vignette derogated a subsequent discrimination claimant as a complainer, reading *multiple* vignettes reduced participants' complainer attributions. Moreover, exposure to multiple (versus one) discrimination vignettes caused participants to report that anti-Black bias was more prevalent in society. It is clear that sharing experiences across the color line can provide insight into the experiences of marginalized group members, and this awareness can benefit Whites' attitudes. While these studies leveraged the controlled nature of the laboratory to expose White students to the experiences of Black students, the question remains of how to achieve this exposure outside the lab. Past research suggests intergroup friendship may be a powerful conduit.

### 3 | INTERGROUP FRIENDSHIP SHAPES DOMINANT GROUP MEMBERS' ATTITUDES AND BEHAVIOR

Contact theory (Allport, 1954) hypothesized that intergroup contact would yield prejudice reduction if it: (1) supports intergroup

cooperation, (2) emphasizes equal status between groups in that context, (3) allows for personal interaction, and (4) is supported by local authorities or laws. Since then, research has revealed these criteria as ideal, but not required, for achieving the prejudice reduction benefits of intergroup contact. Summarizing several hundred studies, a meta-analysis (Pettigrew & Tropp, 2006) revealed that intergroup contact, defined as "actual face-to-face interaction between members of clearly defined groups" produced a robust prejudice reduction effect (p. 754). Moreover, taking the perspective of outgroup members—which may be afforded by intergroup contact—fosters greater involvement in collective action (Mallet, Huntsinger, Sinclair, & Swim, 2008). Thus, it is clear that intergroup contact can be an effective avenue for positively impacting not just dominant group members' intergroup attitudes but the behaviors they enact as well.

A more detailed look at the existing data reveals that intergroup *friendships*, not mere contact, provide the most robust opportunities for attitudinal and behavioral change. Indeed, in the aforementioned meta-analysis of intergroup contact studies (Pettigrew & Tropp, 2006), prejudice reduction was even more pronounced in studies that focused on intergroup friendship—that is, interactions that emphasized: (a) cooperation and shared goals, (b) that occurred during multiple equal-status interactions, and (c) that took place over an extended period of time. One set of studies examined the outgroup attitudes of White elementary, middle, and high school students from neighborhoods in the UK with a large Asian population. In addition to having positive effects on White students' implicit and explicit outgroup attitudes, intergroup friendships also predicted a greater likelihood of self-disclosure and reduced intergroup anxiety (Turner, Hewstone, & Voci, 2007). Research by Page-Gould and colleagues found that intergroup friendships were especially helpful for participants high in implicit prejudice, as making an intergroup friend lowered participants' reported intergroup anxiety and prompted even more intergroup interactions (Page-Gould, Mendoza-Denton, & Tropp, 2008). Clearly, the close relationships afforded by intergroup friendship can facilitate more positive, and less anxiety-riddled, engagement across group lines.

Taken together, the evidence suggests that intergroup friendships can facilitate open conversation that contributes to intergroup understanding, a crucial component to increasing dominant group members' perceptions of the injustices that marginalized group members contend with. This suggests, then, that intergroup friendship may similarly shape dominant group members' involvement in collective action. For example, one study found that dominant group members were more likely to participate in social change following intergroup contact that emphasized group differences, rather than similarities (Vezzali, Andrighetto, Capozza, Di Bernardo, & Saguy, 2017). Importantly, though, this was only the case when such interactions occurred over repeated (and positive) contact. That is, behavioral change occurred following interactions that allowed for intergroup relationships to develop over time. Thus, the available research supports the hypothesis that intergroup friendship positively impacts collective action, but this remains a burgeoning area of research.

One barrier to understanding whether intergroup friendship shapes dominant group members' perceived injustice and involvement in collective action is that actual contact between members of different racial/ethnic groups remains relatively low (Public Religion Research Institute, 2013). Even in our increasingly diverse society, racial/ethnic groups are largely segregated in where they live, go to school, and with whom they spend leisure time (e.g., Rothstein, 2013; Shedd, 2015). Pettigrew and Tropp (2006) caution researchers to consider this in investigations of intergroup contact, noting, "One cannot assume contact from the opportunity for contact, such as living in an intergroup neighborhood with no report of actual interaction" (p. 755). This caution rings especially true on college campuses, where a racially, culturally, and nationally diverse student body affords many *opportunities* for intergroup contact that often translate into very few actual interactions. For example, previous research on the friendship networks of incoming first-year college students revealed that, on average, White students had less than one friend (out of 10) from a different racial/ethnic group (Massey, Charles, Lundy, & Fischer, 2003; Tatum, 1997). Thus, even with diversity literally at their footsteps, most college students fall more into the "opportunity for contact" than in the "actual contact" category. This self-segregation underscores an important reality: to see the benefits of intergroup contact, people must actually interact. When people choose to engage in intergroup friendship, there may be countless positive impacts on perceived injustice and collective action, but researchers have yet to examine whether this is the case, and under what conditions these impacts may play out. This call to investigation brings us to the present research.

#### 4 | THE PRESENT RESEARCH

The present research explored how the racial/ethnic composition of college students' friendship networks related to their perceptions of injustice toward fellow students from marginalized backgrounds and their reported involvement in collective action to improve the inclusivity of their campus. In a brief survey at the end of their first year in college, students answered several questions about the race/ethnicity of their seven closest friends, as well as their perceptions of the state of intergroup relations on their campus, and their personal involvement in efforts to make campus a more inclusive place. The descriptive information provided about students' close friends allows an update to previous findings (i.e., Massey et al., 2003) on the racial/ethnic composition of college students' friendship networks. In addition, the study sought to replicate and extend previous research by exploring the role that close friendships between students from different racial/ethnic backgrounds may have in the relationship between perceived injustice and involvement in collective action.

To build on current knowledge about the relationship between intergroup friendship, perceived injustice, and collective action, the present research explored these questions among a sample of college students from eight predominantly White institutions

(PWIs) in the United States. Although the specific demographics of the institutions varied, the student body of *all* institutions was majority-White. As a result, the primary focus of the present research was to explore the relationship between the composition of White students' friendship networks and their intergroup attitudes. We hypothesized that White students with more URM close friends would perceive more injustice and would be more involved in collective action than White students with fewer URM friends.

In addition to this question, the present research explored these relationships among URM students. That is, how does intergroup friendship related to URM students' perceived injustice and involvement in collective action? Past research shows ironic consequences of intergroup contact for marginalized group members. In particular, intergroup contact seems to engender positive outgroup attitudes but may undermine involvement in collective action by decreasing perceived injustice and increasing expectations for intergroup harmony (e.g., Dovidio, Gaertner, & Saguy, 2009; Saguy & Chernyak-Hai, 2012; Saguy, Tausch, Dovidio, & Pratto, 2009; Tausch, Saguy, & Bryson, 2015). A notable exception to this ironic impact comes from a study demonstrating that friendship with White peers can decrease Black students' race-based rejection sensitivity (Mendoza-Denton & Page-Gould, 2008). Thus, it is important to investigate how URM students' friendship networks relate to their perceived injustice and collective action. We hypothesized that URM students with more White friends in their close friendship networks would perceive less injustice and would be less involved in collective action than URM students with fewer White friends. Ultimately, by simultaneously examining the relationship between the racial/ethnic composition of students' friendship networks and attitudes for dominant and marginalized groups, the present research contributes to our understanding of the processes that support, or undermine, collective action among different racial/ethnic group members.

#### 5 | METHOD

The data for the present research were from a larger project examining students' experiences in the transition to college. The primary purpose of the larger project was to test social-belonging interventions (Walton & Cohen, 2007, 2011; Yeager, Walton, Brady, et al., 2016) across many different campuses.<sup>3</sup> More information about the larger project and the interventions is available from the College Transition Collaborative (<https://tinyurl.com/ctc-belonging-ts>).

The present research focuses on the eight institutions from the larger project which included the relevant questions about perceived injustice and collective action. All eight institutions were predominantly White institutions in the United States. Table 1 describes

<sup>3</sup> Significant intervention treatment (vs. control) condition effects emerged on key variables of interest for this study; thus, all analyses reported in the main text of this article control for intervention condition. The intervention effects are reported in the Supplemental Material, as are additional analyses that examine moderation of the patterns reported here by treatment condition, results for the control participants only, and models that do not control for intervention condition.

**TABLE 1** Student racial/ethnic demographics of colleges in the study

|           | School type           | Location (All US) | Undergrad enrollment | White (%) | Black (%) | Asian (%) | Hispanic (%) | Native (%) | Multi-racial (%) | Other Race (%) | N in Sample |
|-----------|-----------------------|-------------------|----------------------|-----------|-----------|-----------|--------------|------------|------------------|----------------|-------------|
| College A | Private, Liberal Arts | Midwest           | 1,000–4,999          | 80        | 4         | 3         | 11           | <1         | 2                | <1             | 184         |
| College B | Private, Liberal Arts | Midwest           | <1000                | 72        | 7         | 1         | 10           | <1         | 2                | 2              | 109         |
| College C | Private, Liberal Arts | Midwest           | 1,000–4,999          | 70        | 6         | 4         | 2            | <1         | 7                | 5              | 168         |
| College D | Private, Liberal Arts | Midwest           | 1,000–4,999          | 74        | 5         | 4         | 3            | <1         | 8                | 1              | 198         |
| College E | Private, Liberal Arts | Midwest           | 1,000–4,999          | 63        | 10        | 6         | 5            | 1          | –                | 3              | 232         |
| College F | Private, Research     | Northeast         | 1,000–4,999          | 48        | 8         | 18        | 7            | 4          | 2                | 7              | 170         |
| College G | Private, Liberal Arts | West              | 1,000–4,999          | 71        | 3         | 9         | 10           | 2          | <1               | 2              | 219         |
| College H | Private, Research     | Northeast         | >5,000               | 62        | 10        | 20        | 10           | 2          | –                | –              | 302         |

key characteristics of the eight institutions, all of which were liberal arts colleges or selective research universities. The racial/ethnic demographics reported in the table are based on institutional data at each school from the year in which the study was conducted.

## 5.1 | Participants and Procedure

Before the beginning of their first year of college, students completed the intervention survey in which they reported their own race/ethnicity. (If a student did not answer this question, information about their race/ethnicity was based on institutional records from their school, where available.) At the end of their first year of college, students were invited to complete a survey about their attitudes and their experiences over the past year, including their friendship networks.<sup>4</sup> Students received modest compensation (e.g., \$5 Amazon.com gift card) for completing the 30-min survey.

The sample for the present research was defined as students (a) for whom race/ethnicity data were available, (b) who attended one of the eight institutions at which the perceived injustice and collective action questions were assessed, and (c) who answered the spring survey questions about the racial/ethnic composition of their friendship network (even if they had missing data for other measures of the spring survey). In total, 1583 students met these criteria. One student said that each of their seven friends belonged to all possible

racial/ethnic groups and was therefore excluded, yielding a final sample for analysis of 1582 of students.

Of the students in the final sample, 1021 were White (65%); 110 were Black, African American, or African (7%); 128 were Hispanic or Latinx (8%), 13 were Native American, American Indian, Native Hawaiian or Pacific Islander (1%); 225 were Asian American or Asian (14%); 26 were multiracial or multiethnic (2%); and 59 had a different racial/ethnic identity or did not provide their race/ethnicity (4%). Students who identified as Black, Latinx, or Native American were collapsed into a “URM” category. Overall, 59% of the students were women, 39% of the students were men, and 1% of the students identified in another way with respect to gender or did not provide their gender. Nineteen percent of the students were first-generation college students (i.e., no parent/guardian had earned a four-year college degree), 77% were continuing-generation college students (i.e., at least one parent/guardian had earned a four-year college degree), and 4% did not provide information relevant information about generation status.

## 5.2 | Measures

### 5.2.1 | Own race/ethnicity

In the intervention survey before their first year, students were presented with a list of 22 different racial/ethnic groups (e.g., Chicano/a, European American, Caribbean, Other) and were asked to select “one or more boxes” that best described their racial/ethnic identity. For students who indicated more than one

<sup>4</sup>The survey was designed to assess students' attitudes and experiences broadly and included questions about students' psychological well-being, social and academic engagement on campus, and physical health. The present study focuses only on the questions about friendship networks, perceived injustice, and collective action.

racial/ethnic identity, a subsequent question asked, "Please indicate the race/ethnicity with which you identify most strongly, if any." For students who responded to this question, the single racial/ethnic identity they indicated was used. For students who did not answer this portion of the intervention survey, institutional data on students' racial/ethnic backgrounds were used so that the greatest number of students could be retained in the sample. Responses were collapsed into larger monoracial categories (e.g., "Asian" or "Black") and one biracial or multiracial category ("Multiracial"). The "Native" category included all students who identified as Native American, American Indian, Native Hawaiian, or Pacific Islander.

### 5.2.2 | Racial/ethnic composition of students' friendship networks

In the survey at the end of their first year of college, students were asked to provide the initials of their closest friends at college, with spaces for the student to list up to seven friends ("We would like to know about your closest friends at [SCHOOL NAME]. We have provided space for up to 7 friends below but many students do not use all of these spaces. Please just list the close friends you have at [SCHOOL NAME]"). On average, students rated their closeness with the friends they listed at an average of 5.31 ( $SD = 1.05$ ) on a 7-point scale ranging from *not very close* (1) to *extremely close* (7). Of the total 8,602 friends who were listed, more than 90% were rated at or above the midpoint of the closeness scale.<sup>5</sup>

On a subsequent page of the survey, students identified each close friend's racial/ethnic background ("We are interested in the different kinds of friendship networks students have. For each friend, please indicate their...racial/ethnic background"). For each friend, students were directed to select all racial/ethnic identities that that applied from the following: *Asian or Asian American; Black, African, or African American; Hispanic or Latino; Native American or American Indian; White, Caucasian, or European American; Native Hawaiian or other Pacific Islander, or identifies in another way.*<sup>6</sup> As with students' own identities, we created a single URM variable that indexed if the friend was identified as Black, African, African American, Hispanic, Latino, Native American, American Indian, Native Hawaiian, or other Pacific Islander.

We created two continuous measures of the racial/ethnic composition of students' friendship networks by calculating the percentage

of White friends and the percentage of URM friends in each student's network. In calculating these percentages, we counted (in the numerator) only friends identified as monoracial. (overall 96.5% of all friends were identified as monoracial). In addition, we sought to explore how having at least one White friend or one URM friend in one's friendship network related to students' attitudes; thus, we created two dichotomous measures by identifying whether students had any friends that were White and whether students had any friends who were URM (for White friends: 0 = no White friends; 1 = 1 or more White friends; for URM friends: 0 = no URM friends, 1 = 1 or more URM friends).

### 5.2.3 | Perceived injustice

In the survey at the end of their first year of college, students answered one question about their perceptions of the injustices faced by marginalized group members at their school using a 7-point *not at all* (1) to *an extreme amount* (7) scale: "To what extent do minority-group students (e.g., racial, ethnic, sexual, religious minorities) experience bias, discrimination, or other unfair treatment at [SCHOOL NAME]?"

### 5.2.4 | Collective action

In the survey at the end of their first year of college, students answered one question about their reported involvement in collective action using a 7-point *not at all engaged* (1) to *extremely engaged* (7) scale: "Overall, how engaged have you been this year in activism or efforts to make [SCHOOL NAME] a more inclusive place?"

## 6 | RESULTS

### 6.1 | What is the composition of students' friendship networks?

To summarize the composition of students' friendship networks, the percentage of friends who were URM and the percentage of friends who were White were organized into several groups: 0, 14–25, 26–50, 51–75, 76–86, and 100%.<sup>7</sup> See Table 2 for descriptive statistics about the composition of students' networks. Overall, most students' friendship networks included more White friends than URM friends, which may reflect the predominantly White composition of the student populations at the institutions.

However, a closer examination revealed different patterns for friendship networks among White and URM students. On average, White students' friendship networks were rather homogeneous; indeed, the vast majority of White students (84%) reported that at least half of their close friends were also White and slightly more than a third (36%) reported that *all* of their close friends were White. While only 2% of White students said that *none* of their close friends were White, 60% of White students said that none of their close

<sup>5</sup> The present analyses do not include friendship closeness as a moderator. First, as demonstrated by the descriptive statistics, the average closeness of the friends students listed was quite high (5.31 on a 7-point scale). Moreover, the low amount of variance indicates that these data would not allow adequate exploration of the moderating effects of friendship closeness. Second, because all analyses on the relationship between friendship, perceived injustice, and collective action separate the percentage of White friends and the percentage of URM friends for each student, any analysis including overall friendship closeness as a moderator would not provide an accurate representation of the data. This concern would be further augmented because students do not have the same proportion of URM and White friends. Nevertheless, an important question for future research to consider is the likely strong role that friendship closeness plays on shaping intergroup attitudes and behavior.

<sup>6</sup> Students also reported information about these friends' gender identity, but for the present study, we focus only on the racial/ethnic composition of students' friendship networks.

<sup>7</sup> Because students could only list up to seven friends, percentages between 0% and 14% and between 86% and 100% were not possible.

**TABLE 2** Summary of students' friendship networks

|   | White (%) | URM: Black (%) | URM: Latinx (%) | URM: Native (%) | URM total (%) |
|---|-----------|----------------|-----------------|-----------------|---------------|
| <i>All students: Percentage of students overall for whom...</i> |           |                |                 |                 |               |
| N = 1582  |           |                |                 |                 |               |
| 0% of their friends are:  | 10        | 73             | 75              | 94              | 53            |
| 14–25% of their friends are:                                    | 7         | 18             | 16              | 5               | 25            |
| 26–50% of their friends are:                                    | 16        | 6              | 7               | 1               | 14            |
| 51–75% of their friends are:                                    | 23        | 1              | 1               | <0.5            | 5             |
| 76–86% of their friends are:                                    | 17        | <0.5           | <0.5            | <0.5            | 1             |
| 100% of their friends are:                                      | 27        | 1              | 1               | 0               | 2             |
| <i>White students: Percentage of White students for whom...</i> |           |                |                 |                 |               |
| N = 1021  |           |                |                 |                 |               |
| 0% of their friends are:  | 2         | 80             | 80              | 94              | 60            |
| 14–25% of their friends are:                                    | 2         | 16             | 16              | 5               | 26            |
| 26–50% of their friends are:                                    | 12        | 4              | 4               | 1               | 11            |
| 51–75% of their friends are:                                    | 25        | <0.5           | <0.5            | <0.5            | 1             |
| 76–86% of their friends are:                                    | 22        | 0              | 0               | 0               | <0.5          |
| 100% of their friends are:                                      | 36        | 0              | <0.5            | 0               | <0.5          |
| <i>URM students: Percentage of URM students for whom...</i>     |           |                |                 |                 |               |
| N = 251   |           |                |                 |                 |               |
| 0% of their friends are:  | 27        | 47             | 51              | 89              | 21            |
| 14–25% of their friends are:                                    | 18        | 22             | 19              | 10              | 16            |
| 26–50% of their friends are:                                    | 22        | 18             | 18              | <0.5            | 25            |
| 51–75% of their friends are:                                    | 20        | 8              | 8               | 0               | 20            |
| 76–86% of their friends are:                                    | 3         | 1              | 2               | <0.5            | 5             |
| 100% of their friends are:                                      | 11        | 5              | 3               | 0               | 12            |

friends were URM. In contrast, slightly more than a third of URM students (38%) reported that at least half of their friends were also URM, and only about a tenth (12%) reported that all of their friends were URM. Only slightly more URM students reported having no White friends (27%) than those who reported having no URM friends (21%). These results show that college students remain relatively siloed on these campuses based on race/ethnicity, particularly White students (who represent the numerical majority at these institutions) who maintain more racially homogeneous friendship networks than their URM counterparts.

## 6.2 | Is the composition of students' friendship networks associated with their attitudes and behavior?

### 6.2.1 | Analysis strategy

We used R (R Core Team, 2017) and the lme4 package (Bates, Maechler, Bolker, & Walker, 2014) to implement linear mixed-effects models in order to examine the relationships between the racial/ethnic composition of students' friendship networks, their perceived injustice, and their reported involvement in collective

action. Separate models explored friendship network composition as a continuous predictor (percentage of close friends who are White, percentage of close friends who are URM) and as a dichotomous predictor (presence of at least one close friend who is White, presence of at least one friend who is URM). We included intervention treatment as a fixed effect in each model (see Supplemental Material for models that do not control for treatment). We included a random intercept for school in each model to account for unique school variance; however, due to low numbers of URM students at each institution, we did not explicitly test for heterogeneity of effects based on school. To calculate  $p$ -values, we used the R package *lmerTest*, which uses a Satterthwaite approximation test to estimate the degrees of freedom (Kuznetsova, Brockhoff, & Christensen, 2014).

Primary analyses included the entire sample of participants, including White students, URM students, and those identified as Asian, Multiracial, and Other/Different. When specifically interested in the possible moderation of effects by students' race/ethnicity, we included only White and URM students and used dummy-coded variables for race (0 = not URM, 1 = URM). If a significant interaction between students' race/ethnicity and the variable of interest was observed, we then ran separate models including only URM students and only White students. Due to the exploratory nature of the present study, we also chose to probe marginal interactions where previous theorizing would suggest different patterns of results might emerge for White students and for URM students. In so doing, we contribute to the growing literature of the relationships between friendship and intergroup attitudes; at the same time, we interpret these results with caution due to their marginal nature, and note that future research is needed to understand their robustness.

### 6.2.2 | Perceived injustice

Overall, having a greater percentage of White friends was associated with perceiving *less* injustice experienced by people from marginalized groups on campus ( $b = 0.88$ ,  $SE = 0.12$ ,  $t(1533.1) = 7.11$ ,  $p < 0.001$ ). Conversely, having a greater percentage of URM friends was associated with perceiving *more* injustice ( $b = 1.20$ ,  $SE = 0.16$ ,  $t(1531.0) = 7.39$ ,  $p < 0.001$ ). No interactions with student race were observed for either variable ( $ps > 0.45$ ), indicating that these relationships were consistent regardless of whether the student was URM or White.

Consistent with the results from the continuous variable, having at least one White friend (versus none) was negatively associated with perceived injustice ( $b = 0.57$ ,  $SE = 0.13$ ,  $t(1531.5) = 4.46$ ,  $p < 0.001$ ). No interaction with student race emerged ( $p = 0.60$ ). In contrast, and again consistent with the continuous analysis, having at least one URM friend (versus none) was positively associated with perceived injustice ( $b = 0.40$ ,  $SE = 0.08$ ,  $t(1531.3) = 5.23$ ,  $p < 0.001$ ). However, this effect was qualified by a marginal Student Race  $\times$  Any URM Friend interaction ( $b = 0.47$ ,  $SE = 0.25$ ,  $t(1229.0) = 1.92$ ,  $p = 0.06$ ), which we followed up

separately for URM and White students. Among URM students, having at least one URM friend (versus none) was associated with perceiving more injustice toward marginalized students on campus ( $b = 0.68$ ,  $SE = 0.28$ ,  $t(238.1) = 2.43$ ,  $p = 0.02$ ). A similar effect, albeit smaller in magnitude, emerged among White students, such that having at least one URM friend (versus none) was associated with perceiving more injustice ( $b = 0.26$ ,  $SE = 0.09$ ,  $t(989.4) = 2.91$ ,  $p = 0.004$ ).

### 6.2.3 | Collective action

Mirroring the results for perceived injustice, students with a greater percentage of White friends reported less involvement in collective action to improve the inclusivity of the campus ( $b = 0.69$ ,  $SE = 0.13$ ,  $t(885.2) = 5.46$ ,  $p < 0.001$ ), while students with a greater percentage of URM friends reported more involvement in these collective action efforts ( $b = 0.96$ ,  $SE = 0.17$ ,  $t(1496.8) = 5.72$ ,  $p < 0.001$ ). No interactions with student race were observed for either variable ( $ps > 0.55$ ), indicating that these relationships were consistent regardless of whether the student was URM or White.

Again, the analyses using friendship network as a dichotomous predictor yielded similar results. Specifically, having at least one White friend (versus none) was associated with less reported involvement in collective action ( $b = 0.65$ ,  $SE = 0.13$ ,  $t(1498.5) = 4.89$ ,  $p < 0.001$ ). A marginal Student Race  $\times$  Any White Friend interaction emerged ( $b = 0.69$ ,  $SE = 0.41$ ,  $t(1236.0) = 1.69$ ,  $p = 0.09$ ), which we explored using separate models for URM and White students. Among URM students, having at least one White friend (versus none) was associated with less reported involvement in collective action ( $b = 0.65$ ,  $SE = 0.26$ ,  $t(240.0) = 2.53$ ,  $p = 0.01$ ). However, for White students, having at least one White friend (or not) was not associated with collective action ( $b = 0.12$ ,  $SE = 0.33$ ,  $t(993.4) = 0.37$ ,  $p = 0.71$ ). Conversely, having at least one URM friend was associated with more reported involvement in collective action ( $b = 0.39$ ,  $SE = 0.08$ ,  $t(1455.5) = 4.95$ ,  $p < 0.001$ ). No interaction with student race emerged ( $p = 0.82$ ), indicating that these findings were consistent regardless of whether the student was URM or White.

## 6.3 | Might intergroup friendship influence collective action through perceived injustice?

To examine whether the data were consistent with a model in which friendship networks influence collective action through perceived injustice, we conducted mediation analyses to explore a possible indirect effect of students' friendship networks on collective action through perceived injustice.<sup>8</sup> We tested for a significant indirect effect using 5,000 bootstrapped resamples (PROCESS Model 4; Hayes, 2013) and a 95% confidence interval (CI); mediation was indicated by a CI that did not include zero.

<sup>8</sup> As with the previous analyses, the reported results control for treatment condition. However, analyses that do not control for treatment maintain the same pattern of results and are reported in the Supplemental Material.



The first model tested for mediation using the percentage of URM friends as a predictor. As previously reported, students with a greater percentage of URM friends perceived more injustice. This, in turn, predicted more involvement in collective action (indirect effect = 0.42,  $SE = 0.07$ , 95% CI [0.29, 0.57]). The second model tested for mediation using the percentage of White friends as a predictor. As previously reported, students with a greater percentage of White friends perceived less injustice. This, in turn, predicted less involvement in collective action (indirect effect = 0.37,  $SE = 0.05$ , 95% CI [0.48, 0.27]). Both mediation models are consistent with the idea that students' involvement in collective action on campus is influenced, at least in part, by their perceptions of the injustice that marginalized students experience on campus, and the racial composition of students' friendship networks predict these perceptions of injustice.

## 7 | DISCUSSION

The present research examined relationships between the racial/ethnic composition of students' friendship networks, perceived injustice, and collective action among a sample of students at several colleges across the United States. The findings extend past research by demonstrating how the race of students' close friends is related to their perceived injustice. Specifically, for all students, having a greater percentage of White friends among one's close friends was associated with perceiving less injustice against students from marginalized communities, while having a greater percentage of URM friends was associated with perceiving more injustice. Furthermore, subgroup analyses revealed that intergroup friendship (i.e., having at least one URM friend) was a statistically significant predictor of perceived injustice for White students.

The race of close friends was also related to students' reported involvement in collective action. For all students, having a greater percentage of White friends predicted *less* involvement in collective action, and having a greater percentage of URM friends predicted *more* involvement in collective action. Furthermore, subgroup analyses among URM students revealed that intergroup friendship (i.e., having at least one White friend) was a statistically significant predictor of URM students' collective action.

Finally, the mediation models supported theorizing and past studies on the relationship between perceived injustice and collective action. The first model revealed that students who had a greater percentage of URM friends perceived *more* injustice, which, in turn, predicted *more* involvement in collective action. Results also revealed that students who had a greater percentage of White friends perceived *less* injustice, which, in turn, predicted *less* involvement in collective action. Taken together, the present research demonstrates the relationship between the racial/ethnic composition of one's friendship networks, perceived injustice, and their involvement in collective action.

### 7.1 | The Importance of Diverse Friendship Networks

This research builds on past work in several important ways. First, previous research demonstrates that positive intergroup contact decreases marginalized group members' involvement in collective action (e.g., Saguy et al., 2009). However, many studies that demonstrate this effect only examine the impact of intergroup contact on marginalized group members' collective action attitudes and behaviors, and few simultaneously investigate the effects of intergroup contact on dominant group members' attitudes and behaviors (c.f. Dixon, Durrheim, & Tredoux, 2007). By including students from marginalized and dominant groups in the present study, our work adds additional context to investigations of how intergroup friendship shapes engagement in collective action: for URM students, intergroup friendship was associated with *less* involvement in collective action; for White students, intergroup friendship was associated with *more* engagement in collection action. Although our measure of collective action focused on students' broad efforts to create an inclusive climate on their campus, future research should explore whether intergroup friendship carries the same "ironic consequences" for group-based collective action, like advocating for group-specific policies or rights (e.g., Saguy et al., 2009) as in previous research.

The current findings reveal important differences in how intergroup friendship relates to White and URM students' attitudes and behavior; however, it is noteworthy that the attitudes and behavior of students *overall* in this sample were related to the percentage of URM and the percentage of White friends in their network. That is, for all students, regardless of whether they were URM or White, having more URM friends was associated with more involvement in collective action and having more White friends was associated with less involvement in collective action. Thus, while White students' attitudes and behavior benefit from intergroup friendship, the data suggest that URM students' attitudes and behavior benefit from *intragroup* friendship with other URM students.

Psychologically, intragroup relationships among URM students likely operate quite differently from friendships between White and URM students. For URM students, friendships with other minority group members allow opportunities to share discrimination-related challenges and experiences without the need for justification, creating "stigma-based solidarity" (Craig & Richeson, 2016). Because of the shared perception of injustice, such solidarity can inspire collective action. This suggests diverse friendship networks are a foundational component of students' attitudes, and the diversity of these networks shapes the way that they perceive, and how they engage with, the world around them.

The present findings add additional nuance to our understanding of how friendships among members of different racial/ethnic groups can shape intergroup attitudes. One possibility is that these findings reflect the potential impact of intergroup

perspective-taking. For URM students, intergroup friendship may allow students to perceive more similarities between them and their White peers, which has been shown to undermine participation in collective action (Saguy & Chernyak-Hai, 2012; Wright & Lubensky, 2009).

Another, more hopeful, possibility is that intergroup friendships make White students feel more accountable for effecting change on their campus. As a result, their URM peers may feel more comfortable engaging in less collective action, knowing that allies are taking up some of the burden in the fight for justice. In this way, the decreased involvement in collective action among URM students, coupled with the increased involvement in collective action among Whites, may reflect a more balanced dynamic of social engagement across all students at the institution. All potential explanations merit further investigation to more deeply understand the processes by which intergroup friendships influence marginalized and dominant group members.

## 7.2 | How Do We Foster Close Intergroup Friendships?

Our findings also update previous research on the friendship networks of college students (i.e., Massey et al., 2003). In spite of the documented benefits of intergroup friendships, and perhaps reflecting the predominantly White composition of the student population of the participating institutions, the data show that students remain rather segregated on campus. This is especially true for White students, most of whom have majority-White friendship networks. Thus, fostering intergroup engagement, even on college campuses that are more racially diverse, requires intentional effort by students and structural supports from administrators. To be successful, we suggest that these opportunities simultaneously (a) signal to students from marginalized groups that their peers recognize the unique challenges associated with being underrepresented at PWI, and (b) encourage students from dominant groups to actively participate in efforts to create a more inclusive and equitable environment (Brannon, Carter, Murdock-Perriera, & Higginbotham, 2018).

Although promising, the implications of these findings are not easily addressed by simply increasing intergroup contact. Simply placing White and URM students in contact with one another is certainly not enough. Some kinds of intergroup friendship are more likely than others to lead to collective action. For instance, as past research demonstrates, the messages conveyed by dominant group members during intergroup contact can be consequential for marginalized group members' collective action (Becker, Wright, Lubensky, & Zhou, 2013; Droogendyk, Wright, Lubensky, & Louis, 2016). Thus, while friendships that foster authentic conversation may allow White students to learn about injustice in meaningful ways (Droogendyk et al., 2016), in order for these friendships to be similarly beneficial for URM students, their White friends must clearly note disdain for, and speak out against, inequity and injustice (Becker et al., 2013). Additionally, the closeness of the friendships likely matters. In the

present study, students were only asked about their close friends, and in general, the closeness was high. However, previous research demonstrates that repeated positive intergroup contact that focuses on group differences catalyzes dominant group members' motivation for social change (Vezzali et al., 2017). Taken together, this research suggests that closer friendships likely afford more benefits than ones that are more superficial. Thus, we should encourage opportunities for URM and White students to engage in deeper, more authentic ways that heighten perceived injustice and therefore promote involvement in collective engagement among all students.

## 7.3 | Limitations and Future Directions

A major strength of the present study is that we investigate the relationships between intergroup contact, perceived injustice, and collective action by examining the role of college students' actual friendship networks. That is, these were friendships that developed organically over the course of students' first year in college. However, these features also limit our ability to make causal statements about the relationships between these variables. For example, there might be something fundamentally different about the students who have more URM (or White) friends in their friendship networks that also accounts for the corresponding attitudes toward collective action. Nevertheless, our correlational findings align with previous experimental work on this topic, which bolsters confidence that the present research replicates and extends past work in a meaningful way. Further, our findings suggest that an especially fruitful direction for future research would be to examine the friendship networks, perceived injustice, and collective action of students who participate in intervention studies that foster the formation of cross-group friendships (e.g., Mallet & Wilson, 2010; Page-Gould et al., 2008; Shook & Clay, 2012).

Future research should also include a deeper analysis of local contextual features that influence students' collective action. Participants in this study were students from several PWIs across the country. However, due to the underrepresentation of racial/ethnic minority students on these campuses, we could not disaggregate the different groups that comprised the "URM" category. In addition, because of the sample size at each institution, we lacked the statistical power to warrant a full hierarchical model that investigated heterogeneity between schools. Although each institution is predominantly White, specific initiatives related to diversity, inclusion, and social justice vary across institutions. Furthermore, the particular manifestations of intergroup tension differ on each campus. These factors would undoubtedly have an effect on students' perceived injustice and collective action. Future studies should investigate these questions across a wider variety of schools and among a larger sample of students, particularly of marginalized group members who, while numerically underrepresented, have experiences at PWIs that are imperative for us to understand.

A final limitation is our use of a single-item collective action measure. Our measure asked students about their involvement in collective action to create a more “inclusive campus,” and a version of this question that focused specifically on race or ethnicity may have yielded stronger results as students may vary in their ideas of what constitutes activism toward an inclusive campus. However, it is promising that the present findings replicate and extend previous research that has used different versions of this question to assess collective action. Moreover, the measure assessing students’ perceived injustice asked about inequalities experienced by many marginalized groups, including racial/ethnic, sexual, and religious minorities. Thus, the broader version of the collective action item matched the level of inquiry for the perceived injustice item. Overall, this measure adds to the many ways others have assessed collective action and involvement in efforts to support marginalized group members (e.g., Perry, Murphy, & Dovidio, 2015; Tausch, Saguy, & Bryson, 2015). Further research could focus this question on race or ethnicity-related collective action efforts to examine whether similar relationships between intergroup friendships, perceived injustice, and race-based collective action emerge.

## 7.4 | Conclusion

This research highlights how perceived injustice may operate as a key mechanism in the relationship between intergroup friendship and collective action, especially on the part of dominant group members. Moreover, by investigating the close friendships of students at predominantly-White institutions, we are able to gain a better understanding of the impact that intergroup engagement can have for students’ understanding of injustice and inequity on their campuses, and how this impacts their involvement in efforts to improve intergroup relations. This research underscores the importance not only of intergroup contact, but of meaningful *intergroup friendship*, the benefits of which go beyond prejudice reduction and extend to generating intergroup knowledge and understanding that helps to create more socially engaged members of our society.

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## SUPPORTING INFORMATION

Additional Supporting Information may be found online in the supporting information tab for this article.

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