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FRIENDSHIP AND SOCIAL INTERACTION WITH OUTGROUP MEMBERS

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A large body of research in intergroup relations has found that contact—or social interaction—between people from different social groups reduces prejudice toward those groups (e.g., Allport, 1954; Pettigrew & Tropp, 2006). Meanwhile, other research has established anxiety and threat as the basic response to intergroup interaction (Dovidio, Kawakami, & Gaertner, 2002; Mendes, Blascovich, Lickel, & Hunter, 2002; Stephan & Stephan, 1985). This propensity to experience anxiety while interacting with outgroup members—termed *intergroup anxiety*—feeds prejudice (Paolini, Hewstone, Voci, Harwood, & Cairns, 2006; Pettigrew & Tropp, 2008) and avoidance of contact experiences (Paolini, Hewstone, Cairns, & Voci, 2004; Plant & Devine, 2003). Therefore, in order for contact to improve intergroup attitudes, the anxiety experienced during intergroup interactions must be overcome.

Prejudice is associated with anxiety during intergroup interactions and avoidance of outgroup members (Dovidio et al., 2002; Stephan & Stephan, 1985). An ironic aspect of prejudice in modern society is that some individuals hold two conflicting attitudes: They explicitly value egalitarianism while having implicit intergroup attitudes that are nonegalitarian. This discrepancy between intergroup values and attitudes is termed *aversive racism* (Dovidio & Gaertner, 2004; Gaertner & Dovidio, 1986). Gaertner and

Dovidio (this volume) describe and extend this classic theory, emphasizing how relatively strong ingroup favoritism may characterize aversive racism. They suggest that because aversive racists are focused on not appearing prejudiced, discriminatory behavior in aversive racists may be expressed mostly as ingroup favoritism. This new perspective may help explain why many people still exhibit racial homophily (see Tropp & Mallett, this volume) when choosing the people that they interact with and befriend. Heightened concerns about appearing prejudiced may lead individuals to avoid intergroup interactions (Butz & Plant, this volume), and a heightened degree of ingroup favoritism may lead aversive racists to lean toward potential friends and romantic partners of their own race.

Aversive racists may avoid social interactions with outgroup members because these interactions hold the potential for them to behave in a manner that may be dissonant with their egalitarian values (Dovidio et al., 2002). Although the ultimate desire of aversive racists is to be nonprejudiced, intergroup contact cannot help aversive racists if they avoid that contact altogether. However, desire for intergroup interaction increases if an outgroup member is seen as similar to the self (Mallett, Wagner, & Harrison, this volume). As such, it seems likely that associating outgroup members with the self is a promising pathway toward positive intergroup relations, in a way that does not conflict with aversive racists' tendency towards ingroup favoritism.

In this chapter, we review experimental work suggesting that if people can form close relationships across group boundaries, their experiences with and attitudes toward outgroup members will generally improve. We focus specifically on the role of close cross-group friendships in improving contact experiences among prejudiced individuals and on how these relationships can be facilitated among biased individuals who would otherwise avoid them. Complementing the ideas of Mallett et al. (this volume), we then describe research suggesting that cross-group friendship affects intergroup interactions because cross-group closeness leads to a process whereby the group membership of another person becomes a part of one's own self-concept. Finally, we discuss the role of cross-group friendship in facilitating a sense of belonging in institutions that have traditionally restricted access to members of devalued or low-status groups.

EFFECTS OF CROSS-GROUP FRIENDSHIP ON INTERGROUP ATTITUDES AND EXPERIENCES

Ample survey research has associated cross-group friendship with less intergroup anxiety and prejudice (e.g., Levin, van Laar, & Sidanius, 2003; Paolini et al., 2004; Pettigrew & Tropp, 2000, 2006 [footnote 4]). However,

the direction of causality has been difficult to determine, because while cross-group friendship may reduce intergroup anxiety and prejudice, it is just as likely that people who are already comfortable interacting with outgroup members are more likely to form friendships with them (Binder et al., 2009). For this reason, multiple independent labs have recently employed experimental methods to determine whether cross-group friendship has causal effects on intergroup attitudes and experiences (Akinola & Mendes, 2008; Davies, Aron, Wright, & McLaughlin-Volpe, 2007; Mendoza-Denton & Page-Gould, 2008; Page-Gould, Mendoza-Denton, Alegre, & Siy, 2010; Page-Gould, Mendoza-Denton, & Tropp, 2008; Paolini, 2005; Wright, Aron, & Tropp, 2002). Wright and colleagues (Wright & van der Zande, 1999; Wright et al., 2002) reported data showing that making a new cross-ethnic friend in the lab improved a breadth of intergroup outcomes for White students: They reported less intergroup anxiety and racial bias and advocated allocating more resources to ethnic minority student organizations.

Moreover, it appears that cross-group friendship is most beneficial for the prejudiced individuals who, as we pointed out, are most likely to avoid such friendships (Akinola & Mendes, 2008; Page-Gould et al., 2008). Over the course of 5 weeks, Page-Gould and colleagues (2008) created friendships between same-group and cross-group pairs in the laboratory using an expanded version of the fast-friends procedure (Aron, Melinat, Aron, Vallone, & Bator, 1997). This procedure guides the study participants through a series of questions designed to increase self-disclosure, with the effect that the participants subsequently feel closer to each other. We expected that participants who were highly prejudiced would experience the greatest benefits from cross-group friendship. We measured changes in cortisol—a hormone released by the adrenal gland in response to environmental stressors—over the course of the study. We found that participants who were high in implicit prejudice at the outset of the study exhibited increases in cortisol during the first cross-group friendship meeting, suggesting that they were physiologically threatened by the friendly interaction with an outgroup member. By comparison, implicitly prejudiced participants who were paired with a same-group friendship partner and all low-prejudice participants exhibited decreases in cortisol during the first friendship meeting. However, by the second friendship meeting, the hormonal stress responses of implicitly prejudiced participants in the cross-group condition had attenuated, such that their cortisol responses were no longer distinguishable from those of low-prejudice participants. This trend was carried through the final friendship meeting. These findings suggest that intergroup-related stress can be abated early in the development of cross-group friendship, and they add balance to a literature stressing the difficulty and anxiety associated with initial cross-group interactions.

Following the final friendship meeting, we followed participants' daily social interactions for 10 days to examine how frequently they sought out social interactions with outgroup members. After making a new cross-group friend, participants who were high in implicit prejudice self-initiated more daily social interactions with ethnic outgroup members. Moreover, all participants reported less anxiety in the diverse environment if they had made a cross-group friend in the lab. Thus, in addition to the effects at the level of the dyad (the study participants themselves), we observed effects that may translate more broadly to decreased intergroup avoidance and anxiety.

Emerging work suggests that the development of a new cross-group friend shifts implicit prejudice among initially prejudiced individuals. Akinola and Mendes (2008) similarly induced friendship between same-race and cross-race pairs of Black and White participants in the laboratory using a multi-session version of the fast-friends procedure. After each friendship meeting, participants completed a measure of implicit prejudice as measured by the Implicit Associations Test (Greenwald, McGhee, & Schwartz, 1998)—the degree to which one associates particular ethnic groups with the concepts of "good" and "bad." They observed progressive decreases in implicit prejudice after each laboratory friendship meeting, suggesting that becoming close with an outgroup member decreases the strength of negative associations with the new friend's social group. This is an important finding given that implicit associations are responses that cannot be consciously controlled (Greenwald et al., 1998), yet are indeed malleable (Dasgupta & Greenwald, 2001).

Taken together, this work demonstrates the power of cross-group friendship for improving intergroup relations. A nice feature of this research is that it has been conducted among both majority and minority groups, allowing us to view cross-group friendship as being beneficial for the intergroup attitudes and expectations of minority- and majority-group members alike. People who formed cross-group friends in the laboratory showed improvements in their experiences with and attitudes toward outgroup members. These effects were specific to people who were prejudiced prior to the formation of a new cross-group friendship—in other words, people who are most likely to avoid and be anxious during intergroup interactions.

ASSOCIATING OUTGROUPS WITH THE SELF

Given the findings noted thus far, an important secondary question emerges: *How* do cross-group friendships improve intergroup relations? As friendship is fundamentally a form of interpersonal closeness, it is possible that intergroup benefits of cross-group friendship emerge from basic processes of interpersonal closeness. Drawing on self-expansion theory described in

more detail elsewhere (see Davies, Wright, & Aron, this volume), we tested the possibility that people with close cross-group friends have better intergroup interactions because they grow to include qualities and characteristics of friends from outgroups into their own self-concepts (Aron, Aron, Tudor, & Nelson, 1991; Aron & McLaughlin-Volpe, 2001). This association of the self with the characteristics of close others has been referred to as "inclusion of other in the self" (Aron & Aron, 1996) and "self-other overlap" (Kenworthy, Turner, Hewstone, & Voci, 2005), with the terms reflecting a contextual association between a close other and the self. In the context of a close cross-group relationship, the group membership of each friend is a collective characteristic that is not shared between them. Self-expansion theorists argue that outgroups may also be associated with the self to the extent that one feels close to outgroup members (Aron & McLaughlin-Volpe, 2001; Aron et al., 2004; Wright et al., 2002; 2005). This idea has received initial empirical support through work demonstrating that the effects of cross-group friendship are mediated through self-reports of including a cross-group friend in the self (Turner, Hewstone, Voci, & Vonofakou, 2008).

We extended this work in two main ways: (a) We examined how deeply the association between outgroups and the self is encoded among people with cross-group friends and (b) we experimentally tested whether cross-group friendship causes a heightened association between the self and outgroups. We did so by measuring the speed with which participants could classify a cross-ethnic friend's ethnicity as non-self-descriptive as a function of how close they felt to that friend (Page-Gould et al., 2010). Consistent with the logic of the self-expansion model, we reasoned that a longer reaction time to categorize the outgroup as nondescriptive of the self would imply a stronger association between that outgroup and the self. In other words, if I am a member of Group A and am asked if I am a member of Group B, the answer is, of course, "No." Nevertheless, to the degree that a member of Group A associates the self with Group B, we expected this association to interfere with, and thus slow, that person's classification of Group B as non-self-descriptive.

Participants first completed a social network questionnaire that allowed us to determine whether they had any outgroup members in their social network and how close they felt to them. Later in the study, participants completed a reaction-time task in which they were presented with a personality trait in the middle of a computer screen and were asked to categorize each trait as descriptive, by pressing a button labeled *Me*, or nondescriptive, by pressing a button labeled *Not Me*. Labels of ethnic groups (e.g., Asian, Black, White) were randomly interspersed with the personality trait stimuli. Each trial consisted of a single stimulus trait or ethnic group, and each stimulus was presented randomly three times across all the trials. As hypothesized, we found a strong positive correlation between closeness with cross-group friends and the time

it took participants to categorize a friend's ethnic group as non-self-descriptive. This finding implies that the closer participants felt to their cross-group friends, the more they identified with the ethnicities of their friends.

Consistent with past theorizing (Aron & McLaughlin-Volpe, 2001; Wright et al., 2002), these data suggest that cross-group friendship involves an inclusion of an outgroup in the self-concept. Given that ingroup identification involves including the ingroup in the self-concept (Tropp & Wright, 2001; Wright et al., 2002), these data suggest that close cross-group friendship involves identification with an outgroup. When these findings are considered together with the work described in earlier chapters, there is mounting evidence that associating an outgroup with the self may lead to improved expectations for upcoming intergroup interactions (Gaertner & Dovidio; Mallett et al., this volume).

We hypothesized, then, that cross-group friendship should facilitate positive intergroup interactions through an increased sense of similarity between oneself and novel outgroup members—a potentially powerful pathway to positive intergroup relations. We further reasoned that if cross-group friendship causes an association between the self and an outgroup member to develop, then this association should be facilitated or inhibited to the degree that a cross-group friend is accessible in working memory. To test this idea, we used a novel experimental paradigm that manipulates the cognitive accessibility of a cross-group friend.

ACCESSIBILITY OF CROSS-GROUP FRIENDSHIP

In this section, we describe data suggesting that cross-group friendship facilitates smooth intergroup interactions through the mechanism of associating outgroups with the self. However, we wanted to address two additional questions that remained unanswered. First, is the mere presence of an outgroup member within one's social network sufficient for improving contact experiences with novel outgroup members? There is some reason to doubt that cross-group friendships always improve contact experiences (Damico, Bell-Nathaniel, & Green, 1981), particularly when someone has only a few cross-group friends with whom they are not very close. Second, does cross-group friendship improve social interactions with outgroup members whom the perceiver has never met before? For cross-group friendship to play a role in the development of inclusive, diverse communities, positive intergroup attitudes about one's cross-group friend must generalize to outgroup strangers from the larger community. There is some initial support for the idea that positive feelings about a cross-group friend generalizes from a single outgroup member to outgroup members on the whole (Levin et al., 2003; Page-Gould

et al., 2008; Paolini et al., 2004; Pettigrew & Tropp, 2006; Wright et al., 2002), and we sought to test this idea directly.

Page-Gould and colleagues (2010) suggested that the benefits of cross-group friendship are present to the extent that a cross-group friend is readily brought to mind when engaging in an interaction with a novel member of a cross-group friend's social group. Social-cognitive research on interpersonal relationships has demonstrated that concepts of close others are activated when a new person is similar to a close other in some way (Andersen & Berk, 1998). Research on the transference of a significant other's characteristics to new individuals indicates that even subtle similarities between a new person and a significant other can trigger increases in significant-other salience (Chen, Anderson, & Hinkley, 1999). With a characteristic encoded as deeply as race (Cosmides, Tooby, & Kurzban, 2003), it is likely that new individuals of the same race as a cross-race friend activate the concept of that friend. It is thus possible that the accessibility of a cross-group friend may be a more proximal predictor of positive intergroup interactions than whether or not one has an outgroup member in one's social network.

Across two studies, we manipulated the accessibility of a close cross-group or same-group friend and observed improvements in intergroup interactions. For these studies, we focused on individuals who already had a very close cross-group friend (specifically, a person of another ethnicity whom the participants rated as a 6 or a 7 on a 7-point Likert scale of closeness). Participants who had at least one very close same-group and cross-group friend along this criterion were invited to the lab, and the names of their same-group and cross-group friends were stored for use as idiographic stimuli. To manipulate the accessibility of a cross-group friendship, participants were randomly assigned to describe either their same-group or cross-group friend in detail, identified only by the friend's name.

In the first study, we were interested in whether participants who had just described their cross-ethnic friend in detail would have better expectations for interactions with novel outgroup members. Expectations for intergroup interaction may play a key role in intergroup anxiety and avoidance, as people tend to predict intergroup interactions will be less enjoyable than these interactions actually are (Mallett, Wilson, & Gilbert, 2008; Park, 2009). After describing either a close cross-group or same-group friend in detail, participants took the reaction-time task that measured associations between the self and ethnic outgroups described earlier, and then imagined themselves in a vignette that depicted a social interaction with an outgroup member that they had just met. After imagining themselves in the story and writing briefly what they would say to the interaction partner, they rated how much they would enjoy the social interaction. Consistent with our hypotheses, participants who had just described a cross-group friend in detail reported that they would enjoy the

interaction more than participants who had just described a close same-group friend. In addition, participants who had just described a close cross-group friend took longer to classify that friend's ethnic group as non-self-descriptive compared with the participants who had described a same-group friend in detail. Moreover, associations of the self with a close friend's group partially explained the relationship between describing a close cross-group friend in detail and better expectations for a social interaction with an unfamiliar outgroup member. Again, consistent with Mallett et al. (this volume), a sense of similarity with an outgroup member increased desire for intergroup interaction. Our study builds on this work by demonstrating that the accessibility of a cross-group friend enhances the perceived association between oneself and an outgroup, and in turn this improves expectations for intergroup interactions.

As a next step, we tested whether these effects would apply to a real interaction with an unfamiliar outgroup member. As with the first study, only individuals who had both a very close cross-group friend and same-group friend were recruited. Participants were scheduled for lab sessions in cross-ethnic stranger pairs, but they did not know that they would be interacting with another participant until halfway through the lab session. The participants were randomly assigned to describe their same-group or cross-group friend in detail when they arrived at the lab, and then they completed the reaction-time task measuring associations between ethnic outgroups and the self. Next, participants were introduced to each other, and—after confirming that they were indeed strangers—were left together for a 20-min, unstructured social interaction. They were only told that their goal was to "get to know each other" during the interaction.

At the beginning and end of the social interaction, we collected saliva samples so that we could assess hormonal responses to the novel intergroup interaction. We hypothesized that participants who had just described a cross-group friend prior to the social interaction with an unfamiliar outgroup member would evidence more adaptive hormonal responses to the social interaction than participants who had just described a same-group friend. From the saliva samples, we measured two hormones, cortisol and dehydroepiandrosterone-sulphate (DHEA-S), to gain a measure of anabolic balance (the ratio of DHEA-S to cortisol). Anabolic balance is so named because DHEA-S is an anabolic hormone that builds muscle tissue and facilitates growth, whereas cortisol is a catabolic hormone that breaks down muscle tissue and halts bodily processes to quickly muster energy. Anabolic balance is associated with physiological resilience and health (Epel, McEwen, & Ickovics, 1998) because it protects the body against the tissue damage caused by cortisol and predicts recovery from the stress response.

Supporting our hypotheses, participants who had just described a close cross-group friend prior to interacting with a novel outgroup member

responded to the social interaction with greater increases in anabolic balance than participants who had just described a close same-group friend. Once again, participants who had just described their close cross-group friend in detail took longer to classify that friend's ethnic group as non-self-descriptive, and these reaction times fully mediated the effects of the friendship prime on anabolic balance during the novel intergroup interaction. As all participants in these two studies had a very close cross-group friend, these studies suggest that benefits of cross-group friendship are not solely predicated on the presence versus the absence of such friends in one's network. Rather, the intergroup benefits of cross-group friendship appear to be contingent on how readily that friend is activated when in the presence of a novel outgroup member.

Altogether, the research described here demonstrates that cross-group friendship causally improves intergroup contact experiences, and this is explained through a heightened association between an outgroup and the self. The benefits of cross-group friendship can even apply to social interactions with outgroup members whom one has never met before. However, even among individuals with close cross-group friends, their experiences with novel outgroup members are facilitated only to the extent that their cross-group friend is accessible in mind. It is important to remember that one does not need an experimental procedure that brings cross-group friends to mind for the benefits of cross-group friendship to occur. As we mentioned earlier, group membership is often a salient feature of the strangers that we meet, and this salient feature is often powerful enough to bring to mind friends who belong to that same group. As Willie Nelson reminds us in "Always on My Mind" (Christopher, James, & Thompson, 1972), our closest, most significant others are *chronically accessible*. It is likely that if a cross-group friendship is very close, there may be no need of contextual cues for the effects of cross-group friendship to exert positive effects.

SPREADING THE BENEFITS OF CROSS-GROUP FRIENDSHIP

An additional question remains: How can cross-group friendships be encouraged? We have shown that the people who benefit the most from cross-group friendships are the least likely people to form them, so why would these friendships ever develop? While creating friendships in vitro provides a possible outlet for stimulating cross-group friendships, this process taxes both time and money and is not readily applicable to real-world contexts. Luckily, there are at least two exciting prospects for increasing interest in cross-ethnic bonds in vivo, which we discuss in detail next.

Indirect Cross-Group Friendship

An intriguing line of work focuses on the benefits of indirect cross-group friendship (Cameron, Rutland, & Brown, 2007; Cameron, Rutland, Brown, & Douch, 2006; Wright, Aron, McLaughlin-Volpe, & Ropp, 1997), which has been described elsewhere in the literature as the *extended contact effect* (see, e.g., Davies et al., this volume).[1] A person has an indirect cross-group friendship when, beyond any cross-group friends he or she may have, that person is aware that at least one same-group friend has a cross-group friend. The theory of indirect friendship was informed by studies of racial integration of previously all-White neighborhoods and housing projects (Deutsch & Collins, 1951; Hamilton & Bishop, 1976), where improved racial attitudes were observed even among Whites who had no direct contact with their Black neighbors. A laboratory test of the effects of indirect friendship (Wright et al., 1997) adapted the minimal groups paradigm (Tajfel, 1970) to incorporate a manipulation of knowledge of an ingroup member's cross-group friendship. Participants who witnessed an ingroup member exhibit hostile or neutral behavior toward an outgroup member exhibited many classic aspects of intergroup competition (Tajfel & Turner, 1979), such as attributing less positive affect toward the outgroup and allocating fewer resources to that group. However, participants who witnessed an ingroup member behaving in a friendly way toward an outgroup member ascribed more positive affect to the other team and distributed resources more equitably between the two teams. This provided experimental evidence that the knowledge of an ingroup member's cross-group friendship can improve intergroup attitudes and behaviors.

This effect of indirect friendship has now been replicated both among groups that experience more subtle forms of intergroup conflict (Turner et al., 2008) and groups with high levels of violent conflict, like Protestants and Catholics in Northern Ireland (Paolini et al., 2004). Turner and colleagues (2008) further demonstrated that indirect friendship decreases intergroup anxiety and prejudice through a heightened inclusion of the cross-group friend's group in the self. Their work also showed that indirect friendship decreases prejudice through changes in perceived ingroup and outgroup norms and decreases in intergroup anxiety. Thus, it appears that indirect friendship

[1]We use the term *indirect contact effect* to describe the phenomenon described elsewhere as the *extended contact effect*. We intend these two terms to be interpreted as interchangeable synonyms. However, we choose to use the term *indirect contact effect* in this chapter to follow the terminology used by traditional contact theorists (cf. Paolini et al., 2004; Pettigrew, 2008; Pettigrew, Christ, Wagner, & Stellmacher, 2007). Moreover, we prefer this term because it emphasizes the point that intergroup contact affects intergroup attitudes even when actual, direct intergroup contact is absent.

improves intergroup experience through a similar sense of identification with an outgroup that has been found for direct friendship effects.

These findings are exciting from the perspective of how contact experiences can be improved at a broad societal level. They suggest that not everyone needs to form a cross-group friendship in order to improve contact experiences with outgroup members; the mere knowledge of an ingroup member's cross-group friend is sufficient for improving intergroup attitudes. This knowledge may be key for individuals who have no opportunity to forge intergroup relationships or for whom prejudiced attitudes lead to intergroup avoidance. From an intervention standpoint, then, cross-group friendships could be formed in the lab or through social programs, and the benefits of these efforts could spread by encouraging participants in these programs to mention their new cross-group friendships to other ingroup members. Exciting research conducted among Catholic and Protestant community members in Northern Ireland has demonstrated that both direct and indirect cross-group friendships improve intergroup attitudes, even among groups that have a strong history of violence (Paolini et al., 2004). Altogether, the work reviewed in this section speaks to the power of cross-group friendships to build positive intergroup relations, both between friends and among other ingroup members, as well.

Conceptions of Race

Still, some people might be less responsive to the benefits of indirect intergroup friendship because of the way they conceptualize race. A series of compelling studies (Williams & Eberhardt, 2008) suggests that people who view race as biologically based (as opposed to being largely a social construction) are more accepting of racial disparities in the United States and less engaged by media depictions of growing racial inequality. This concept is similar to recent work demonstrating that essentialist versus constructivist lay theories of race affect how information about social groups is encoded, represented, and applied (Hong, Chao, & No, 2009). Relevant to our discussion, Williams and Eberhardt (2008) found that people who view race as biologically based have fewer cross-group friends. However, this view can be changed. Participants were randomly assigned to read one of two fake articles from a magazine, *Gene*, that either depicted race as a physical feature that can be determined by looking at one's DNA or a physical feature that is not detectable at the genetic level. Participants who read the article describing race as a nongenetic property showed more interest in friendships with racial outgroup members than did participants who were randomly assigned to read an article describing race as genetically determined.

The studies of Williams and Eberhardt (2008) suggest an important role that the media can play in increasing intergroup friendships. Since the mapping

of the human genome (Venter et al., 2001), there has been little support for the previously assumed genetic distinctiveness of racial groups (e.g., Cho, 2006; Foster & Sharp, 2004; Royal & Dunston, 2004). Therefore, it is ethical—if not ethically necessitated—for media campaigns to focus on educating the population about the lack of support for racial "groups." The work of Williams and Eberhardt (2008) suggests that such a media focus would increase interracial friendliness while simultaneously decreasing people's acceptance of racial inequality.

Taken together, research on indirect friendship and conceptions of race present pathways for facilitating cross-group friendship among prejudiced individuals. Media messages that educate the public on social construction of racial groups may encourage cross-group friendship formation. If only a single member of a social network is affected by these messages, the prejudice-reducing effects of indirect friendship will nonetheless spread. These two lines of research suggest peripheral routes to cross-group friendship that may be most effective for prejudiced individuals.

APPLICABILITY OF INTERPERSONAL RELATIONSHIPS TO INSTITUTIONAL ADJUSTMENT

In addition to intergroup benefits at the individual level, cross-group friendship can also provide possible benefits at the societal level by improving inclusivity within higher education. Rev. Dr. Martin Luther King Jr. (1964) noted that "it is precisely because education is the road to equality and citizenship that it has been made more elusive for Negroes than many other rights" (p. 12). In the half-century since the Supreme Court's 1954 ruling in *Brown vs. Board of Education*, U.S. schools have attempted to facilitate intergroup contact and reduce racial disparities in education through integration. While these structural changes have covaried with rapid increases in the proportions of racial minorities attaining degrees in higher education (U.S. Census Bureau, 2007), a more insidious legacy of racial inequality has remained. In the context of universities that historically discriminated against non-White students in their admission practices, some minority-race students are left to wonder whether they are equally valued members of the campus community or are only grudgingly tolerated (Bowen & Bok, 2000).

Feeling alienated from the campus community can impact academic success. Specifically, students who are sensitive to social rejection based on their race (*RS-race;* Mendoza-Denton et al., 2002) have additional hurdles to success in institutions of higher education that historically discriminated against their group. RS-race among minority-race students leads to feelings of estrangement from the university, avoidance of professors and other academic resources, and declining GPA over the college years. Universities that

have a history of discriminatory practices are culturally associated with majority groups and majority group members (Bowen & Bok, 2000). We therefore reasoned that close relationships with majority-group peers should buffer at-risk students from the negative effects of RS-race by extinguishing learned associations between majority-group members, institutions associated with the majority group, and social rejection (Mendoza-Denton, Page-Gould, & Pietrzak, 2006).

We tested this hypothesis directly across two studies that combined longitudinal field research with experimental data (Mendoza-Denton & Page-Gould, 2008). The first study examined the effects of the natural development of friendship with White students among incoming Black freshmen at a historically White research university. The results of this study indicated that, near the end of college, students who were initially high in RS-race (assessed prior to the start of college) and had made few or no White friends during their 1st year reported significantly decreased satisfaction with the university and less sense of belonging with the university community. However, students who were high in RS-race and made more White friends at the beginning of college were buffered—they were as satisfied and felt as much a part of the university at the end of college as Black students who were low in RS-race. It is important to note that we controlled for the participants' number of Black friends in these analyses, which means that the beneficial relationship between cross-group friendship and institutional belonging did not come at the cost of same-group friendship.

Although these longitudinal findings provided evidence that the development of cross-group friendship chronologically preceded changes in institutional adjustment, experimental data were still needed to distinguish the impact of making new majority-group friends from individual characteristics of high-RS-race students who chose to form these friendships in the first place. Furthermore, as we examined the experiences of only Black students, we did not explicitly test the hypothesis that these effects were unique to minority-race students in historically all-White universities.

To address these issues, we included questions regarding institutional satisfaction after the final friendship meeting of the previously described Page-Gould et al. (2008) study. Latino/a participants who scored high on RS-race prior to the friendship manipulation were less satisfied at a historically White public research university than their low RS-race counterparts at the end of the study if they had been assigned to make a same-group friend. However, the formation of a cross-group friendship in the laboratory predicted similarly high levels of institutional satisfaction among both low- and high-RS-race Latino/a students.

This effect was moderated by ethnicity, as White students who were concerned about rejection on the basis of their race were equally satisfied

at the university as White students who scored low on the RS-race scale (Mendoza-Denton & Page-Gould, 2008). This particular finding is expected because White students do not have as much reason to doubt their acceptance as a function of their race as do students of racial minority backgrounds (e.g., see Purdie-Vaughns & Walton, this volume). However, our hypothesis for institutional identification is more general than describing institutional belonging among minority-race students. Take, for example, the context of a historically all-Black university: In this context, friendships with Black students should improve the institutional outcomes of White students, but friendships with White students should be irrelevant to the institutional identification of Black students. Our work embraces the more general viewpoint that developing cross-group friendship enhances institutional identification when that friendship is formed with members of outgroups that are associated with the institution, and this phenomenon should apply across varying manifestations of institution–outgroup associations.

In sum, these studies demonstrate that cross-group friendship improves institutional adjustment among individuals who have reasons to question their acceptance in institutions of higher education. Again, these data show that cross-group friendship is most beneficial for individuals who feel threatened by outgroup members and alienated from institutions associated with an outgroup. Given that minority-race students who are low in RS-race feel greater institutional belonging and have increasing GPA over time (Mendoza-Denton et al., 2002), it is important to identify factors that facilitate these positive outcomes for all students in higher education. Moreover, in the first study described in this section, we controlled for students' development of same-group friendship, which implies that the benefits of cross-group friendship do not come at the cost of friendships with ingroup members. The institutional benefits of cross-group friendship provide a method through which students can not only coexist but interrelate.

SAME-GROUP FRIENDSHIP

We have been discussing the benefits of cross-group friendship for people who are vulnerable to intergroup alienation. In such a discussion, a question invariably arises of how same-group friendship plays into intergroup relations. Throughout the studies we have described here, same-group friendship has played a nuanced role in intergroup experience. When we manipulated the accessibility of same-group and cross-group friendships (Page-Gould et al., 2010), participants who were primed with a same-group friend had a weaker association between the outgroup and the self and exhibited more aversive stress responses during an intergroup interaction. This was the case

despite the fact that they had a very close cross-group friend. However, when examining the impact of cross-group friendship on institutional adjustment (Mendoza-Denton & Page-Gould, 2008), cross-group friendship affected institutional well-being independently of same-group friendship. Furthermore, the work on indirect friendship (e.g., Wright et al., 1997) emphasizes that same-group friends play a pivotal role in improved intergroup attitudes if the same-group friends have cross-group friends.

These studies imply that same-group friendship does not need to be sacrificed for the benefits of cross-group friendship to be realized. In fact, the benefits of cross-group friendship may be spread efficiently through a social network of same-group friends through indirect friendship processes. However, when meeting with an unfamiliar outgroup member, people who have close cross-group friends will have smoother intergroup interactions only to the degree that their cross-group friend is cognitively accessible. In this latter case, a salient same-group friend will not facilitate positive contact experiences. Altogether, same-group friendship does not diminish the benefits of cross-group friendship—in the case of indirect friendship, it spreads the intergroup value of any given cross-group friendship to many people—but only an accessible cross-group friend will ensure positive contact experiences with novel outgroup members.

CONCLUSION

In this chapter, we have reviewed recent experimental work on cross-group friendship. This research converges to show that cross-group friendship causally affects intergroup experience at both the interpersonal and institutional levels. Moreover, cross-group friendship holds the most benefits for people who are at risk for alienation in diverse contexts. While at once inspiring, the distinct benefits of cross-group friendship for individuals who are prejudiced or anxiously expect prejudice simultaneously present a conundrum of how these relationships can be fostered in everyday life. We reviewed work showing that interracial friendliness can be increased through media portrayals of the foundation of racial differences, and that the benefits of cross-group friendship spread throughout one's social network even in the absence of direct cross-group friendship.

The most exciting component of the work described here and in other chapters (e.g., Davies et al.; Mallett et al., this volume) is the clear path that cross-group friendship paves toward positive intergroup relations. Martin Luther King's "I Have a Dream" speech (see Tropp & Mallett, this volume) identified the goal that children of different races would one day play together. Cross-group friendship is the manifestation of that image. Altogether, it appears that cross-group friendships hold benefits for multiple spheres of life, from improved

social interactions with outgroup members to a greater sense of inclusion and satisfaction in marginalizing performance environments. In an increasingly diverse social environment, cross-group friendships may play an important role in fostering unified, tolerant societies.

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