

Intergroup Contact Across Time:  
Beyond Initial Contact

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Author Note: Preparation of this chapter was supported by NSF Grant # BCS-1052966 to the first author and Spencer Grant #200900193 and NIH Grant #1RO1HL0856331-0182 to the second author.

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Intergroup friendship has a profound effect for improving intergroup relations. Yet, compared to the substantial literature on intergroup contact generally, little is known about the dynamics of intergroup interaction beyond initial contact, how people form friendships across group lines, and how this process might differ from developing intragroup friendships. Indeed, interracial interactions are fundamentally distinct from intraracial ones in terms of the cognitive, affective, perceptual, and behavioral processes. This chapter examines the dynamics of anticipated and initial intergroup interaction and extends this work to investigations of contact between roommates of the same or different race/ethnicity over time. We present empirical evidence of how these dynamics change as a function of the orientations that people bring to these interactions and emergent qualities of the social exchange across multiple stages during intergroup, compared to intragroup, dyadic interactions. We conclude by identifying avenues for future research to help illuminate the underlying psychological mechanisms that shape interpersonal perceptions and, ultimately, intergroup relations.

Intergroup contact represents the most widely researched and empirically-supported way of creating more positive intergroup attitudes and harmonious intergroup relations (Allport, 1954; Pettigrew & Tropp, 2006, 2008, 2011). Moreover, this body of research reveals that intergroup friendship is, cross-culturally, one of the most potent elements of contact for reducing intergroup bias (Pettigrew, 1997, 1998). Merely learning that another ingroup member has a friend in an outgroup is sufficient to improve attitudes

toward the outgroup overall (the *extended contact effect*; Wright, Aron, McLaughlin-Volpe, & Ropp, 1997). Nevertheless, forming intergroup friendships is not easy. In the US, for example, contact between Whites and Blacks is limited substantially by widespread residential and occupational segregation (Massey, 2001). Moreover, Whites and Blacks are often motivated to avoid contact (Gaertner & Dovidio, 1986; Plant & Butz, 2006; Mallet, Wilson, & Gilbert, 2008). When interracial contact does occur, these interactions are characterized by high levels of tension (W.G. Stephan & C.W. Stephan, 1985, 2000) and suspicion (Dovidio, Gaertner, Kawakami, & Hodson, 2002), and they are cognitively taxing (Shelton, Richeson, Vorauer, 2006). Interactions between members of different groups are much more fragile and easier to disrupt than are interactions between two people who are members of the same group. Thus, whereas previous work amply documents the benefits of cross-group friendships for intergroup relations, the present chapter focuses on the dynamics shaping how racial and ethnic majority- and minority-group members in the US overcome these barriers and form intergroup friendships over time.

The approach we adopt in this chapter reflects the recent emphasis on the importance of what transpires in interpersonal interactions in intergroup relations. Traditionally, research on racial/ethnic group relations has emphasized the *intrapersonal* processes, such as stereotyping and prejudice (Dovidio, Brigham, Johnson, & Gaertner, 1996) or contextual factors, such as the optimal prerequisite conditions for intergroup contact (Pettigrew, 1998; Pettigrew & Tropp, 2006), on relations between groups. Although it is an area attracting increasing attention, still comparatively little work has investigated the

nature of intergroup interactions from a more interpersonal perspective (Richeson & Shelton, 2010).

An *interpersonal* perspective considers how relationships between individuals are shaped *jointly* by the interpretations and responses of each person during their interaction. It considers how, within a given interaction, an individual's own outcomes are not only shaped by their own characteristics (e.g., agreeableness) but also by their partner's qualities (e.g., their partner's agreeableness). Studying interpersonal relations from an *intergroup* perspective further recognizes how people's sense of social identity and their partners' group membership and identity influence the nature and outcomes of interactions (Richeson & Shelton, 2010; Page-Gould, Mendoza-Denton, & Tropp, 2008). The experiences of two individuals interacting with each other can be substantially shaped in different ways by their group memberships. For example, during an interaction between a majority and a minority group member, the minority person's outcome might be largely influenced by the majority member's level of prejudice, but, because of differences in the social power of the groups, the majority member's outcome might be affected to a much lesser extent by the minority member's biases.

This chapter emphasizes the unique value of studying dyadic interactions from the perspectives of both participants simultaneously for understanding intergroup relations. In particular, we consider how interpersonal processes shape the nature and outcomes of intergroup interactions. Specifically, we examine the dynamics of dyadic intergroup interactions – social exchanges between members of two different groups – on the

development of intergroup friendships. Our focus is on sustained interactions over time, typically within the context of college roommate relationships. Our goal is to provide a framework for understanding how different factors contribute to intergroup dynamics at different stages in interactions.

The remainder of this chapter considers analytic approaches, conceptual issues, and empirical findings relating to the development of intergroup friendships over time. In our framework, we take an interpersonal perception approach by focusing on subjective experiences and person perception at three levels: (a) how Whites and minorities *perceive themselves* in such interactions; (b) how Whites and minorities *perceive each other*; and (c) how Whites and minorities *are perceived by each other*. In the next section of the chapter, we provide a brief overview of our analytical approach. After that, we present a conceptual framework for understanding how intergroup interactions unfold across time. We discuss the intra- and interpersonal processes that characterize interracial interactions: how expectations are shaped as people approach these encounters, and how such expectations influence reciprocal responses in brief interactions between new acquaintances. We then focus specifically on how the psychological processes observed during brief interactions may change over time to predict friendship development. We conclude the chapter by discussing several avenues of future research.

## ANALYTIC FRAMEWORK

We adopt a dyadic approach to examine friendship formation within the context of race relations in the US. To date, most studies of intergroup friendships have adopted a cross-sectional approach (Shelton, West, & Trail, 2010), which limits an understanding of the unfolding processes involved in intergroup relationship formation. Friendship is an inherently interpersonal phenomenon that develops over time: The thoughts, feelings, and behaviors of one partner in the relationship are interdependent with those of the other. Recent advances in the analysis of dyadic data have enabled intergroup researchers to not only expand beyond the individual to the interpersonal, but to examine these interpersonal processes dynamically as they change across time (Kenny, Kashy, & Cook, 2006).

Much of the work on the development of cross-race friendships that we discuss in this chapter utilizes the Actor-Partner Interdependence Model (APIM; Kashy & Kenny, 2000; Kenny & Acitelli, 2001). The APIM is an analytical framework that can be used to ask theoretical questions about the interdependence between partners, and thus represents a tool for exploring the interpersonal processes that characterize interracial friendship development. As illustrated in Figure 1, within the APIM an individual's own outcome is predicted by factors that vary at two levels: at the level of the *actor* and at the level of the *partner*.

Everyone is both an actor and a partner in the APIM framework. *Actor effects* refer to the influence of respondents' intrapersonal processes on their own outcomes. They represent the effects on an interaction of qualities that an individual (the respondent) brings to an

interaction, such as his or her attitudes or contact experience. These factors can influence, for example, how anxious the individual feels, willingness to disclose personal information, and how responsive the person is in the interaction. Partner effects represent the influence of the partners' qualities on the respondent. For instance, the partner's attitudes or contact experience can determine how anxious the respondent feels and how self-disclosing the respondent is during the interaction. It is important to note that the same behavior, such as a respondent's level of self-disclosure, can be the product of both actor and partner effects. As another example, illustrated in Figure 1, in an investigation of whether anxiety predicts individuals' perceptions of closeness with their partners, anxiety would be studied both in terms of (a) the effect of the respondent's own anxiety on his or her feelings of closeness (the *actor effect*), and (b) the effect of the partner's anxiety on the respondent's feelings of closeness (the *partner effect*). In the APIM, outcomes are jointly determined by predictors at the actor and partner levels, and so the pattern of actor and partner effects provides insight into the dynamic and reciprocal nature of the interaction.

----- [insert Figure 7.1 about here]-----

When applied to dyadic relations involving members of majority and minority groups, the APIM can answer questions such as: (a) Does the process of friendship development differ for people in same-race dyads compared to cross-race ones? (b) Does the process differ for Whites and racial/ethnic minorities within same-race dyads, as well as within cross-race dyads? The APIM allows researchers to simultaneously examine these questions pertaining to the race composition of dyads.

The APIM can also be used to examine how different psychological factors at the levels of the actor and partner contribute to intergroup friendship development. When data are collected longitudinally, it is possible to examine two different types of individual-level predictors, time-invariant and time-varying predictors. The distinction between time-varying and time-invariant variables is a methodologically one. *Time-invariant* predictors are those that because of their presumed nature or the plan of the researcher, are measured only once in the study. For example, because a person's sex is unlikely to change over the course of a study (although it is possible), it is typically considered a time-invariant predictor and measured only once. Other predictors are classified as time-invariant not because they cannot change but because the design of the study does not allow for consideration of a change. For example, Page-Gould et al. (2008) examined how individuals' levels of race-based rejection sensitivity measured prior to contact influenced the process of friendship development. Although race-based rejection sensitivity can vary over time and as a function of the interaction, methodologically this is a time-invariant predictor because the researchers measured it only once, at the beginning of the study. *Time-varying* predictors are conceived to potentially vary and are thus measured more than once during the study. Anxiety is often considered a time-varying predictor of friendship development because its level and influence can change over time and it is measured at multiple time points.

In the APIM, both time-varying and time-invariant predictors can be considered simultaneously, and at the level of the actor and the partner. In addition, dyad level-predictors are those that vary between dyads, such as the racial composition of the dyad

(i.e., same-race compared to mixed-race), or as another example, how long dyad members have known each other. We apply an approach whereby both individual-level and dyad-level factors are included in studying the dynamics of friendship formation between roommates of different racial and ethnic groups.

Taken together, the APIM is an analytical approach that, when applied to longitudinal data, helps researchers identify the process by which friendships develop. Predictors of friendship formation are simultaneously examined at the levels of the actor, partner, and relationship. Moreover, the APIM can be used to answer several questions related to the longitudinal nature of the data, such as what predicts linear and non-linear growth in friendship, and what predicts day-to-day stability in friendship.

#### UNDERSTANDING INTERGROUP INTERACTIONS AT MULTIPLE STAGES: ANTICIPATED AND INITIAL INTERACTION

Traditionally, much of the research on intergroup relations has focused on the general orientations that members of minority and majority groups have toward one another, such as intergroup attitudes (Dovidio et al., 1996; Johnson & Lecci, 2003; Talaska, Fiske, & Chaiken, 2008) and motivations (Dunton & Fazio, 1997; Plant & Devine, 2003), without actual or even anticipated interaction. More recently, attention has shifted to appreciating the complex nature of actual interactions (Richeson & Shelton, 2010) and how experiences in these exchanges are shaped by and, in turn, shape intergroup relations more generally (Dovidio et al., 2002). However, this work has focused largely on the

earliest stages of interaction; that is, the responses of people as they approach an interaction and the initial, relatively brief contact between members of different groups who are strangers.

In general, this research shows that intergroup interactions at the earliest stages – in the anticipation of interaction and in initial contact – differ fundamentally from intragroup interactions in two critical ways: Expectations of others and the amount of anxiety experienced. These two elements, separately and in combination, exert systematic influences that can create barriers to the formation of intergroup friendships, leading members of different groups to avoid interacting with one another and creating fragile relations between them in initial encounters. We consider these processes as people approach new interactions and engage in initial interactions with strangers from another group.

#### Anticipating interaction

As people approach interactions, the mere information that their partner is a member of their own group or another group arouses differential expectations and affective reactions. Generally, people anticipate outgroup (*vs.* ingroup) members to behave less positively to them personally, and to be less likely to share their attitudes and values (Robbins & Krueger, 2005). In addition, people anticipate outgroup members to display bias toward their group (Judd, Park, Yzerbyt, Gordijn, & Muller, 2005). As a consequence of these negative expectations, people are less trusting of outgroup than

ingroup members (Foddy, Platow, & Yamagishi, 2009), and are vigilant to cues of bias from outgroup members (Vorauer, 2006). With respect to race, Shelton and Richeson (2005) found that both Whites and Blacks were personally interested in intergroup interaction, but avoid such interaction because they anticipate that their overtures would be rejected by members of the other group. Thus, people not only perceive ingroup members more favorably, they also have negative expectations about how outgroup members will treat them.

Perceiving others as members of another group rather than as a member of one's own group (or as a unique individual) also has a systematic effect on affective responses (see Gaertner & Dovidio, 2000). In part as the result of heightened vigilance and negative expectations (Plant, Butz, & Tartakovsky, 2008), intergroup interactions are characterized by much higher levels of intergroup anxiety than are exchanges between members of the same group (W.G. Stephan & C.W. Stephan, 1985, 2000). Within the U.S., interethnic contact, in particular, is often marred by anxiety and distrust (Dovidio et al., 2002; Plant & Butz, 2006), and thus both Whites and Blacks experience heightened anxiety in interracial compared to intraracial interactions, but for somewhat different reasons. Whites' anxiety may relate to increased cognitive demand associated with not wanting to appear biased (Dovidio & Gaertner, 2004; Richeson & Shelton, 2003; Richeson & Trawalter, 2005; Shelton, 2003), whereas Blacks' anxiety and arousal may be related to vigilance in detecting bias (Vorauer, 2006) and ways of coping with anticipated prejudice and discrimination (Hyers & Swim, 1998). Feelings of anxiety in

anticipation of interaction, in turn, motivate members of majority and minority groups to avoid intergroup interaction (Plant, 2004; Plant & Butz, 2006).

### Initial interaction

For a range of different reasons, members of different groups cannot always avoid intergroup interaction and may sometimes seek such encounters. They not only typically enter intergroup interactions with more negative expectancies and greater levels of anxiety than they do for intragroup interactions, but these biases take on a dynamic nature in social exchange. Specifically, people have more favorable orientations toward ingroup than outgroup members (Tajfel & Turner, 1979); they are more positive, both explicitly and implicitly, in their evaluations of ingroup members (Otten & Moskowitz, 2000). Cognitively, people process information more deeply for ingroup than for outgroup members (Van Bavel, Packer, & Cunningham, 2008), have better memory for information about ways ingroup members are similar and outgroup members are dissimilar to the self (Wilder, 1981), and remember less positive information about outgroup members (Howard & Rothbart, 1980). Although the consequences of these cognitive processes are studied for individual-level outcomes, they can also influence complex interpersonal dynamics and interpersonal outcomes. For example, when individuals enter interracial interactions, their cognitive biases shape their own behaviors as well as their perceptions of their partners, which can in turn influence their partners' perceptions of them.

Differential expectations leading up to interactions can engage people to make different attributions for the behaviors of ingroup and outgroup members. Positive behaviors and successful outcomes are more likely to be attributed to internal, stable characteristics of ingroup than outgroup members, whereas negative outcomes are more likely to be ascribed to the personalities of outgroup than ingroup members (Hewstone, 1990).

Group-based expectancies shape the perception of emotional behaviors displayed by both ingroup (Beaupré & Hess, 2003) and outgroup (Hugenberg & Bodenhausen, 2003) members, often in a stereotype-confirming manner.

As a consequence of systematic biases in the ways people interpret the behaviors of ingroup and outgroup members, interracial interactions are not only characterized by a higher level of anxiety, but also, individuals make more negative attributions for their partners' anxiety in interracial relative to same-race interactions (West, Shelton, & Trail, 2009). In mixed-race interactions, the attributions that individuals make tend to refer to the cross-race nature of the interaction (Richeson & Trawalter, 2005) and are interpreted in ways consistent with negative expectancies of intergroup relations (Shelton & Richeson, 2005). For instance, whereas both Whites and Blacks attribute nonverbal cues related to high levels of anxiety (e.g., self-touch, inconsistent gaze, closed posture) displayed by another person of the same race primarily as an indication of mere anxiety, these same behaviors demonstrated by a member of the other race is interpreted as unfriendliness as well (Dovidio, West, Pearson, Gaertner, & Kawakami, 2007). Thus, both Blacks and Whites tend to conflate cues of anxiety with indications of dislike, but only when the other person is of a different race.

Understanding what guides attributions of partners' behaviors, and the systematic misinterpretations of cues such as manifestations of anxiety, can have both immediate and longer-term effects on dyadic and group relations. Pearson, West, Dovidio, Powers, Buck, and Henning (2008), for example, showed that intergroup interactions are substantially more fragile than intragroup exchanges. Whereas a slight (1-second) delay in audio-visual feedback between interactants over closed-circuit television, which was imperceptible to participants, had no detrimental affect on same-race dyadic relations, it had a significant adverse effect on cross-race dyadic interactions. Of particular importance was how this delay led participants in cross-race interactions to perceive their rapport more negatively, compared to a control condition. Participants in cross-race, but not same-race interactions, became more anxious as a function of the delay, and they perceived more anxiety in their partner. However, it was the perception of partner's anxiety, not their personally experienced anxiety, that primarily mediated the lower level of rapport. This finding is thus consistent with the study of Dovidio et al. (2007) of biases in perceptions of nonverbal cues of anxiety, again showing that perceived anxiety carries surplus meaning in cross-race interaction that disrupts rapport-building.

Interventions that alter people's expectations as they enter intergroup interactions can improve initial contact experiences. For instance, inducing members of different groups to attend to their similarities rather than their more typical focus on dissimilarities produces smoother and more favorable initial interactions between members of different races (Mallett et al., 2008). In addition, reminding people of personal experiences in which intergroup contact went better than they expected leads people to be more relaxed

in intergroup interactions, anticipate more positive responses from members of other groups, produces more satisfying interactions with other outgroup members, and increases motivation to engage in cross-group contact in the future (Mallett & Wilson, 2010).

We have briefly reviewed the interpersonal processes that characterize initial interracial interactions. In the remainder of the chapter, we focus on whether these same processes sustain themselves as interactions unfold across time.

#### UNDERSTANDING INTERGROUP INTERACTIONS AT MULTIPLE STAGES: INTERACTIONS OVER TIME

Given the importance of friendships to social life and the current prominence of cross-group friendships for promoting more positive relations between groups, research on friendship formation, in general, is surprisingly limited. Research on the development of intergroup friendships is even rarer. In the next section, we offer a brief overview of general processes in friendship formation.

##### Processes in friendship formation over time

Research on the process by which friendships develop has highlighted the interdependence between individual, dyadic, and situational factors that determine the course of a personal relationship. Although initial models of friendship development focused primarily on the role of disclosure in predicting intimacy in the early stages of

friendship development (see Reis, Collins, & Berscheid, 2000 for a review), other models of relationship development have focused on determinants of intimacy beyond self-disclosure, including responsiveness to nonverbal cues (Patterson, 1982).

In terms of process, models of friendship development have focused on the cognitive, affective, and behavioral processes that occur during repeated interactions with new college friends (Hays, 1985). Importantly, as relationships progress from casual acquaintanceship to close friendships, benefits of the relationship transform from reflecting self-interest (i.e., what will I get out of the relationship), to reflecting interpersonal and reciprocal interests (Levinger & Snoek, 1972). The transformation from individual to personal friendships creates substantial self-other overlap in self-concept, which is associated with greater relationship satisfaction and intimacy (see A. Aron, McLaughlin-Volpe, Mashek, Lewandowski, Wright, & E.N. Aron, 2004).

In addition, as Hays' (1985) work has demonstrated, the factors that individuals bring with them to new relationships largely influence the trajectory of that relationship. Hays specifically examined individuals' motivation to develop a new friendship, as well personality factors, such as shyness. Within the context of intergroup friendships, it is important to consider individual-level factors that uniquely influence behavioral and perceptual processes, such as those that may alter individuals' feelings of anxiety during their interactions, their perceptions of their partners' anxiety, and the behaviors associated with their anxiety. The next section thus considers, theoretically, how intergroup contact and interaction over time may unfold over time.

### Intergroup interactions across time

As we noted earlier, the dynamics of initial interactions between members of different races are more challenging and tenuous than those between members of same races. Nevertheless, it is possible that the forces that disrupt initial intergroup interactions may weaken over time. Repeated interactions with an outgroup member, especially when the quality of these interactions is positive, can reduce intergroup anxiety, increase perspective taking and empathy, and improve interpersonal and intergroup relations substantially (Turner, Hewstone, Voci, & Vonofakou, 2008). As a consequence, it is likely that through repeated interaction over time, members of different races may relatively quickly overcome initial negative group-based perceptions and expectancies and form friendships as readily as do members of the same racial group.

In support of this hypothesis, Page-Gould et al. (2008) found that Whites experienced heightened levels of anxiety during an initial interaction with an outgroup member, but their anxiety decreased over the course of subsequent interactions with the same person. Moreover, structured contact (i.e., contact in the lab in which participants were given specific tasks to do together, such as playing the game Jenga ® together) facilitated prejudice reduction, mediated by anxiety reduction. Similarly, Shook and Fazio (2008b) found that not only was Whites' intergroup anxiety reduced over time when they had an ethnic minority roommate, but automatically activated racial attitudes also became less negative.

Alternatively, the biases that individuals bring with them to intergroup interactions, and those that shape perceptions made during interactions, may continue to exert an influence on perceptions made over time. In this case, building directly on initial intergroup biases, dynamics between partners from different social groups may consistently worsen over time. Furthermore, there may be additional qualities of extended interaction over time that can exacerbate intergroup tensions. Briefly, in structured laboratory interactions individuals are able to regulate (to some degree) their behaviors toward their partners by not explicitly expressing negative feelings such as distrust or dislike. However, the ability to regulate one's true thoughts and emotions may weaken over time, particularly as regulatory cognitive resources that inhibit bias diminish with time (Shelton et al., in press), resulting in a "leaking out" of behaviors that are reflective of these thoughts and emotions.

Initial attempts to suppress negative thoughts and feelings often produce an amplified, "rebound" effect when cognitive resources are depleted (see Monteith, Sherman, & Devine, 1998, for a review). If group boundaries remain salient during intergroup interactions, the negative thoughts and feelings that characterize intergroup encounters at the initial interaction stage will either be maintained or they will increase. In either case, such thoughts and feelings will eventually be expressed through behaviors, which will in turn be perceived by partners. This rather grim hypothesis has received some support in the finding that individuals are more satisfied with and more likely to continue living with a same-raced roommate than a different-raced one (Shook & Fazio, 2008a, 2008b; Trail, Shelton, & West, 2009).

As these alternative hypotheses and conflicting data suggest, the question of whether repeated outgroup interactions will lead to friendship formation cannot be answered with a simple “yes” or “no.” How and why Whites and minorities become friends represent complicated processes that involve both the cognitive orientations and affective reactions that individuals bring with them to such interactions and the perceptual, cognitive, and affective processes that occur during these interactions. We posit that to understand the longitudinal trajectory of intergroup friendship formation, it is important to study both intrapersonal and interpersonal processes, as well as the interplay between them. In the remainder of this section, we first highlight the unique opportunities that studying college roommates have for testing theories of intergroup relations, and then we review current findings about processes that determine the development of interracial friendships over time.

Why study roommates?

Much of the recent research on intergroup contact (Binder et al., 2009) has revealed the causal role of frequent, positive contact with members of other groups for improving intergroup attitudes, not only with respect to the specific individuals involved in contact but also to their group as a whole (van Laar, Levin, & Sidanius, 2008), as well as to other minority groups (Pettigrew, 1997). In addition, many of the intrapersonal processes that benefit from repeated direct contact also profit from repeated contact over time. For example, Turner et al. (2008) demonstrated that intergroup contact reduces subsequent

intergroup anxiety, increases the inclusion of the outgroup in the self, and alters norms about the outgroup.

In much of the longitudinal study of interracial interactions, researchers have relied upon college roommates as a population for examining relationship development. Research examining repeated contact with roommates differs from work on repeated contact with outgroup members in general because it allows for the examination of how contact with a specific outgroup member over time facilitates friendship formation with that outgroup member.

Although studying college roommate relations represents a restricted contact context – college students are more highly educated and liberal than others in the general population – there are also several important methodological advantages (see Shook & Fazio, 2008a, 2008b; Van Laar, Levin, Sinclair, & Sidanius, 2005). First, college roommates are often randomly assigned with respect to race or ethnicity to live together, thus circumventing problems of self-selection. Second, the living conditions of college dormitories represent optimal conditions of contact: Roommates are of equal status in the context of the living environment, they have the common goal of getting along with one another (especially given the small living space they share), they have equal access to resources within the college community, and they have the sanction of authorities (Allport, 1954). Third, researchers have access to the amount of and quality of contact between roommates before they move in together and can monitor friendship formation from the time of initial contact. Fourth, roommate relations are consequential ones for

college students; the quality of roommate relations affects the physical health and psychological well-being of college students (Joiner, Vohs, & Schmidt, 2000).

Even though college roommate living environments typically exist under optimal conditions of contact for psychological research, simply living with someone of a different race is not sufficient to facilitate interracial friendship formation. Such situations can be hugely demanding, form of contact, particularly for people who have strong racial bias and little previous intergroup contact. In fact, day-to-day contact can make interracial relations even worse given the intensity of these interactions. Mixed-race roommate relationships are generally less satisfying (Shook & Fazio, 2008b), are more likely to dissolve (Shook & Fazio, 2008a), and demonstrate steeper declines over time (Trail et al., 2009) than do same-race ones. Thus, studying roommates provides opportunities to understand both harmonious and contentious intergroup relations. The next section summarizes the results of a series of studies that have investigated the influence of both emergent (time-varying) processes – those that arise through repeated interactions between roommates – and influences related to the qualities that individuals bring to their exchange (time-invariant factors).

#### FRIENDSHIP DEVELOPMENT BETWEEN ROOMMATES OF THE SAME OR DIFFERENT RACES

The research on intergroup interactions at varying stages of intergroup contact – anticipated contact, initial contact, and repeated contact with members of another group –

triangulates on the importance of a perceiver's own anxiety and perceptions of the partner's anxiety in these encounters. In this section, building on Hays's (1984) general framework of how dyadic and individual factors shape the development of friendships, we illustrate how affective and perceptual processes that occur during repeated interactions predict friendship development between roommates of the same race or of different races. We first review two studies of friendship development between roommates of the same or different races that demonstrate the pivotal roles of self-reported anxiety and perceptions of the partner's orientations. Then, in two additional studies, we consider factors particularly relevant in the intergroup domain (i.e., concerns with appearing prejudiced and perceptions of commonality) that individuals bring with them to their dyadic relations and that can moderate the trajectory of intergroup friendship development.

#### ANXIETY AND FRIENDSHIP DEVELOPMENT

West, Shelton, et al. (2009) investigated the role of the experience of anxiety in friendship development in same- and cross-race roommates over time, during the first weeks of roommates living together. Within the first week of the semester, college students who had been randomly assigned to same-race and cross-race roommate dyads made daily ratings of their own felt anxiety (e.g., how anxious, nervous, and uncomfortable they felt) and interest in living together in the future. These ratings began shortly after the roommates moved in together and continued for 15 consecutive days. Using APIM (Kenny et al., 2006), we treated anxiety experienced by the respondent on

one day as the predictor of reported anxiety levels the following day, both the respondent's own anxiety (the *actor* effect), and the anxiety level of the respondent's partner (i.e., the *partner* effect). Because anxiety is often perceived as rejection in interracial interactions (Pearson et al., 2008), it was hypothesized that partner's self-reported anxiety, above and beyond respondents' own self-reported anxiety, would have detrimental effects over time, but mainly for individuals in cross-race dyads. That is, the main prediction was that in cross-race roommate dyads, but not in same-race roommate dyads, greater anxiety experienced *by the roommate* would negatively predict the respondent's subsequent interest in living together again (over and above any effect of the respondent's level of anxiety).

In general, across roommate pairs of the same race or of different races, one's own anxiety experienced one day predicted one's own anxiety the following day, and greater self-reported anxiety predicted respondents' lower desire to live with their roommate in the future (i.e., an actor effect). Moreover, as hypothesized, there were additional dynamics that were unique to cross-race roommate dyads. Only in cross-race roommate dyads did the respondent's anxiety experienced one day carryover to predict their roommates' anxiety the following day (i.e., a partner effect). That is, there was a "contagion" of anxiety between roommates of different races but not between roommates of the same race. Also, in cross-race roommate dyads, the more *one's roommate was anxious* across the 15-day period of the study, the less the respondent desired to live with that roommate in the future. In contrast, in same-race roommate dyads, greater anxiety reported by one's roommate was related to a greater desire by the respondent to live with

the roommate in the future. This pattern of results was similar for White and racial minority participants.

Overall, the findings of West, Shelton, et al. (2009) demonstrate that not only does partner anxiety linger in cross-race interactions to influence how people feel themselves the following day, the attributions for it appear to harm the process of friendship development. The finding that same-race roommates' anxiety positively predicted respondents' interest in living together is similar to the finding in Pearson et al. (2008) in which same-race pairs reacted positively to the one-second delay. Perhaps people in same-race pairs not only make attributions for their partners' anxious behaviors that are relationship-enhancing, but they also engage in compensatory behaviors during their interactions with their anxious roommates. In interracial interactions, compensatory behaviors may be less likely, which, coupled with elevated feelings of anxiety, put these interactions at a great disadvantage relative to same-race ones.

Anxiety and its social manifestations represent one class of behaviors that people can exhibit in their interactions. Individuals can also engage in actions that are even more directly communicative of intentions to promote greater intimacy or create greater social distance. The next study we report thus expands upon the previous research on the experience of anxiety to perceptions of people's own and their roommate's behaviors. Intimacy-related behaviors and intragroup and intergroup roommate relations

Trail et al. (2009) investigated how differences in partners' intimacy-building behaviors (e.g., perceptions of the partner smiling, talking, appearing engaged and interested) and intimacy-distancing behaviors (e.g., perceptions of the partner fidgeting, avoiding eye contact, concealing opinions) contribute to differences in friendship development between same-race and cross-race roommate dyads. This research drew upon additional data from respondents in the previous study, who completed diaries of the experiences across 15 days soon after they met their roommates.

The main hypothesis was that the lower quality of relationship between interracial than interracial roommate dyads would be mediated by a range of different behaviors exhibited in these interactions and particularly with respect to perceptions of the roommate's behaviors. Quality of relationship was represented by positive orientations toward the roommate and their connection (e.g., "I like my roommate"; "I want to live together in the future").

The distinction between distancing and building behaviors is particularly important in the context of interracial relationships because Whites and ethnic minorities often have ambivalent attitudes about interacting with one another (Dovidio & Gaertner, 2004), and subtle prejudice is conveyed more through the absence of intimacy-building behaviors than through the presence of intimacy-distancing ones. As such, it was expected that intimacy-building behaviors would play a more prominent role in explaining differences between the quality of cross-race and same-race relationships than would intimacy-distancing behaviors.

As expected, the quality of roommate relationships was higher for same-race than for cross-race roommate dyads. Furthermore, consistent with the hypotheses, both minorities and Whites in cross-race roommate pairs perceived fewer intimacy-building and more intimacy-distancing behaviors than did Whites and minorities in same-race roommate pairs. In addition, although intimacy-distancing behaviors remained relatively constant over time for both same-race and cross-race roommate dyads, intimacy-building behaviors declined over time particularly for Whites and minorities in cross-race pairs. This finding is supportive of the prediction that interracial dyads would be characterized more by subtle expressions of bias (the absence of intimacy-building behavior) than by more overt bias (intimacy-distancing behaviors).

Further supportive of the hypotheses, Trail et al. (2009) also found that differences in the quality of interracial roommate relationships (i.e., the desire to live together again, liking of the roommate) are due, in part, to perceptions of the partners' behaviors. Specifically, perceptions of roommates' intimacy-building and, to a weaker extent, intimacy-distancing behaviors mediated the difference in relationship quality (i.e., desire to live together again, satisfaction with the relationship, and perceptions of support) between same-race and cross-race dyads. In addition, we found evidence for both actor and partner effects of the mediators: The respondent's perceptions of the partner's behaviors and the partner's perceptions of the respondent's behaviors both predicted the respondent's report of relationship quality.

Taken together, these results suggest that, in addition to the general negative impact of perceived anxiety of one's roommate in interracial dyads, perceptions of the roommate's display of intimacy-distancing and especially intimacy-building behaviors are critical determinants of lower quality relations between roommates of the different racial/ethnic group status than of the same group.

These first two studies that we reviewed in some detail did not consider how the individual-level factors that individuals bring with them to interracial interactions can influence the dynamics of the relationship over time. The next two studies illustrate how individual-level factors can differentially moderate the trajectory of friendship development between roommates of the same or of different races.

Concerns with appearing prejudiced and friendship development

Drawing on additional data from respondents in the previous two studies, Shelton et al. (2010) examined how Whites and minorities' concerns with appearing prejudiced, measured at the start of the semester, predicted changes in self-reported anxiety (i.e., actor effects) and perceptions of those individuals by their roommates, over the course of 15 days.

In initial interracial interactions, concerns with appearing prejudiced have positive effects on liking and rapport building because individuals high on these concerns are motivated to appear positively toward their roommates, and if they do experience negative feelings during their interactions, they are able to monitor them. Indeed, Shelton (2003) found that

Blacks liked Whites who tried not to be prejudiced during an interaction more than they liked Whites who did not. Over time, however, the monitoring of one's thoughts and feelings may break down, leading individuals to express the anxiety that they are successful at "holding in" during the very early stages of the interaction. Shelton et al. (2010) investigated both Whites and minorities' concerns with appearing prejudiced on their self-ratings of anxiety, their perceptions of their partners' anxiety-related behaviors (e.g., fidgeting), and their liking of their roommate.

Overall, in Shelton et al. (2010), Whites and minorities who were more concerned with appearing prejudiced felt more anxious during their interactions with their roommates, and the level of anxiety did not change over time. In addition, a partner effect for concerns with appearing prejudiced was found for Whites and minorities in cross-race dyads. Specifically, for Whites and minorities high on concerns with appearing prejudiced, their anxious behaviors began to "leak out" after about 10 days of living together. Beginning on the tenth day of the study, respondents in cross-race interactions began to perceive their roommates, particularly those roommates who were more concerned with appearing prejudiced at the beginning of the study, as more anxious. By the end of the study (i.e., by the 15<sup>th</sup> day), individuals in cross-race roommate relationships who had roommates higher on concerns with appearing prejudiced also liked those roommates significantly less.

These results indicate the importance of examining how intrapersonal factors can have very different effects on the dynamics of relationships during the initial stages of the

relationship than on later stages. Concerns with appearing prejudiced at the beginning of the study did not show a relationship with anxiety-related behaviors until several days into the study, and then only, as expected, in cross-race roommate dyads. Nevertheless, this emergence of anxiety-related behaviors was related to less liking of roommates of a different race at the end of the study. Thus, to the extent that efforts to control one's bias can eventually increase anxiety-related behaviors, presumably as people struggle to inhibit prejudice, attempts to control one's bias may backfire and undermine the development of cross-group friendships between roommates.

Given all of the potential negative intra- and interpersonal processes that can occur during the development of interracial roommate relationships, how then can these roommate pairings result in successful friendship development? We considered this question in the next study.

#### Commonality and intergroup friendship formation

The ways people conceive of one another at the very outset of their interaction can systematically influence the nature and outcome of their exchange. For instance, focusing people on the similarities, rather than dissimilarities, between them and members of another group reduces intergroup anxiety, creates more positive expectancies, and facilitates smoother intergroup interactions (Mallett et al., 2008). In West, Pearson, Dovidio, Shelton, and Trail (2009), we examined how individuals' common in-group identity framework— that is, the way in which people think about racial categories in the

context of a larger, superordinate category (i.e., college students on campus; see Gaertner & Dovidio, 2000) — influences changes in intergroup anxiety and, consequently, friendship development over time. The Common Ingroup Identity model (Gaertner & Dovidio, 2000) proposes that incorporating members of different groups into a common, inclusive identity can extend the benefits of within-group categorization to members of racial out-groups. Typically, research utilizing a common in-group identity framework has experimentally manipulated or primed commonality, and then examined perceptions made in brief, one-time-only interactions. However, in our research we treated commonality orientation as an individual difference trait which can influence individuals' own anxiety and perceptions of friendship development, as well as their roommates' anxiety and perceptions of friendship development over time.

In West, Pearson, et al. (2009), college students completed measures of commonality at the beginning of the semester (e.g., “Regardless of our racial/ethnic group, it usually feels as though we are all members of one group”). For the next 5.5 weeks, they completed twice-weekly measures of friendship formation and anxiety experienced in the context of roommate interactions.

Although both same-race and cross-race roommates generally showed a decline in friendship over time, stronger perceptions of commonality between members of different racial and ethnic groups on campus, relative to seeing people mainly in terms of their different-group memberships, buffered the decline in friendships among roommates of different races. As illustrated in Figure 2, for cross-race roommate dyads, when either

the respondent or his or her roommate strongly perceived commonality among the groups at the beginning of the semester (i.e., both actor and partner effects), roommates were able to sustain their friendship six weeks into the semester. When commonality perceptions were initially weak, friendship in interracial dyads declined across the same period. Furthermore, consistent with the research implicating the role of perceptions of the partner's anxiousness in initial intergroup responses (Pearson et al., 2008) and contact across time between roommates of different races (West, Shelton, et al., 2009), these effects were mediated by roommates' anxiety.

Overall, these results demonstrate that commonality perceptions not only have intrapersonal effects on intergroup anxiety, but interpersonal ones as well—although roommates likely never discussed their commonality perceptions with each other, these perceptions positively influenced the trajectory of their friendship from the perspectives of both partners. What is not clear in this study, as well as in our other studies of roommate relationships, is how this repeated interracial interaction over time generalizes to affect attitudes toward the other group as a whole and orientations to other members of the group. Our research has focused primarily on roommates' dyadic interactions and their orientations to each other.

Although the development of an intergroup friendship is typically one of the most potent contributors to reductions of bias toward other members of the group (Pettigrew, 1998; Pettigrew & Tropp, 2011), friendship formation between roommates may be limited in its effects on intergroup relations, depending on the processes by which this friendship is

achieved. In particular, to the extent that intergroup friendship formation occurs when roommates think primarily in terms of common group identity (West, Pearson, et al., 2009), the salience of their separate racial group memberships may be greatly diminished. A key element for generalizing the positive effects of an intergroup encounter to more favorable attitudes toward the group as a whole is maintaining the salience of the different group identities, which provides the associative links to other group members (see Brown & Hewstone, 2005). Thus, although friendship formation between roommates can reduce intergroup bias generally (Shook & Fazio, 2008a, 2008b; Van Laar, Levin, Sinclair, & Sidanius, 2005), it may be less effective if the friendship is achieved and maintained by ignoring or dismissing their different group identities. Given the social importance of racial group memberships, it is unlikely that race will cease to be a factor altogether in roommate relationships. Nevertheless, future research might consider more directly how the dynamics of friendship formation between roommates might be different or similar to other forms of contact in how it influences, over time, the ways people think about, feel about, and act toward other members of the roommate's racial group.

## SUMMARY AND FUTURE DIRECTIONS

Despite the importance of intergroup friendships for improving intergroup relations generally (Pettigrew, 1997; Wright et al., 1997), to date there has been limited research examining intergroup friendship formation, the processes that critically shape the development across group lines, and how these processes may differ from those

underlying intragroup friendship formation. The present chapter thus considered, both theoretically and empirically, these issues.

Building on research that examines anticipated and initial intergroup contact, we emphasized the importance of social expectations, anxiety, and the different attributions people make for this anxiety in intergroup compared to intragroup exchanges. In general, people have more negative expectations for intergroup than intragroup interaction (Mallett et al., 2008; Shelton & Richeson, 2005) and experience greater levels of anxiety in anticipation of and during intergroup contact (Plant, 2004; W.G. Stephan & C.W. Stephan, 2000). Both negative expectations and anxiety lead people to avoid interaction with members of other groups, and when these interactions do occur they are more fragile and cognitively and emotionally taxing than intragroup interactions (Pearson et al., 2008; Richeson & Shelton, 2010). As a consequence, intergroup friendships are more difficult to establish and sustain over time (Shook & Fazio, 2008a, 2008b) than are intragroup friendships.

Guided by the Actor-Partner Interdependence Model, we proposed that in both initial and sustained interaction it is important to consider how individuals perceive themselves, perceive their partners, and are perceived by their partners in social exchanges. These three different types of perceptions uniquely influence evaluations of the relationship and ultimately the development of cross-group friendships.

With respect to intergroup contact, perceptions of one's partner's anxiety, whether in terms of global impressions (Shelton et al., 2010) or perceptions of specific behaviors (Trail, Shelton, West, 2009), have particularly strong effects on initial intergroup reactions and on friendship formation longer-term, above and beyond perceivers' own thoughts and feelings. Moreover, the perceived or actual anxiety of one's partner impairs relations only for interactions between members of different groups, not for members of the same racial or ethnic group (West, Shelton, et al, 2009). The potential misattribution of anxiety in which anxiety is seen as unfriendliness, which is theorized to occur reciprocally between majority and minority group members (West, Shelton, et al., 2009), can create a cascading effect producing an especially pronounced decline in feelings of friendship between members of different groups (West, Shelton, et al., 2009).

The studies of roommate relations reported in the present chapter add an important element to the study of intergroup interaction through longitudinal analyses: the dimension of time and the role of intervening processes. Besides revealing more negative trajectories for relationships between roommates of the same race than of different races, this work illuminates how emergent qualities of an interaction (time-varying factors) influence subsequent interaction processes and outcomes. This research triangulates on the importance of anxiety, particularly perceptions of a partner's anxiety, on the erosion of intergroup relationships over time. Furthermore, the trajectory of influences that develop throughout the course of sustained interaction can be substantially altered by intrapersonal (time-invariant) factors that people bring with them to the interactions. For instance, concerns about appearing prejudiced have a detrimental effect on intergroup

roommate relations over time, while perceptions of different groups belonging to a common superordinate identity promotes friendship between cross-race roommate pairs over time.

There is considerable research examining the importance of intergroup anxiety on intergroup relations, but most of that research has focused primarily on how people personally experience anxiety. The research reviewed in the current chapter is supportive of this work on experienced arousal, but it also consistently implicates the critical role of the partner's anxiety and what that signals to interactants. Given the importance of perceptions of others' anxiety – which is generally even more influential than one's own experienced anxiety – in intergroup interactions, future research might productively consider the processes that shape these perceptions. We suggest three potential questions to pursue in this direction: (a) What factors influence, and potentially bias, perceptions of the partner's anxiety? (b) Is accuracy in these perceptions beneficial? and (c) What kinds of interventions can facilitate more positive intergroup interaction, both for initial and sustained contact?

With respect to the first question, future research might investigate the cognitive and motivational mechanisms that influence the processes of interpersonal perception. As we reviewed in this chapter, in the expectation and initial stage of interracial interactions, perceptions of one's partner are largely guided by cognitive biases that typically lead to negative outcomes for the self or the relationship. However, whether these cognitive biases continue to exert the same influences on the process of perception over time

remains unexplored. Moreover, the strength of basic cognitive biases on perceptions may change over time as a function of individuals' motivations and goals pertaining to perceptions of their partners. Although the interplay between cognitive and motivational biases have received a great deal of attention in other perceptual domains (see Kunda, 1990, for a review), to date there has been little research in the intergroup domain concerning how individuals' goals and motivations, as well as situational factors, influence judgments made during interactions. Understanding these processes, and how they may differ for intergroup and intragroup interactions, can help illuminate the intergroup dynamics that occur within contact situations.

In terms of the second question we posed, considerable attention has been devoted in social psychology to the detrimental effects of biases in perceptions of members of other groups (Dovidio & Gaertner, 2010), but relatively little work has considered the “flip side” of this issue – the assumption that accuracy in perceptions is beneficial to intergroup relations (cf. Pearson et al., 2008). On the surface, it may seem as though accuracy would positively benefit both partners, given the importance of overcoming communication roadblocks that characterize intergroup interactions. Indeed, there is some evidence that accurate impression formation has positive effects on social judgments and behavior in the context of interracial interactions (Vorauer, 2006; see Chapter 2 by Vorauer, this volume). In addition, the inability of Whites to “read” minorities accurately contributes to minorities' mistrust of Whites and the societal institutions with which they are associated (Pearson, Dovidio, & Gaertner, 2009).

However, accuracy in perceptions is not necessarily the best way of creating and sustaining positive relations, whether intergroup or interpersonal. There is a well-replicated finding in the domain of romantic relationships that evaluations that are overly positive are more beneficial to both partners in the relationship than are evaluations that are completely grounded in reality (see Murray, 1999, for a review). Thus, creating positive biases, rather than true accuracy, may ultimately be critical in creating the quality of intergroup contact that is instrumental for improving intergroup relations generally (West, Pearson, et al., 2009).

The literature on interpersonal relationships, however, suggests a more complex process—one involving accuracy on some dimensions and positive bias on others. Fletcher (2010) recently demonstrated that in personal relationships it is important to have *tracking accuracy*—to know on average how one’s partner is feeling and to know that partner’s ups and downs—and *positivity*—to see one’s partner more positively than that partner actually is. Applying Fletcher’s theorizing to the development of cross-race friendships, it may be beneficial to the relationship as a whole for Whites and minorities to understand how their partners are feeling on day-by-day basis—to know if they are feeling particularly anxious on one day and calm the next—but, at the same time, to also overestimate their partner’s acceptance and friendliness toward them. Future research might therefore investigate directly whether these processes, which have been studied primarily in within-group personal relationships, apply to cross-group friendship formation, and ultimately to intergroup relations generally.

Although the Contact Hypothesis (Allport, 1954; Pettigrew, 1998) identifies the types of conditions (e.g., cooperative interdependence) that are critical to establish for contact to improve relations between groups, applying work on interpersonal relations to contact can suggest other types of interventions to promote intergroup friendship with sustained interaction. For example, the research we have presented in this chapter demonstrates the pivotal role of perceptions of a partner's anxiety, especially for members of different groups, in the development of relationship. Anxiety perceived in members of another group, but not in members of one's own group, is interpreted as signs of unfriendliness and rejection (Dovidio et al., 2007).

Although anxiety is generally higher in intergroup than intragroup interactions (W.G. Stephan & C.W. Stephan, 1985, 2000), to promote more positive intergroup interactions it may be possible to influence the attributions that interactants make for the other's anxiety. Indeed, utilizing the classic misattribution of arousal paradigm, Richeson and Trawalter (2005) demonstrated that individuals who re-attribute their *own* anxiety experienced during interracial interactions to features of the context (i.e., to the one-way mirror in the room rather than to the interracial nature of the interaction) experience their intergroup interaction more positively. The work we have presented suggests that an intervention altering perceptions of the partner's, rather than one's own, anxiety would have particular benefits for interaction over time with a member of another group.

In conclusion, a more comprehensive understanding of relations between groups and how to improve them involves consideration of interpersonal as well as intrapersonal

(e.g., stereotyping, prejudice) and intergroup (e.g., structural) processes. How members of different groups perceive and respond to each other both shape and are shaped by intergroup relations more generally. Moreover, to understand the dynamics of intergroup relations, it is important to study how interactions unfold over time. The trajectories of intergroup interactions are determined not only by the intrapersonal factors (e.g., intergroup stereotypes and other expectations) that people bring to their interactions with members of other groups, but also by factors (e.g., anxiety and perceptions of anxiety) that emerge during the course of the interaction and change over time. Integrating work on intergroup behavior, which identifies the importance of intergroup friendships for improving intergroup attitudes, and interpersonal relations, which illuminates how people form and maintain friendships, can help illuminate ways to promote enduring positive relations and bridge the “racial divide.”

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