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The Contact Space: A Novel Framework for Intergroup Contact Research

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Abstract

This article presents a new framework for understanding research on the intersection between language, communication, and intergroup contact. Contact theory has described a variety of ways in which contact between groups can reduce prejudice and improve intergroup relations. However, the field has become fragmented by the study of a variety of forms of contact whose interconnections have not been elucidated, and it has paid insufficient attention to the language and communicative dynamics of the contact event itself. This article accounts for the variation in forms of contact studied by arraying them in two-dimensional space organized by (a) involvement of self in contact and (b) richness of self-outgroup experience. The former pertains to whether an individual is directly involved in interaction with an outgroup member (vs. merely observing such contact); the latter pertains to the multiplicity of channels and senses through which one experiences the outgroup member. These two dimensions are argued to be largely orthogonal. The two-dimensional space is used to organize mediators and moderators in the field, to specify in detail the intersection between contact and issues of language and communication, as well as to outline areas of particular promise for specific contact interventions.

Keywords

intergroup contact theory, intergroup communication, media richness, self, group salience

Intergroup contact theory is among the more interesting and productive ideas from the past 50 years of social science research (Allport, 1954). Allport suggested that when

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members of different social groups come into contact with one another there is the possibility for more positive attitudes to emerge. For instance, Black and White Americans may emerge from interracial contact with less racist feelings about their respective groups. Although the basic idea is relatively simple, Allport also outlined a variety of conditions that might facilitate the positive effects, and subsequent research has elaborated on both those qualifying conditions and various potential mechanisms by which contact effects occur. The theoretical perspective has resulted in hundreds of research studies over the past half century (Pettigrew & Tropp, 2006) and is one of relatively few social scientific theories to engage policy makers and practitioners (Pettigrew, 1975). Whereas Allport's work is the definitive original statement of this perspective, earlier scholars had made similar points, perhaps most notably Williams (1947). For the purposes of this article, the effects of concern will be defined as the process of inferring from the quality of a particular intergroup experience to more general intergroup attitudes or beliefs.

The majority of work in this area has emerged from social psychology, but the theory is inherently communicative in nature, as it centers on a moment of *contact* between people. Although relatively few research programs have examined the specifics of said contact in detail, the broad parameters of the theory and how it is discussed make it clear that the specific linguistic and interactive dynamics of the contact situation *matter*. Allport discusses that the contact should be pleasant, for instance, something that is presumably manifested in the communicative dynamics of the event. Interest in contact as a communication phenomenon is growing, with attention to interpersonal (Fox, Giles, Orbe, & Bourhis, 2000), group and computer-mediated communication (Amichai-Hamburger & McKenna, 2006), family communication (Soliz, Ribarski, Harrigan, & Tye-Williams, in press), and media effects (Schiappa, Gregg, & Hewes, 2005). However, theoretical frameworks in the area have not kept pace with the growing literature in the field of communication, nor have communication scholars fully integrated the various tendrils of the massive social psychology literature into their work.

In this article, I present a brief review of the intergroup contact literature, including recent developments in extended contact, contact that occurs via either interpersonal or mass media, and imagined contact. Following this, I present a new framework—the "contact space"—and provide illustrations of its utility for understanding and extending research on intergroup contact in terms of (a) mediators and moderators of contact effects, (b) language and communication issues in contact, and (c) practical prejudice-reduction applications.

Face-to-Face Contact

Face-to-face (FtF) contact dominated research in this field until recent years. Extensive reviews of this literature exist (e.g., Dovidio, Glick, & Rudman, 2005; Pettigrew & Tropp, 2006; Wagner, Tropp, Finchilescu, & Tredoux, 2008); therefore, the coverage here will be brief. Allport (1954) suggested that by coming together with one another, people from different social groups would understand that their expectations about one

another were inaccurate, would develop mutual understanding and uncover shared interests, and that from this more positive intergroup attitudes would emerge. Allport also, however, understood that contact could reinforce stereotypes and negative attitudes. He outlined four facilitating conditions for contact—that it should be equal status, supported by authorities, in pursuit of common goals, and cooperative. These facilitating conditions have been studied extensively, and Pettigrew and Tropp's (2006) meta-analysis shows that contact meeting these conditions (typically treated as package rather than examined individually) is more effective in shaping attitudes than contact not meeting the conditions. However, Pettigrew and Tropp also note that these are not essential conditions and that contact can be quite effective even without any of them. They also note, consistent with a number of other current researchers, that contact featuring intimate relationships (particularly friendship) is a useful proxy for Allport's conditions and that it tends to have positive effects.

Challenges to face-to-face contact as a panacea. In spite of the promise of contact theory, certain challenges nonetheless persist. Most broadly, an increasingly multicultural world does not appear to be resulting in substantially greater harmony between groups of people. Despite the ubiquity of intergroup contact in the global village, examples of intergroup conflict are still rife. Many of these conflicts are actually fueled by proximity between groups, itself a form of contact. In other words, and as clearly described by Allport (1954), contact per se does not appear to be a panacea. If relations between groups are conflict ridden and affectively negative, contact can reinforce and exacerbate negative attitudes.

How individual positive contact events generalize to positive attitudes about entire groups is also riddled with complications. Hewstone and Brown (1986) argued that group memberships need to be salient in interaction, and the data support this convincingly (Brown & Hewstone, 2005)—indeed, it is a point raised by Allport. However, salient group memberships increase the likelihood that stereotypes may be applied, increase the probability of group-based anxiety in interaction, and hence the very contact that might be most likely to generalize from individual to group is also contact that has a greater potential to be negative (see Trawalter, Richeson, & Shelton, 2009, for a broader discussion of anxiety and stress in interracial contact). Recent work by Paolini, Harwood, and Rubin (2010) provides data indicating that negatively toned contact increases the likelihood of group salience, thus suggesting that *negative* contact is more likely to generalize to attitudes about groups than positive contact.

Positive outcomes from intergroup contact are also challenged by intergroup *segregation*. Quite simply, the potential for contact to change perceptions is limited if groups rarely encounter one another, which is often the case in problematic intergroup contexts (J. Dixon, Durrheim, & Tredoux, 2005). Finally, and as frequently discussed in the literature, the conditions under which contact is most likely to result in positive attitude change are somewhat unlikely to occur spontaneously. To meet all of Allport's conditions and to have intimate contact capable of generating friendship typically requires *intervention* (J. Dixon et al., 2005). Whereas Pettigrew and Tropp (2006) note that contact per se has effects (and they provide an interesting mere exposure-type explanation; Zajonc,

1968), contact is substantially more effective under the somewhat rarified conditions described earlier (equal status, etc.). This rather pessimistic evaluation of the literature need not result in despair, however. A significant portion of the reservations pertain specifically to FtF contact. Alternate forms of contact have been explored in the literature, and some of these forms offer the potential to mitigate some of the challenges.

Extended Contact

Wright, Aron, McLaughlin-Volpe, and Ropp (1997) describe the extended contact effect, whereby knowledge of positive intergroup relations involving *other people* can influence one's own attitudes about the outgroup ("outgroup" refers to the group to which I do not belong; "ingroup" is the group to which I belong). The four studies reported by Wright et al. convincingly demonstrate that positive attitudinal effects accrue from knowledge of contact or observation of contact, above and beyond actual contact. Work on this extended contact effect—also sometimes called "indirect contact"—has continued, and solid evidence has accumulated (Paolini, Hewstone, Cairns, & Voci, 2004). In particular, having ingroup *friends* who have outgroup friends improves attitudes about the outgroup. Explanations for the effect are diverse, ranging from the impact of the ingroup friends' friendships on perceived norms concerning intergroup relations, and the influence of the observed friendship on seeing the outgroup as "connected to" a close member of the ingroup (thus bringing the outgroup closer to the self).

This literature has not always carefully defined what is meant by extended contact. Going back to the original Wright et al. (1997) study, for instance, extended contact is sometimes defined as "observation of a cross-group friendship" (p. 87) and sometimes as "knowledge of cross-group friendships" (p. 77). Clearly, "knowledge" and "observation" are not isomorphic; observation, for instance, opens up potential mechanisms involving modeling of positive intergroup communication, which knowledge alone would not. The issue of whether a given individual participates in the intergroup interactions of their friends has also been left somewhat "loose" in the literature; typically, studies control for the overall level of the subject's intergroup contact but not for whether they directly interact with the focal friend's friends.

These reservations aside, however, extended contact offers numerous productive routes for reducing prejudice. Knowledge and observation of intergroup relationships is less likely to include high levels of anxiety (relative to actually having contact); interventions aimed at publicizing ingroup targets' intergroup relationships could be administered en masse; and group memberships in such scenarios are almost by definition salient—you have to know the group membership of your friend's friend in order to know that the person belongs to an outgroup.

Mass Mediated Contact

Various lines of research have examined contact between media consumers and outgroup media characters from a contact theory perspective. Schiappa et al. (2005)

focus on exposure to the outgroup and the ways in which it may have contact effects directly parallel to FtF contact. Building on the parasocial interaction literature, they assume that contact with a media character can result in learning about the outgroup, development of affective ties with an outgroup member, and the like. Schiappa et al.'s parasocial contact hypothesis is supported by a considerably larger body of work on the *negative* effects of exposure to outgroup media characters. There is now good evidence that exposure to negative and limited portrayals of minority groups in the media results in negative attitude change (Mastro, 2009). Although such work rarely references contact theory, its basic premises match a parasocial contact model (albeit the dark side of such a model): negative parasocial contact leads to reinforcement of negative stereotypes and attitudes about outgroups and results in negative attitude change. This research draws attention to a major barrier in expecting mass mediated contact to have positive effects on attitudes—if media portrayals of social groups are largely negative, the most likely effects of exposure to such portrayals will be negative (Brown Givens & Monahan, 2005).

Ortiz and Harwood (2007) focus on the viewing of *intergroup relationships* (as opposed to just outgroup characters). Building from a social cognitive theory perspective (Bandura, 2001), these authors suggest that viewing intergroup relationships allows for modeling of positive intergroup behavior; such modeling might be facilitated by, for instance, identification with the ingroup member in the relationship. For a straight viewer who identifies with a straight character on television, that character's friendship with a gay character should result in reduced homophobia; the ingroup (straight) character provides a positive model for intergroup relationships and by extension for positive intergroup attitudes. This mechanism is similar to the idea that extended contact increases the perceived normativity of intergroup contact (see previous section), although Ortiz and Harwood's (2007) perspective is explicitly premised on actual observation and modeling of contact, not just knowledge. Thus, there are direct parallels between the research on extended contact and observing intergroup contact in the media. Both suggest that observing intergroup contact influences attitudes over and above directly experienced contact. Indeed, recent studies have examined the effects of observing media portrayals of contact and have framed the results explicitly as *extended* contact effects (Cameron & Rutland, 2006).

The perspectives described in the previous two paragraphs are not mutually exclusive and, indeed, it is possible that both processes occur simultaneously. Seeing a positive relationship between an ingroup and an outgroup member also involves exposure to the specific outgroup member. Hence, modeling positive intergroup behaviors can occur simultaneously with developing a parasocial relationship with the outgroup member, and as noted by Ortiz and Harwood (2007), these processes may facilitate one another.

Mediated Interpersonal Contact

Recently, research has examined the process and outcomes of contact between individuals that occurs in some form other than FtF (particularly computer-mediated

communication [CMC]; Walther, 2009). This work builds on the idea that mediated interpersonal communication often features reduced cues and less immediacy (e.g., it's often asynchronous, text-based, lacks nonverbals). As such, the communicative dynamics of such contact differ from FtF contact. Two lines of research are particularly relevant here.

Scholars in the social identity deindividuation tradition have investigated the influence of reduced cues on group salience. The reduced cues are seen as reducing individuality, thus resulting in more emphasis being placed on group memberships (Postmes & Baym, 2005). For instance, computer-mediated groups are more likely to develop strong identities and to deal with each other as deindividuated group members than members of groups meeting face-to-face (E. Lee, 2007). Such effects have positive potential in that group salience matters for generalization (Brown & Hewstone, 2005); however, they also suggest that stereotyping and perceptions of outgroup homogeneity may be stronger online.

Scholars in the hyperpersonal tradition have downplayed the deindividuating elements of CMC and provide evidence that attention to interpersonal cues is still strong in online communication and may, under some circumstances, outweigh group-related cues (Wang, Walther, & Hancock, 2009). Walther (2007, 2009) notes a trend toward extreme and idealized impressions in online communication rather than simply a trend to more group-based perception. Elements such as selective self-presentation and biased seeking of confirming evidence can result in a loop by which excessively positive perceptions, for instance, can become confirmed and reified. Scholars in the both the above-described traditions share an interest in the potential for CMC to overcome challenges associated with FtF contact, a potential elaborated in Amichai-Hamburger and McKenna's (2006) Internet contact hypothesis. This work describes how CMC is well-suited to provide contact that meets Allport's conditions, balances positive communication with group salience, and is implementable when FtF contact is precluded by social norms, segregation, or material threats to safety (e.g., Hoter, Shonfeld, & Ganayem, 2009). Amichai-Hamburger and McKenna (2006) also note the possibility for graded contact, where contact moves from situations of simple text-based exchanges, through use of audio and video technologies, and, finally results in FtF interaction. This latter idea will be further developed below.

Imagined Contact

Research has recently emerged concerning *imagined* contact interventions, in which an individual imagines having positive contact with an outgroup member. This exercise yields more positive attitudes toward the outgroup than either a neutral control condition or a condition in which people imagine simply an outgroup member (Turner, Crisp, & Lambert, 2007). Crisp and Turner (2009) present an integrated review of this literature; among the key points they make is that imagined contact is part of a continuum of contact, where imagined contact can be followed by extended contact, and ultimately actual FtF contact. This idea will be further examined later. Recent work is

also integrating work in imagined and extended contact. Shelton and Richeson (2005), for instance, show that imagining a close friend having outgroup friends reduces fear of rejection by the outgroup.

Summary

The above areas are all growing and demonstrating promising effects, but the concept of "contact" may be losing some definition and focus in the process, and the processes by which contact has effects certainly should not be viewed as homogeneous across such diverse literatures. Some terms (particularly *extended contact*) are getting used to cover a wide range of structurally quite distinct situations. Meanwhile, areas that could be exploited are perhaps not being examined, in part because their potential is not intuitive from the current organization of the field. As a result of the rather separate development of the lines of research described above, there has been little discussion of whether mediators and moderators for contact effects might actually be substantially different for the different effects; indeed, without an overarching framework for these different areas of contact research, it is difficult to develop a basis for hypothesizing different processes (but see Paolini, Hewstone, & Cairns, 2007, for a relevant study exploring exactly such issues). Below, a parsimonious two-dimensional framework—the *contact space*—is introduced in a way that captures the variation in the literature as it currently stands and offers productive directions for rethinking and extending contact research. Two dimensions clearly cannot capture the variation in sociohistorical complexities that underlie intergroup contact situations. The framework is instead aimed at providing an organizational frame for the *research* in this area, which has itself sometimes skirted some of the "blood and guts" issues in intergroup relations. This latter concern will be returned to in later sections. I begin by describing the two dimensions that make up the contact space.

The Contact Space

Dimension 1: Involvement of Self in Contact

First, I propose that a continuum of self-involvement accounts for some of the variation in the current literature. In certain types of contact, the self is immediately involved and participating (e.g., when *I* have an FtF conversation, *I* have a parasocial relationship with an outgroup TV character, or I imagine *myself* in an intergroup contact situation). In others, my personal involvement in the contact situation itself may be very low (e.g., when I hear about an intergroup friendship between two strangers). Between these extremes, intermediate levels of involvement undoubtedly apply. For example, my own intergroup contacts *in the past* probably operate at a slightly lower level of personal involvement than my intergroup contacts right now, and observing contact involving a *friend* is likely to involve more of the self than observing contact involving a *stranger*. This idea draws on work by Aron and colleagues (e.g., Aron, Aron, Tudor,

& Nelson, 1991), which suggests that, in close personal relationships, the self expands to include others—intimacy with others is seen as inclusion of those others in the self. Involvement of self captures a good deal of the variation in different versions of the extended contact literature, as well as capturing some variation in media exposure. For instance, developing a parasocial *relationship* with a specific outgroup character (Schiappa et al., 2005) may imply greater involvement of self than disinterested viewing of an intergroup contact situation (Ortiz & Harwood, 2007; see also Cohen, 2001). It is important to emphasize that higher involvement of self is not necessarily better; as is elaborated elsewhere, being highly involved may be counterproductive in some contact situations, and being personally distanced might be precisely what is required for constructive effects.

Dimension 2: Richness of Self-Outgroup Experience

The richness construct has been examined extensively in mass communication and organizational communication research. In this literature, *richness* has been defined in terms of the number of cues and channels available in a given communication context and the availability and immediacy of feedback (Daft & Lengel, 1984). Hence, a continuum of richness might run from FtF communication or live video conferencing, down through telephone conversations and instant messaging, to typewritten and mailed letters. The communication literature has outlined the consequences of limited cues in shaping the nature of communication messages and preferences for communication channels. The intergroup contact literature covered earlier describes a wide range of possibilities in terms of how complex and detailed one's experience of an outgroup member is during contact. Direct FtF contact yields a fully dimensioned, multisensory, and immediate experience of the outgroup member. Viewing an outgroup member on television is somewhat less rich (e.g., it is noninteractive and sensory channels such as smell are lost), and interacting over text-based email is even less rich (e.g., virtually all nonverbal cues are absent, interaction is asynchronous). The second dimension of the contact space captures this variation and helps detail its implications for contact. Imagined contact can be integrated into such a dimension. Most other forms of contact involve an outgroup member external to the self experienced either directly or through some medium. Imagined contact involves only intrapersonal processes. Such contact, although potentially powerful, involves no observation or participation (either mediated or not), there is no "real" outgroup member to be experienced, and hence, in the current framework, it is viewed as relatively impoverished on the richness dimension. As with the previous dimension, being "high" or "low" on this dimension is not a value judgment—in some circumstances the most productive type of contact may be low in richness.

The Contact Space

As illustrated in Figure 1, the two-dimensional field described above provides a framework within which currently studied forms of contact can be understood and their

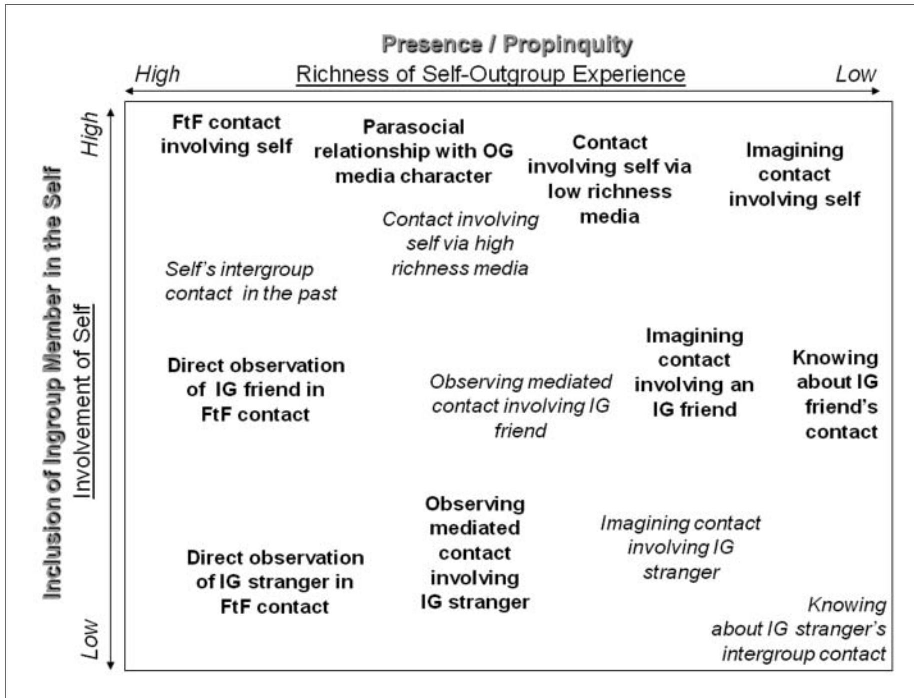


Figure 1. The contact space: A two-dimensional model accounting for variation in studies of intergroup contact

Note: IG = ingroup; FtF = face-to-face. "Contact" is always used to refer to some form of contact between an ingroup member (the self in some areas) and a member of an outgroup. The axes are labeled with both objective labels (underlined) and subjective labels (grey outline font). In the body of the contact space, items in bold are areas already studied in the intergroup contact literature; items in italics are contexts of contact that have not previously been examined.

interrelationships, similarities, and differences can be examined more closely. This area is called the *contact space*. Direct FtF contact is at the top left, reflecting direct personal involvement and high richness of such contact. Knowing about contact between strangers is at bottom right, reflecting the absence of personal involvement in the contact itself, and the low richness inherent in simply knowing about (vs. directly witnessing) the contact.

Types of contact that have received research attention are represented in bold in Figure 1. However, the contact space also suggests new areas of intergroup contact that merit examination (the italicized entries in Figure 1). For example, research has not specifically examined the influence of intergroup contact in a person's past (or whether the amount of time since contact is important), but the contact space opens that area up to study. Such contact might be high on richness (assuming it was FtF contact) but would fall somewhat lower on the involvement of self-dimension due to the distancing of past selves from the present self. Similarly, contact effects from observing mediated

contact between a friend and an outgroup member are suggested by the space. Perhaps the most common contemporary platforms for this would be via the increasingly ubiquitous cell phone or social networking Web sites. For instance, a young adult witnessing an age peer having a cell phone conversation with a grandparent would be a form of partially mediated extended contact. The "ingroup end" of the conversation is directly observed and hence a general idea of the tone of the interaction can be inferred, but the outgroup member's contribution is invisible. Similarly, social networking sites permit knowledge of friends' friendships with others whose (out)group memberships may be apparent from photos, language use, or other cues. These sites often permit observation of interactions. However, such sites rarely display in-depth exchanges and often remain tantalizingly ambiguous about the precise nature of the friendship (e.g., are these close friends or casual acquaintances?). Such contact would be lower still on involvement of self (with precise position varying depending on intimacy of relationship with the ingroup member) and would also score lower on richness than FtF contact (with precise position varying depending on the specific medium; observing a video chat would provide a richer experience of the outgroup member than overhearing a phone call). Other forms of intergroup contact might also be examined within this framework. One area of considerable promise that has gained relatively little attention is the examination of contact between ingroup and outgroup characters in videogame-type settings (Dotsch & Wigboldus, 2008; Kawakami, Phills, Steele, & Dovidio, 2007; Tynes, Giang, & Thompson, 2008). Such contact could vary substantially in terms of contact space placement based on specifics of game design, interactivity with other players, first-person perspective, and the like.

The dimensions in the contact space are conceptualized as orthogonal. It is possible to have contact with an outgroup member in which the self is highly involved but where richness of experience of the outgroup member is low (e.g., imagining FtF contact between self and outgroup member; pen-pal relationships). Similarly, it is possible to have very rich experience of an outgroup member, while not being the person actually having the contact (e.g., sitting at an adjoining restaurant table to an interracial couple on a date and overhearing their conversation). In reality, it is likely that the dimensions are not fully orthogonal; for example, interactivity is one contributing factor in determining richness, and interactivity is clearly constrained by the absence of self's involvement in the contact. Nonetheless, as illustrated in Figure 1, there is very broad scope for examination of these dimensions as independent.

Both objective and subjective labels for the dimensions are provided (represented respectively by the axis labels closer to, and more distant from, the axes). *Involvement of self* can be understood as representing structural features of the situation (fundamentally, whether the ingroup person in the contact is *self* or *other*); however, it also reflects a psychological dimension represented as inclusion of the ingroup member in the self (Aron et al., 1991). Ingroup members who are "closer" to the self (e.g., friends) will have different influences on the self when compared with strangers. Similarly, *richness* can be understood in structural terms—to what extent are cues filtered out of the message exchange between ingroup and outgroup members, is communication (a) synchronous, and the like. However, this variation gains psychological resonance and

power in the form of feelings of psychological presence (K. M. Lee, 2004) or propinquity (Walther & Bazarova, 2008). Richer communication will typically result in a greater feeling that the other person is really *there*; that the participants are copresent. It is reasonable to imagine empirical work that treats the dimensions as objective or subjective, or indeed both (Tao & Bucy, 2007).

In the remainder of this article, various ways in which the contact space helps us understand and extend current theory and research in this area will be elaborated. I first use the contact space to explore mediators and moderators of contact effects (see Baron & Kenny, 1986, for a seminal discussion of the mediator–moderator distinction). The space adds to our understanding of when and where specific variables might be most likely to mediate/moderate contact effects and aids in the identification of new mediators/moderators of contact effects. Next, the role of language and communication processes in the intergroup contact experience will be expanded on, and the contact space will be used to more closely specify which forms of communication might be addressed in which regions of the space. This section includes discussion of forms of communication previously unexplored in this area of study. Finally, the contact space is used to make practical suggestions for when and where specific forms of intergroup contact might be more or less effective, or even counterproductive, in addressing prejudice and tolerance. This discussion will also address how one type of contact might lead to another within the contact space.

Mediators and Moderators of Contact Effects Within the Contact Space

Mediators

A key current concern in the contact literature is the "how" of contact—the mediators that operate to translate contact into more positive attitudes. A large number of these have been proposed, with some drawing more support than others. With the current framework, I propose an organization of mediators in the contact space such that some are more likely to be operational in certain regions. A schematic is presented in Figure 2, with a stronger mediating role for the specified variables being indicated by darker shading in the contact space. Each variable is described in more detail below, beginning with the three variables identified within in Figure 2A (experienced anxiety, self-disclosure, dissonance). These three variables are predicted to have a stronger mediating role in contact effects in the top left of the contact space (particularly in FtF contact, hence the darker shading in that region) and to be weaker mediators in other regions. Figure 2B-E specifies variables that should be more reliable mediators of contact effects in other areas of the space, again as specified by the darker shaded regions. Clearly, other mediators could be included; limited numbers are presented simply to illustrate the utility of the contact space in this regard.

Experienced anxiety. Affective mediators, and anxiety in particular, have received considerable attention as mediators of contact effects for many years (Harwood, Hewstone, Paolini, & Voci, 2005; Islam & Hewstone, 1993). For current purposes,

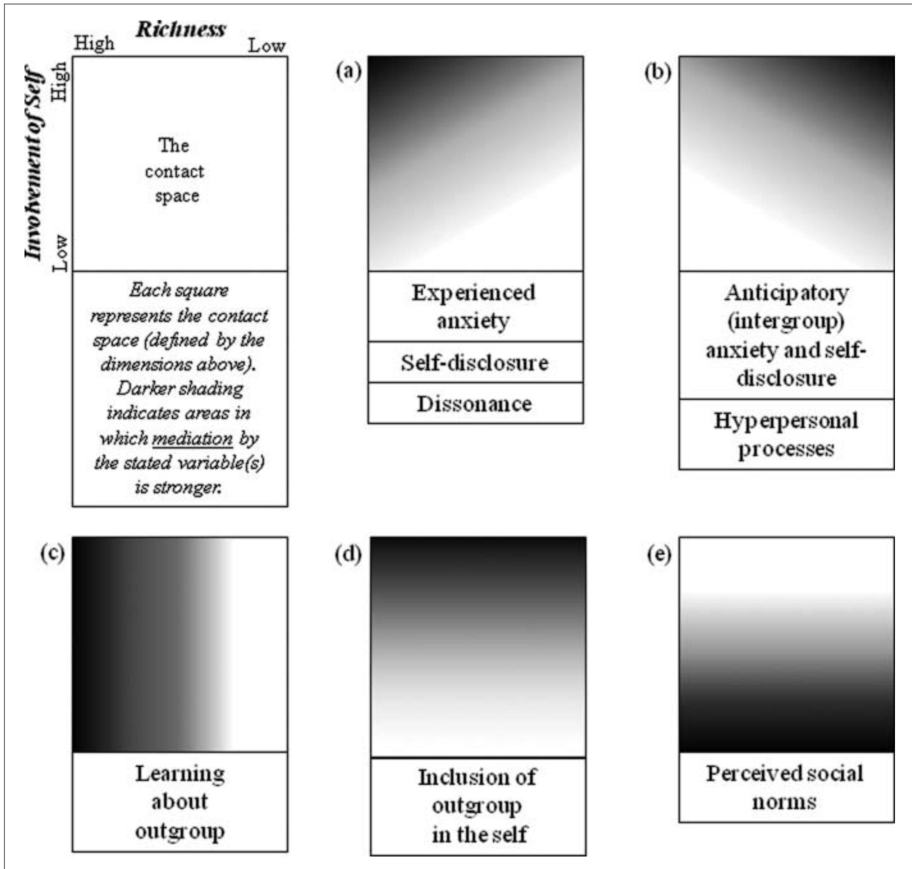


Figure 2. Mediators of effective intergroup contact arrayed in the contact space

experienced anxiety is conceptualized as the immediate anxiety experienced *during* intergroup interaction. To the extent that intergroup contact causes anxiety *during* the intergroup interaction, it will impede effective communication during that interaction, leading to negative outcomes both during and in post hoc evaluations of the encounter (e.g., restricted topic choices, reliance on stereotypes). This type of anxiety should function as a powerful mediator in the FtF context where direct and immediate anxiety about the current ongoing interaction is possible and where it may influence the interaction in a direct and immediate manner (see Figure 2A). Stephan and Stephan (1985) suggest that anxiety occurs because of a fear of negative consequences from interaction. In many cases, the negative consequences they describe are either less likely to occur or more easily managed outside of the FtF context. Just to provide one example, the fear of negative evaluation by either ingroup or outgroup members is

considerably less likely in either imagined contact or contact with a media figure, and hence, experienced anxiety should be less likely to function as a mediator in such contexts (see below for discussion of other forms of anxiety as a mediator in these forms of contact).

Self-disclosure. A number of studies now show that mutual self-disclosure operates as a mediating variable for contact effects (Harwood et al., 2005). It appears to operate through enhancing empathy, individuation, and perspective taking (Turner, Hewstone, & Voci, 2007). As such, self-disclosure should be most powerful as a mediator in the upper-left region of the contact space where there is sufficient self-involvement for responses such as empathy to operate, and where real interaction occurs. Observing self-disclosure between ingroup/outgroup members who are close to the self (e.g., loved media characters, close friends) might also enhance a sense of intergroup trust and empathy in ways that are close to the experience and effects of direct interpersonal contact. In contrast, witnessing self-disclosure between strangers, or experiencing self-disclosure in less rich interactions, is less likely to trigger empathy, at least immediately and dramatically. Hence, mediational effects for self-disclosure are less likely as we move away from the top left of the space, but might occur in less rich contexts when sufficient time is allowed for relationships and meaningful interaction to develop (see Walther, 2007, for this argument pertaining to computer-mediated communication). Other interpersonal processes merit attention as potential mediators: conflict, conflict resolution strategies, storytelling, and use of humor all appear promising, and all should have their strongest effects in this upper left area.

Dissonance. Pettigrew (1998), among others, has noted the power of behaviors in shaping attitudes. When prejudiced individuals engage in structured, positive interaction with an outgroup member, the disconnect between their behaviors and attitudes should trigger dissonance, and one potential resolution is a positive attitudinal change concerning the outgroup. This is likely when actual behaviors are being engaged in by the self, predominantly near the top of the space. Dissonance processes might even occur in imagined interaction; recent work on false memories, for instance, suggests that dissonance-like processes may influence attitudes when individuals come to believe that they have engaged in actions with outgroup members that in fact they have not engaged in (McIntyre, Lord, Lewis, & Frye, 2004). In contrast, dissonance processes seem very unlikely to mediate attitude change when witnessing contact between strangers, for instance. Such contact is distant from the self and hence will be unlikely to trigger a sense of inconsistency with one's personal attitudes. As a cautionary note, dissonance can be reduced in many ways, and not all of them are as constructive as the positive attitude change hypothesized here (e.g., work on prejudice suppression; Crandall & Eshleman, 2003).

Anticipatory mediators. In addition to the direct experience of anxiety during an interaction, anxiety may also operate as a mediator when considered in terms of *anticipatory anxiety*: anxiety about *future* intergroup interactions (Stephan, Stephan, & Gudykunst, 1999). Having a positive intergroup interaction might result in reduced anticipatory anxiety, independent of whatever anxiety that might be experienced in

engaging in the interaction itself. Such reduced anxiety about future interactions might then influence intergroup attitudes. As illustrated in Figure 2B, the mediating effects of anticipatory anxiety are hypothesized to be particularly strong with experiences of imagined contact. Such situations are likely to feature little experienced anxiety pertaining to the interaction itself (except for the most imaginative people—see Moderators, below), and so anxiety effects are more likely to manifest in terms of anticipatory anxiety. In FtF situations, anticipatory affect may also mediate contact effects; however, such effects seem likely to be somewhat redundant with the effects of experienced anxiety—experienced anxiety is probably the primary driver of anticipatory anxiety effects in such situations.

A similar point can be made concerning self-disclosure. The earlier argument pertains to the importance of self-disclosure *within* a particular encounter; such effects should be most important when actual interaction is occurring. Turner, Hewstone, et al. (2007) show that *anticipation* of self-disclosure can also mediate contact effects. Using a measure of "*intention* to self-disclose to outgroup members in the future," self-disclosure mediates *extended* contact effects.

In the case of both anxiety and self-disclosure, the mediating role of the variable *during* a specific encounter versus *in anticipation of* future encounters has not been made in the literature, and hence, both terms are sometimes being used in substantively different ways. I urge careful distinction between the two uses. Whereas anticipatory anxiety and anticipatory self-disclosure may function broadly across the contact space, their unique promise is probably in areas outside of FtF contact, because in FtF contact the experienced and anticipatory variables are likely to be somewhat redundant (Crisp & Turner, 2009). There may interesting connections here between anticipatory variables and behavioral *intentions* in contemporary models of behavior change, at least when considered in terms of behaviors such as self-disclosure (Fishbein & Cappella, 2006).

Hyperpersonal processes. The hyperpersonal model pays particular attention to the unique possibilities that CMC allows (e.g., editing, pausing before "speaking") as opposed to its limitations. The model describes, in particular, how such affordances lead to exaggerated or idealized perceptions of an interaction partner. Clearly, exaggerated or idealized perceptions of a partner might be critical processes in determining the outcome of intergroup contact and hence these processes are important considerations with contact that is low in richness. A positive email interaction might lead to (perhaps unrealistically) glowing perceptions of the outgroup; a negative email could result in overly negative inferences. Similar levels of idealization and exaggeration are plausible in the realm of imagined contact, in this case due to the unique affordances of imagined interaction (e.g., the partner's behaviors and responses are entirely malleable). Hence, the upper right area of the space seems most amenable to hyperpersonal processes serving as mediators (Figure 2B), because it is here that variation in such processes is likely to be apparent. However, it certainly could be worth considering processes related to idealization and exaggeration in contact that is low in self-involvement. For instance, when we observe our friends' intergroup relationships we may believe them to be more positive than they actually are because they keep their fights private and we only see them being nice to each other in public.

Learning about the outgroup. Ever since Allport, learning about the outgroup has been hypothesized to be a powerful mechanism driving contact effects. Although some recent analyses have downplayed the cognitive effects of contact (Pettigrew & Tropp, 2008), this may be due to a heavy reliance on *affective dependent variables* in the literature. Cognitive mediators such as learning may be more powerful with cognitive dependent measures (e.g., beliefs). Within the contact space, a mediating role for learning about the outgroup is predicted where there are opportunities to engage with or observe outgroup members—predominantly the left side of the space (see Figure 2C). Extended contact offers this possibility in the form of observing outgroup members in interactions with ingroup members. Learning is also possible in computer-mediated interactions with outgroup members and through traditional mass media channels. The latter makes clear the possibility that learning about the outgroup may not always be accurate or positive. For instance, T. Dixon (2008) shows that White television viewers who consume high volumes of local news come to believe that Black people are violent and heavily involved in crime. These viewers have clearly "learned" from their mediated intergroup contact experience, but not in ways that proponents of contact theory would welcome. Mediation via learning is less likely at the extremes of low richness media (e.g., imagined contact does not yield knowledge—at least not in the traditional sense).

Inclusion of outgroup in the self. As an extension of the self-expansion model (Aron et al., 1991), Wright et al. (1997) suggested a mediating role for inclusion of outgroup in the self as part of the extended contact hypothesis. According to this argument,

> In an observed ingroup-outgroup friendship, the ingroup member is part of the self, the outgroup member is part of that ingroup member's self, and hence part of myself. Presuming that the outgroup member's group membership is part of what one has included of that outgroup member in myself, then to some extent the outgroup is part of myself. (p. 76)

I suggest that inclusion of outgroup in self may serve a mediating role in almost any area where *self* is involved. Some level of connection to the outgroup member in the contact situation is required, either directly or through an intermediary who is included in the self (e.g., a close ingroup friend, a beloved television character). In contrast, this form of mediation is unlikely in situations where the self is uninvolved, such as knowledge or observation of strangers' intergroup contact (see Figure 2D).

Perceived social norms. Norms are most likely to be effective mediators when the contact situation provides some information about other *ingroup* members' attitudes or behaviors (Figure 2E). For example, when observing an ingroup friend engaging in positive intergroup contact, I might come to believe such contact is acceptable and approved of by my peers. Such beliefs might then reasonably influence my attitudes (Ata, Bastian, & Lusher, 2009). As such, the effects of extended contact and exposure to mass media seem particularly likely to be mediated by norms, whereas direct personal contact will be less likely to influence perceived norms (although it is possible for my behavior to influence my perceived norms; Rimal, 2008). Whether effects on

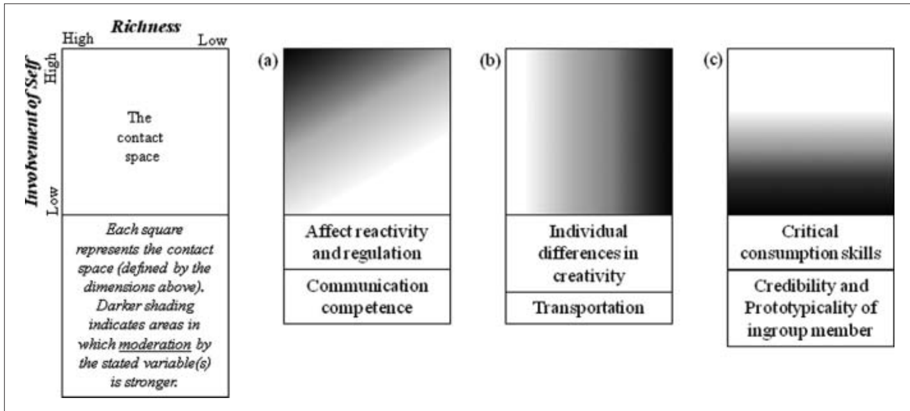


Figure 3. Moderators of effective intergroup contact arrayed in the contact space

norms differ for actually *observing* intergroup contact versus *imagining or hearing about it* has not been examined in the literature. However, such contrasts would be interesting in terms of understanding how to design effective interventions in this area. It is worth noting that Allport's (1954) concerns about institutional support bear on arguments about norms. In this case his arguments are extended to apply to peers as well as authorities.

Moderators

Some moderators of intergroup contact effects are sufficiently well supported that they appear to have generality across contexts of contact. I will not dwell here on the function of group salience or typicality, which appears to be essential on at least a low level in order for contact to generalize, no matter what the type of contact (Brown & Hewstone, 2005). Rather, I focus on factors that are theoretically likely to moderate the effects of contact in *some* areas of the contact space but *not* others—local moderators rather than global moderators. The general patterns are illustrated in Figure 3.

Affect reactivity and regulation. Given the centrality of anxiety and other emotional processes to the contact experience, it is surprising that no contact theory work has examined individual differences in either affective reactivity (Timmermans, Van Mechelen, & Nezlek, 2009) or regulative abilities (Gross & John, 2003). Broadly, both reactivity (the tendency to affectively react strongly and quickly to stimuli) and regulative capacity (the ability to control one's affect) should influence the extent to which people get "caught up in" the affective flow of the interaction. Hence, whether the effects of a specific contact situation are positive or negative, I predict that those who are highly reactive and have low regulative capacity are more likely to experience extreme responses. Those with more affective control should respond in a more

controlled manner. Thus, larger positive and negative effects of contact are predicted among more reactive participants. Such moderator effects should be more apparent in situations that are affectively most involving and which require immediate and real-time affect management (i.e., FtF interaction; see Figure 3A and Paolini et al., 2007). In situations further from the direct FtF scenario, affect reactivity/control will be less influential. For example, computer-mediated communication offers considerably more space and time to manage emotion, hence reducing the moderating impact of immediate emotional skills.

Communication competence. As with emotional skills, interpersonal skills can affect how interactions unfold and the extent to which participants can manage the flow of interaction to yield desired outcomes and mutual satisfaction (Flora & Segrin, 1999). Individuals with more developed social skills should be able to manage FtF intergroup contact situations such that there is a greater chance of mutual satisfaction and positive effects, particularly insofar as their social skills permit simultaneous maintenance of group salience and positive affect, for instance (Arasaratnam, 2007). These skills may be general or may be specific to intergroup interaction, for instance, as might be obtained via extensive previous intergroup contact (Blascovich, Mendes, Hunter, Lickel, & Kowai-Bell, 2001). Those with less sophisticated skills will have a disadvantage in managing the flow of FtF intergroup interaction to a positive outcome. The effects of these skills are likely to persist into mediated interactions, although the specific skill sets that help people manage CMC, for instance, may not be isomorphic with the skills that aid in FtF interaction (Keaten & Kelly, 2008). Hence, within the contact space the moderating effects of competence are predicted to be strongest in the upper left (Figure 3A), but different patterns might be observable when considering skill sets unique to contexts other than the FtF setting (phone, online interaction, etc.).

Individual differences in creativity. For imagined contact interventions and situations in which the subject merely *knows about* or *imagines* contact without experiencing it, the ability to imagine detailed and complex encounters will moderate contact effects. There seems to be little scholarly consensus on the specific variables that might underlie such individual variation, but differences in certain forms of intelligence (Furnham, Batey, Anand, & Mansfield, 2008) or cognitive complexity (Clark, 2009) seem likely candidates. Individuals who imagine simplistic conversations or who are unable to generate a multidimensional imaginary partner should demonstrate weaker effects when compared with those who generate richer and more cognitively engaging mental pictures. Such effects should increase the effectiveness of imagined contact interventions for certain individuals; the effect of these variables in more direct contact situations should be lower.

Transportation. Transportation is the phenomenon whereby individuals become deeply involved in a narrative or story to the extent that they feel "transported" by it (Green, Brock, & Kaufman, 2004). On the left-hand side of the contact space, the person really IS there, therefore transportation issues should be relatively unimportant (although *conversational involvement* is perhaps worthy of investigation as a parallel). With lower richness, feelings of being present in the interaction, message, story, or

imagined event should enhance involvement and exacerbate contact effects, whereas feelings of being detached or uninvolved in the event should yield smaller effects. Thus, moderating effects of this variable are predicted on the lower richness end of the contact space (Figure 3B). Transportation effects are a product of individual differences/ tendencies toward transportation (transportability; Bilandzic & Busselle, 2008), as well as specific message effects; some messages are inherently more engaging (e.g., those with high narrative fidelity; Fisher, 1984) and will be more likely to yield transportation.

Critical consumption skills. When *observing* contact, the ability to critically process the messages being consumed is crucial. Individuals who have minimal media literacy skills, for instance, might be more likely to unquestioningly internalize media messages portraying intergroup conflict or threats from outgroups (Ramasubramanian, 2007). Those with higher levels of media literacy should have a greater tendency to consider such messages in the context of their daily experiences and with an understanding of media biases and thus should be less influenced. Thus, and similar to the effects of affective reactivity, the moderating effect here should operate in terms of effect sizes—larger effects for people with lower skills levels. The direction of the effect is dependent on the specific stimuli being considered. Although less studied, presumably similar processes might occur with extended contact, with some people more likely to unquestioningly generalize from a friend's intergroup experience (positive or negative), and others less so, perhaps as a function of cognitive complexity, education, or some similar construct. For both this variable and the next, the effects make sense only when contact is being observed; when someone else is actually having the contact. Hence, moderating effects of these variables should occur in the lower regions of the contact space (Figure 3C).

Ingroup member credibility and prototypicality. In situations featuring an ingroup member other than the self, characteristics of the ingroup member will be critical to the degree of influence of the contact experience. Specifically, ingroup members seen as credible and representative of the ingroup will have more potential to influence the subject than those who are viewed as atypical or as lacking credibility. A nonprototypical ingroup member may be treated as a black sheep—someone to be distanced from the ingroup as much as possible (Marques, Abrams, & Serôdio, 2001). If such a person is seen consorting with the outgroup, other ingroup members are unlikely to internalize or model the black sheep's behavior, and hence, observing such contact will not yield positive attitude change. Moderating effects of this variable are likely whenever the ingroup member is not the self; these processes would make little sense if the ingroup member is the self.

Language and Communication Issues in the Contact Space

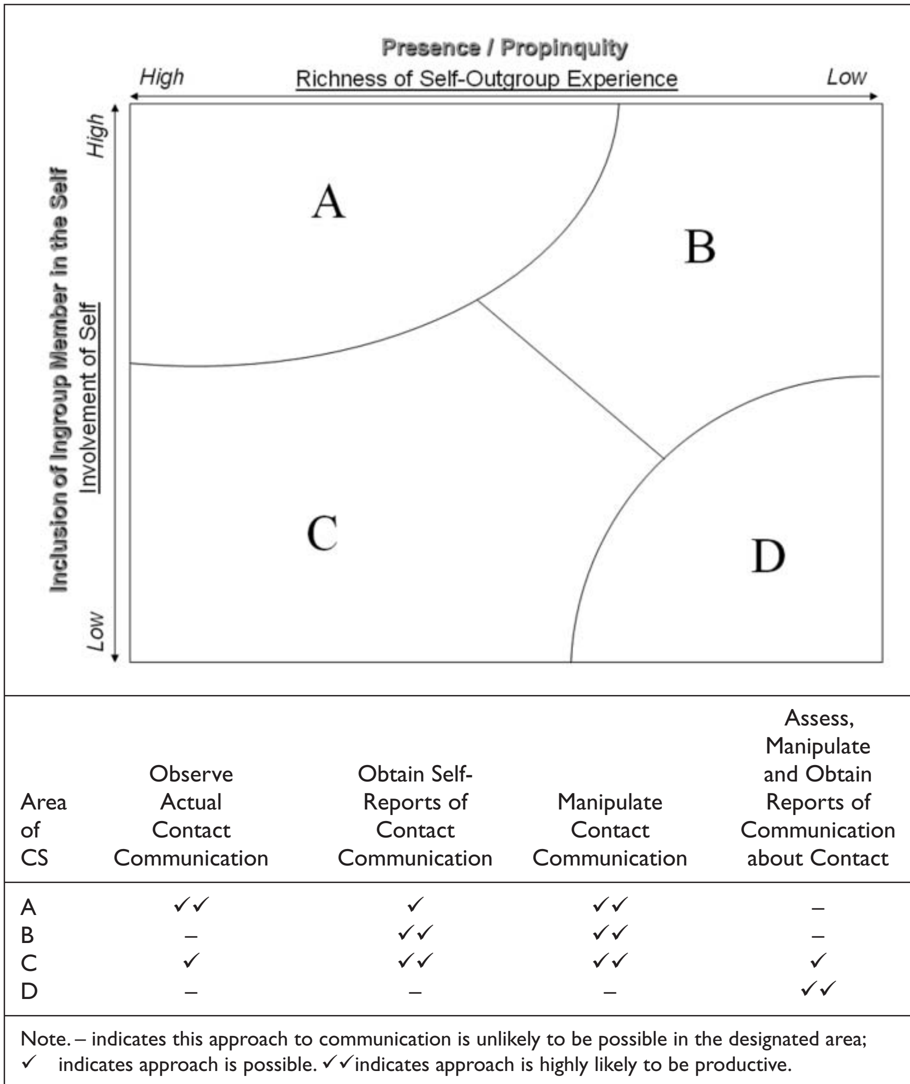
As has been suggested elsewhere in this article, research on the specific linguistic and communicative parameters and dynamics of intergroup contact is sparse. The contact *event* is a bit of a black box—people disappear into it and emerge with altered attitudes. We know relatively little about what they do during the contact itself. As described

earlier, a few studies have looked at self-reports of specific communication behaviors (e.g., self-disclosure). There are also broader literatures on intergroup communication (Giles, Reid, & Harwood, 2010) and intercultural communication (Gudykunst, 2005), which reveal aspects of what goes on when groups communicate. However, the specifics of communication in *contact* have been underexamined and undertheorized.

One approach here is to begin with the Brown and Hewstone (2005) perspective prescribing positive and group-salient contact as the ideal to improve intergroup attitudes. With that premise, we can consider specific types of communication that might achieve such an outcome. Examples include the following:

- Group-relevant questions that exhibit genuine curiosity and interest in the other's group membership ("How long do prayers last at your mosque?")
- Demonstration of interest in outgroup culture and concerns ("I've always loved Zafón's writing.")
- Group-based compliments ("I think English food is a lot more appetizing than it's reputed to be.")
- Open discussion and demonstration of awareness of group-based prejudices ("A lot of people don't like Mexicans, it's true.")
- Disclosure concerning group-related practices and issues ("Sukkoth is crazy—we build a big hut in the back yard and eat all our meals in it!")
- Open and nonjudgmental acknowledgement of group differences and stereotypes ("Do you think it's true that American tourists are louder than others?")
- Group-related humor, perhaps particularly when targeting the ingroup and "playing with" stereotypes ("It's not true that we all eat dogs, but I might make an exception for your dog, he looks pretty tasty!")

Following a theme in the literature, most of these forms of communication will work better in the context of an ongoing friendship, where the motives for such communication are unlikely to be challenged or questioned. This returns us to Pettigrew's (1998) longitudinal model whereby the introduction of group salience is more likely to be effective (or less likely to be counterproductive) when it occurs on solid interpersonal grounds. Without a relational context, each of the above forms of communication could easily be implemented clumsily or in such a manner as to increase group-based defensiveness and intergroup tension. Nonetheless, with appropriate sensitivity to partner and context, at least some of these communicative forms could be initiated even in initial encounters and might serve to raise group salience in ways that do not also raise negativity. Indeed, it is possible that one of the mechanisms by which salience and negativity come to be related is the uncertainty or anxiety associated with feeling that group memberships can *not* be comfortably addressed (i.e., groups might be particularly salient, and negatively so, precisely because they are NOT being mentioned). If that is the case, then providing people with constructive strategies for getting groups "on the table" might be quite effective in overcoming such concerns and adjusting the valence–salience connection. Put differently, even a clumsy attempt to



Area of CS	Observe Actual Contact Communication	Obtain Self-Reports of Contact Communication	Manipulate Contact Communication	Assess, Manipulate and Obtain Reports of Communication about Contact
A	✓✓	✓	✓✓	–
B	–	✓✓	✓✓	–
C	✓	✓✓	✓✓	✓
D	–	–	–	✓✓

Note. – indicates this approach to communication is unlikely to be possible in the designated area; ✓ indicates approach is possible. ✓✓indicates approach is highly likely to be productive.

Figure 4. Communicative constraints and opportunities across the contact space

raise group issues might be appreciated as addressing the elephant in the room and might result in more positive outcomes than the most graceful avoidance of the topic. Recent data from Trawalter and Richeson (2008) indicate that this is true for minority participants in intergroup contact. Black people in interracial contact were less stressed when talking about race issues as compared to talking about a neutral topic.

Figure 4 provides a preliminary elaboration on how such discussion of communication fits with the contact space. The space is divided into four somewhat discrete areas. Area A represents *actual interaction* between a subject and an outgroup member, either FtF or via some form of interactive media. Area B represents *imagined contact*. Area C represents *observed contact*—situations in which a subject witnesses intergroup interaction in which she/he is not a direct participant. Area D represents *knowledge of contact*—situations in which a subject learns that contact has occurred or is occurring but does not witness or participate in it. These four areas imply different constraints for assessment of communication processes and for communication-related interventions, as summarized at the bottom of the figure and elaborated below.

One issue is whether actual communication in contact can be directly observed (e.g., by a researcher). As shown in Figure 4, it is reasonable to think that this might occur under some conditions in Areas A and C. In contrast, communication is unobservable or unlikely to be observed in Areas B (imagined contact) and D (knowledge of contact). Where contact is directly observable, communication processes of interest can be directly examined (e.g., by coding transcripts for a feature such as group-based questioning). Observation of contact is somewhat more likely and reasonable in Area A than in Area C, simply because once a person is recruited for research, the options for examining *that* individual's communication are considerably broader than the options for examining the communication environment to which they are exposed. However, mass media portrayals of contact that a person has observed may be readily available for detailed analysis of the actual contact event.

Independent of whether contact can be directly observed, in many cases it can still be assessed via self-reports (see column 2 at the bottom of Figure 4). In Areas A and B this would come in the form of reports of one's own and one's outgroup partner's behavior (e.g., by asking whether the person asked or received questions about his/her ethnicity/religion, etc.; in Area B, of course, these would be reports of what was imagined). In Area C, such reports could be provided secondhand (e.g., by asking whether the individuals being observed asked or received questions about their ethnicity/religion, etc.). Such reports seem particularly critical in Areas B and C because in the former this is the sole point of access to communication and in the latter it is the most probable point of access.

As can be seen in column 3 of Figure 4, Areas A, B, and C all offer scope for *manipulating* the communicative content of contact, and this is likely to be productive in all three areas. In Area A, this manipulation could occur via training or instructions to engage in particular behaviors (e.g., group-based questioning). Teaching people effective and sensitive ways of addressing group memberships and being able to talk about them constructively should lead to more positive and generalizable outcomes. In Area B, this would occur via instructions as to what to imagine in the scenario (e.g., instructing subjects to imagine that at some point in the conversation they ask the target a question about being a member of the specified group). In Area C, manipulation would occur via constructed scenarios, scripts, or videotapes of ingroup and outgroup individuals communicating, with the designated form of communication either present

or absent. If observing intergroup contact has effects, then observing contact that commingles positive and group salient interaction should be particularly effective. When the observed communication is a mass media message, the power of observed communication becomes apparent; a single highly effective contact event could be disseminated to a very large audience simultaneously.

Area D is excluded from the discussion up to this point, because actual contact (and hence communication-in-contact) is almost by definition absent in such cases. However, Area D does carry important and interesting communicative implications. If we obtain knowledge of intergroup contact without observing or participating in it, then that knowledge is probably *obtained* communicatively. If we know that Seal is married to Heidi Klum, it is because we saw it on *E!*; similarly, we might learn about our Jewish coworker's Muslim girlfriend when another coworker tells us about it. Such situations open a different realm of communication for exploration—communication *about* contact. Communication about contact is fundamental to the understanding of contact that we merely "know about" because it is in the description of such contact that meaning is assigned to it. Communication about contact conveys whether the contact is judged as good or bad and tells us whether group memberships are relevant or irrelevant to an understanding of the relationship.

Communication about contact is also relevant in Area C; in such settings we may see contact occurring, but we may also get information about the contact independent of the observation. A straight person (X) may see her straight friend (Y) interacting with a gay friend (Z), but X and Y may also talk directly about Z, and X's understanding of the Y–Z relationship will be shaped by both sources of information. Communication about contact is directly observable, and information about it could also be obtained via reports about it. It is also manipulable; in particular, gossip about celebrity relationships could easily be manipulated in the form of news articles which might emphasize the relevance of the group membership to the relationship, or which might indicate support or disdain for the relationship (presumably with the group membership either relevant or irrelevant to that support/disdain). To my knowledge, very little work exists that bears on how contact is learned about and discussed, yet it may be in such talk that people make "sense" of contact and what it means for them and their peers. Finally, the discussion of communication about contact suggests ways in which work on intergroup contact may merge into other prejudice reduction strategies such as intercultural training (Cargile & Giles, 1996) and explicitly persuasive messages about stereotyping and tolerance (see Paluck & Green, 2009).

I close this section with two final disclaimers. First, the emphasis here has been on the direct and topical addressing of group salience. Group salience could also be raised by nonverbal cues (e.g., emphasizing accent/language choice; Giles & Ogay, 2007), more subtle discourse markers (e.g., a topic or style that is stereotypically characteristic of a particular group; Coupland, Coupland, Giles, & Henwood, 1991), lexical markers of group membership (Harwood, Raman, & Hewstone, 2006), or many other language factors (Scherer & Giles, 1979). The current discussion is not meant to discount such phenomena but rather to (at least initially) emphasize the most direct manner in which

communication variables might implicate group salience: making groups the subject of conversation.

Second, at least one other model exists that addresses communication in the contact situation. Fox and Giles (1993) present a model of communication accommodation in intergenerational contact settings that provides a very helpful framework within which language and communication might be more carefully addressed in intergroup contact. Their model is somewhat broader than the current effort. It emphasizes more macro-level parameters related to intergroup understanding and satisfaction at the level of attuning speech and accommodating individual needs and desires in conversation. As such, the model is perhaps a little more focused on achieving positive valence, with somewhat less to say about achieving generalization. Nonetheless, the model is an alternative that is worth pursuing and that may prove to be complementary to the current framework, addressing as it does various precursors and consequences of communication in a manner that goes beyond the capacity of the contact space. The model also provides a useful reminder that accommodation theory (Giles & Ogay, 2007) provides a sophisticated framework for understanding multiple positive and negative communication behaviors in contact. This theory may help structure knowledge of how various forms of communication in intergroup contact (e.g., self-disclosure, competence, etc.) can be jointly understood. The theory also forces attention to the means by which positive intergroup interaction is achieved: not merely by enacting specific behaviors but rather by doing so with appropriate consideration of the needs, goals, and identities of one's interaction partner.

Practical Application of the Contact Space in Prejudice-Reduction Interventions

The contact space stimulates some new practical thoughts about how contact interventions might address intergroup prejudice. In this section, some suggestions for matches between specific intergroup contexts and particular regions of the contact space are provided: What types of contact intervention might work best for what types of intergroup context? Second, I discuss how various types of contact could complement one another: How might we shift around the space to achieve maximum positive effects of intergroup contact?

Intergroup Contexts

Classic FtF contact is well suited to situations of *aversive prejudice*—when participants do not explicitly endorse overt hostility or negative attitudes but, nonetheless, harbor implicit or uncontrollable negative feelings or anxieties (Dovidio & Gaertner, 2004). Intensive FtF contact may be the most productive way to address those attitudes, with mere exposure effects perhaps being operational (Pettigrew & Tropp, 2006). Deep-seated uncontrollable affective responses may only be overcome by repeated positive conditioning concerning the outgroup and that contact needs to address

prejudices in the most direct manner possible. Areas elsewhere in the contact space might actually be counterproductive in reducing aversive prejudice. As noted by Coover (2001), for example, *observing* contact between groups in the media can reinforce and bolster explicit antiracist ideologies while simultaneously encouraging a level of comfort and sanctimoniousness concerning one's own lack of prejudice. If I feel good about seeing an interracial interaction on television, it might make me *less* likely to introspect about subtle ways in which I still harbor prejudice or to seek out direct contact myself. As noted earlier, however, for FtF contact to be effective it is helped greatly by occurring under Allport's (1954) somewhat idealized conditions. Uncontrolled and unstructured intergroup contact may be substantially less predictable in terms of outcomes. FtF contact is also more likely to be successful when time is available for contact to move through longitudinal stages, in particular stages that deemphasize group memberships early on, and reemphasize them once a solid basis for a relationship has been developed (Pettigrew, 1998). One-off conversations thus do not present the potential that, for example, roommate relationships might (Shook & Fazio, 2008; Van Laar, Levin, Sinclair, & Sidanius, 2005).

Moving away from the top left, it is possible that the two dimensions of the space address two major issues—uncertainty and anxiety (Gudykunst, 1995)—which themselves might be symptoms of two fundamental dimensions of intergroup contexts—segregation and hostility, respectively. In segregated situations, contact is restricted by geographic and other physical barriers (J. Dixon et al., 2005). Such situations may require contact that is lower in richness (particularly contact through some form of media) and may also be characterized by considerably uncertainty about the outgroup as a result of the absence of regular contact. Distance and segregation are well suited to the development of inaccurate beliefs and myths, a sense of mystery or exoticism concerning the outgroup, and a serious lack of knowledge. Contact through interactive media (e.g., email) provides intergroup interaction that overcomes physical segregation and geographic isolation. Such contact may reduce uncertainty through gaining knowledge of outgroup members and by successfully negotiating intergroup interaction (Berger & Bradac, 1982). Being able to manage an interaction with an outgroup member, even a low richness interaction, should provide a sense of comfort that communication with "them" is possible. Hence, segregated intergroup contexts seem suitable for interventions that extend into the right-hand region of the contact space. In contrast, highly segregated environments provide relatively few options for extended contact (if groups are segregated, then even my friends will not have outgroup friends), and thus the vertical dimension offers fewer opportunities for helping in such situations (although observations of interactions in the media could serve such a function if they are available).

On the other hand, contexts that are high in intergroup hostility (even if somewhat more integrated) may be more effectively addressed by considering the vertical dimension of the contact space. Hostility is associated with anxiety or even anger. Distancing of *self* from the contact environment is well suited for overcoming anxiety, or at least minimizing the impact of anxiety on the contact event. Thus, forms of extended and

observed contact provide a route by which individuals can become more comfortable with the concept of contact, observe it modeled, and ultimately consider moving toward engaging in it. Low richness contact, on the other hand, may be counterproductive here. Ellis and Maoz (2007), for instance, show that computer-mediated contact between Israeli Jews and Palestinians is often characterized by negative and unconstructive argumentation, not a recipe for successful contact outcomes.

These comments are a little speculative and do not address the massive variation in intergroup contexts. However, research on contact theory has sometimes paid insufficient attention to the specific dynamics of the intergroup *context* being examined. The current discussion provides a starting point for suggesting that different forms of contact might be better (or worse) suited to specific intergroup contexts. It also provides an initial set of hypotheses to examine such differentiated effectiveness: In segregated settings or those characterized by anxiety, low richness contact will be most effective; in settings marked by intergroup hostility or anger, contact that is low on self-involvement will be most effective.

Complementary Forms of Contact

The contact space is not only a space for organizing research literature but also a space *through which people can move*. Conceptualizing contact as a process that has the potential to lead to more and different kinds of contact is not a new idea. Crisp and Turner (2009) note how imagined contact can be a prelude to extended and actual contact, reducing anxiety levels about the outgroup prior to "real" contact. Similarly, Amichai-Hamburger and McKenna (2006) note that low richness media contact can be a springboard for higher richness contact. The current model suggests a broad repertoire of pathways through the contact space. For instance, *hearing about* (positive) intergroup contact between strangers (bottom right of the space) might stimulate attempts to *observe it* (visiting places where it's occurring, seeking media portrayals of it, seeking friends who engage in it—bottom left of the space). Such observation could lead to *imagining* self in the same situation (top right of the space). Actual contact could then be tried using interpersonal media (e.g., Internet chat rooms—top middle of space), leading ultimately to FtF communication (top left of space). Numerous paths through the space might be possible, all moving from areas in the lower or right side of the space and toward the upper left, albeit perhaps in nonlinear trajectories. Building on the previous section, it is possible to imagine a general trajectory through the space whereby anxiety and hostility are reduced by interventions in the lower area: Such interventions cause psychological shifts in the acceptability of contact and the normative nature of tolerance. Presuming such shifts occur, interventions on the right side of the space address residual uncertainties concerning the outgroup, reduce social distance, increase willingness to consider real contact, enhance egalitarian norms, and build intergroup empathy and trust (Nadler & Liviatan, 2006). This opens the door to interventions in the top and left of the space, which address residual unconscious or aversive prejudices.

Conclusion

Contact theory has persisted for more than 50 years and has generated a huge body of cross-disciplinary research. It is among the most promising avenues for reducing prejudice and encouraging positive intergroup communication practices. The contact space draws on the language, communication, and social psychology literatures and presents an integrative model that incorporates insights from both. The contact space should trigger research to investigate predictions about mediators and moderators, language and communication processes, and the circumstances under which various forms of contact are most effective. Notable issues unaddressed in this article include the details of group salience and typicality and whether their influence varies across the space, the implications of the contact space for research examining perceptions of outgroup heterogeneity, and the roles of multiple group memberships and identities in influencing contact across the space. These represent challenges and also opportunities for the contact space in helping us address prejudice and discrimination in the world.

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Bio

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