Can Imagined Interactions Produce Positive Perceptions?

Reducing Prejudice Through Simulated Social Contact

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The contact hypothesis states that, under the right conditions, contact between members of different groups leads to more positive intergroup relations. The authors track recent trends in contact theory to the emergence of extended, or indirect, forms of contact. These advances lead to an intriguing proposition: that simply imagining intergroup interactions can produce more positive perceptions of outgroups. The authors discuss empirical research supporting the imagined contact proposition and find it to be an approach that is at once deceptively simple and remarkably effective. Encouraging people to mentally simulate a positive intergroup encounter leads to improved outgroup attitudes and reduced stereotyping. It curtails intergroup anxiety and extends the attribution of perceivers' positive traits to others. The authors describe the advantages and disadvantages of imagined contact compared to conventional strategies, outline an agenda for future research, and discuss applications for policymakers and educators in their efforts to encourage more positive intergroup relations.

Keywords: intergroup contact, imagined contact, prejudice

One day you find yourself on a busy train. You get a seat and start reading the novel you brought with you to pass the time. At the next stop, an older Black man boards the train and sits down next to you. After a few minutes, the man looks at what you are reading and comments that it is one of his favorite books. This begins a discussion in which you share your thoughts on the book and what you both enjoyed about it. The conversation meanders, and by the time you get off the train, 30 minutes later, you have discussed a whole range of topics, from the stresses of having to commute to work every day, to what neighborhood you live in, to what your children's favorite subjects are at school.

Most people will have found it easy to imagine this scenario. There may have been unfamiliar elements (perhaps they do not often travel on trains, or perhaps they do not have children), but imagination is a powerful tool, and people can envisage themselves in almost any situation. The power of imaginative thought lies at the heart of their hopes, fears, aspirations, and innovations. In this article, we argue that psychologists can harness this power to encourage more positive *intergroup relations*.

Take our opening illustration. It did not involve just a train, a book, and a conversation. If you are young, White, or a woman, it also featured an intergroup encounter (with an older Black man). What might be the impact of imagining this encounter? The imagined interaction was a success: You found lots to talk about, it was a pleasant encounter, and your trip went more quickly as a result. You might therefore reason that if you actually met an older Black man on a train in the future, you might have more positive expectations about how that encounter would go. These positive expectations may make you feel more positive and open toward older Black men in general. The next time you actually met an older Black man, you might well feel less anxious and more confident about starting a conversation.

The scenario you imagined is pretty much what we have used in our research on *imagined intergroup contact* (although, as we describe later, the benefits of the technique can be observed with a much less involving narrative). We believe that imagined contact is such an exciting prospect because it provides a simple, flexible, and effective means of promoting more positive perceptions of outgroups. We do not advocate imagined contact as a replacement for existing interventions, such as extended or actual contact (which we expect to have a stronger overall impact on attitude change). Rather, we assert that the value in imagined contact is in its ability to encourage people to seek out contact, to remove inhibitions associated with existing prejudices, and to prepare people to engage outgroups with an open mind. We argue that imagined contact could be highly effective as a first step on the route toward reconciliation and reduced prejudice, on a *continuum of contact* that provides a road map for the use of multiple contact strategies in improving intergroup relations.

In what follows, we track recent trends in contact theory, from the use of actual contact to the development of indirect forms of contact. From here, we outline the imagined contact proposition, describe supportive empirical studies, and discuss how we isolated the most effective imagined contact narratives. Finally, we consider how future research might develop the technique further and the range of potential applications it may offer.

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Recent Trends in Contact Theory

Promoting the peaceful coexistence of different social groups is perhaps the biggest social issue people face. New and emerging conflicts serve as vivid reminders of the importance of this endeavor; immigration and globalization underscore the need for informed policies that encourage co-operation and tolerance. Do people face an inevitable *clash of civilizations* (Huntington, 1996) as tensions erupt and escalate around differences in religion and ethnicity? Social psychologists have long been concerned with this question and have sought to understand the relationships among segregation, social contact, and intergroup relations. This work has maintained sustained interest in one of the most important concepts in psychologists' developing understanding of the nature of prejudice: *intergroup contact*.

In 1954, Gordon Allport proposed the idea that contact between members of opposing groups, under the right conditions, would lessen intergroup hostility and lead to more positive intergroup attitudes. In the intervening years this *contact hypothesis* has become one of the most extensively researched ideas in psychology (Oskamp & Jones, 2000) and a recent meta-analysis of 515 of these studies has confirmed the core proposition: There is a robust, highly significant, negative relationship between contact and prejudice (Pettigrew & Tropp, 2006). Of importance, this analysis revealed that, although contact that met Allport's optimal conditions (co-operation, common goals, equal social status, and institutional support) led to the greatest reductions in prejudice, prejudice was still reduced in their absence. This indicated that these optimal conditions are, in fact, best considered *facilitating* conditions, rather than necessary conditions.

Key principles of contact have been distilled into *intergroup contact theory* (Brown & Hewstone, 2005; Pettigrew, 1998), which specifies how, when, and why contact is associated with reduced prejudice. Contact theory has become a sophisticated account of the conditions under which intergroup interactions have benefits for intergroup relations, and it has provided an important guide for diverse applications of the core idea. For instance, psychologists now know that a unique form of contact, cross-group friendship, is more effective at improving outgroup attitudes than less intimate forms of contact (Pettigrew, 1997; Pettigrew & Tropp, 2006; Turner, Hewstone, & Voci, 2007; Turner, Hewstone, Voci, Paolini, & Christ, 2007).

Despite its success, contact theory has had its critics. For instance, some have argued that researchers have been overly optimistic about the power of contact and that although studies have demonstrated prejudice reduction at an individual level, it is not yet known whether this translates into broader societal change (Dixon, Durrheim, & Tredoux, 2005). This is an important question and one that can be answered as contact interventions are tested with greater frequency in field settings. Our concern is with a different practical limitation: that contact can work only where the opportunity for contact exists. When groups are highly segregated, physically or socially, or when there is little motivation to engage in contact, the benefits of contact may remain unrealized. Is this an intractable limitation? We argue that it is not and that the power inherent to the concept of contact enables an intriguing and enabling proposition: that even imagining intergroup contact could improve intergroup attitudes.

Opportunity for Contact

Contact can reduce prejudice only when social groups and group members have the opportunity to engage positively with one another (e.g., Phinney, Ferguson, & Tate, 1997; Turner, Hewstone, &Voci, 2007). Unfortunately, there are many examples where the local intergroup relations afford few such opportunities. In the United States, for example, segregation of Latino and White communities remains pervasive (Martin, 2006), and the average White person lives in a predominantly White neighborhood with less than 10% Black residents (Logan, 2001). Many Catholic and Protestant communities in Belfast, Northern Ireland, include a very low percentage of residents from the other community, and only 5% of Northern Irish children attend mixed Catholic–Protestant schools (Office for National Statistics, 2001). There are many other examples of more extreme segregation, from the Green Line in Cyprus to the West Bank Wall in Israel (Pettigrew, 2008). Even in multicultural communities where many different groups live in close proximity to one another, there can be very little opportunity for meaningful interaction, and people have a tendency to interact mainly with those similar to themselves, especially with regard to age, race, and gender (Graham & Cohen, 1997). For instance, in the multiracial city of Bradford, United Kingdom, South Asian and White communities remain largely isolated from one another, with residents living "parallel lives." This social segregation is regarded as contributing to Britain's worse ever race riots in July 2001 (Cantle, 2001). In all of these circumstances, interventions that involve intergroup contact may be very difficult to establish. Yet, it is in precisely these settings that contact interventions are needed the most.

What if there was a way to produce the positive effects of contact without there being any actual contact? This was the motivation behind the development of an ingenious indirect form of intergroup contact: *extended contact*.

Extended Contact

According to the extended contact hypothesis (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997), the benefits of contact could accrue from vicarious experiences—learning that people we know engage in positive interactions with members of outgroups (even if we ourselves do not). A number of studies have now demonstrated the benefits of extended contact. In two studies, Wright et al. (1997) showed that White respondents who knew at least one ingroup member with an outgroup friend reported weaker prejudice toward that target group than those who had no extended outgroup friends. Moreover, the more extended outgroup friends a participant had, the weaker their prejudice. In a third study, to demonstrate extended cross-group friendship experimentally, Wright et al. initially created

intergroup conflict between two small artificial groups. One participant from each group was then chosen to take part in an unrelated co-operative game designed to create interpersonal closeness. Individuals who experienced direct intergroup contact returned to discuss the experience with the rest of their group. Participants who merely learned about the intergroup contact from the returning member showed less ingroup favoritism than they had before the extended contact experience.

The extended contact effect has subsequently been demonstrated in a number of studies. In a survey of Catholic and Protestant students in Northern Ireland, participants completed a questionnaire focusing on the number of ingroup friends they had who had outgroup friends, their attitudes toward the opposing community, and their experience of intergroup anxiety (Paolini, Hewstone, Cairns, & Voci, 2004). To measure intergroup anxiety, participants were asked to think about how they would feel mixing socially with a group of people from the other community (e.g., how awkward, self-conscious, and defensive they would feel). Structural equation modeling revealed that extended contact was associated with lower levels of outgroup prejudice, a relationship that was fully mediated by reduced intergroup anxiety. Research has also found that extended contact between White and Asian undergraduates produced positive outgroup attitudes (Turner, Hewstone, Voci & Vonofakou, 2008). In this research, participants were asked how many White people they knew who had South Asian friends and how this related to a number of outcome measures. These included how anxious they felt at the prospect of future interactions with South Asians (intergroup anxiety), how much they thought their White peers liked South Asians (ingroup norms), how much they thought South Asians liked White people (outgroup norms), and how much overlap they perceived there to be between themselves and South Asians (inclusion of the outgroup in the self; Aron, Aron, & Smollan, 1992). Using structural equation modeling, Turner et al. (2008) found that extended contact was associated with more positive outgroup attitudes. Moreover, this relationship was fully mediated by lower intergroup anxiety, more positive perceived ingroup norms, more positive perceived outgroup norms, and greater inclusion of the outgroup in the self.

Extended contact has also been successfully used as an intervention to reduce prejudice among school children. Following an intervention that involved being read stories about an ingroup member and a refugee, children between ages 5 and 11 had significantly more positive attitudes toward refugees compared with those in a control condition (Cameron, Rutland, Brown, & Douch, 2006). In other research, Finnish teenagers read stories in their schools about same-age ingroup peers engaging in close friendships with foreigners (Liebkind & McAlister, 1999). Tolerance toward foreigners increased or remained stable in schools where the intervention was introduced, whereas it remained stable or decreased in some of the control schools.

This research is important because it shows that actual experience of contact with outgroups is not the only way that contact can have benefits for intergroup relations. Extended contact may be especially useful when there is less opportunity for contact because it does not depend on personal experience, but depends simply on the existence of some contact somewhere in one's social network. The importance of this idea for policymakers and educators seeking to develop interventions to reduce prejudice cannot be understated because it suggests that contact may be a far more powerful and flexible means of improving intergroup relations than previously thought.

So, just how powerful is the concept of contact? Researchers know that actual contact is not (at least not always) a requirement: Simply learning about positive intergroup interactions can change intergroup attitudes. Does extended contact solve the opportunity-for-contact problem? The answer is yes, to some extent, but it cannot do so entirely. Under some circumstances, extended contact could suffer the same limitation as actual contact. In highly segregated settings, one simply might not know anyone who has an outgroup friend (or even anyone who would interact in any meaningful way with an outgroup member). We could call this a lack of extended opportunities for contact, where no outgroup friends exist within one's wider social network. This is a characteristic of many real contexts of conflict, ranging from the Middle East to Cyprus to the former Yugoslavia. However, if the concept of contact is powerful enough to extend to extended contact, perhaps it can be extended just a little further.

Imagery's Social Impact

Pettigrew (1997, 1998, 2008) proposed that to take intergroup contact theory forward, researchers should focus on understanding in greater depth how unique forms of contact reduce prejudice. Here, we describe one such new approach that capitalizes on the basic idea of contact but does so in a way that discounts the limits of opportunity, an approach based on the *mental simulation* of social contact.

The mind's tremendous capacity for imagination has captivated psychologists since the earliest enquiries (Galton, 1883; James, 1890), and it is a concept that has enjoyed enduring appeal. Mental imagery has been found to elicit emotional and motivational responses similar to those of real experiences (Dadds, Bovbjerg, Redd, & Cutmore, 1997), and neuropsychological studies have shown that mental imagery shares the same neurological basis as perception and uses neurological mechanisms similar to those for memory, emotion, and motor control (Kosslyn, Ganis, & Thompson, 2001). Functionally, mental imagery serves as an important element in the selection, rehearsal, preparation, and planning of action and goal-directed behavior (Marks, 1999), and it has been shown to have significant benefits for activities ranging from academic ability to sporting performance (Taylor, Pham, Rivkin, & Armor, 1998).

There is a precedent for the social impact of imagery. Recent research has shown that simply imagining a particular social situation can have the same effect as the experience itself. Research has found that after imagining a (counterstereotypic) strong woman, participants demonstrated fewer implicit stereotypes than participants who

engaged in neutral or stereotypical mental imagery (imagining a weak woman or a strong man) or participants who had not engaged in any imagery (Blair, Ma, & Lenton, 2001). Other research has investigated the role of imagining a social context on the *bystander apathy effect*, the idea that people are less likely to help others if other people are present. Research has found that simply imagining being in a large group can lead to significantly less helping behavior on a subsequent task (Garcia, Weaver, Moskowitz, & Darley, 2002). In their study, Garcia et al. (2002) found that participants who imagined having a meal out with 10 other people were subsequently less likely to help the experimenter by participating in a second study than those who imagined having a meal out with just 1 other person. It therefore seems that imagining both people and situations has a significant impact on perceptions, attitudes, and attributions. It turns out that when person and situation are combined in imagined interactions, something similar occurs.

Imagined Intergroup Contact

Imagined intergroup contact is the mental simulation of a social interaction with a member or members of an outgroup category. The basic idea is that mentally simulating a positive contact experience activates concepts normally associated with successful interactions with members of other groups. These can include feeling more comfortable and less apprehensive about the prospect of future contact with the group, and this reduced anxiety should reduce negative outgroup attitudes. According to Garcia et al. (2002), imagery increases the accessibility of abstract concepts associated with that social context. Imagining being in a crowd, for example, activates feelings of being lost in a crowd and unaccountable, feelings that are associated with less helping behavior in real situations. Similarly, when people imagine intergroup contact, they should engage in conscious processes that parallel the processes involved in actual intergroup contact. They may, for example, actively think about what they would learn about the outgroup member, how they would feel during the interaction, and how this would influence their perceptions of that outgroup member and the outgroup more generally. In turn, this should lead to more positive evaluations of the outgroup, similar to the effects of face-to-face contact.

At the start of this article, we presented a fairly elaborate imagined contact narrative. In fact, we have found a much more minimal instructional set is sufficient to yield positive effects. The core task instructions are very simple: "We would like you to take a minute to imagine yourself meeting [an outgroup] stranger for the first time. Imagine that the interaction is positive, relaxed, and comfortable." This simple phrase includes two key elements that we have found to be the critical components. First is the instruction to engage in simulation. We have found that running through the mental script of an interaction is critical for observing positive effects (thinking, in contrast, of just an outgroup member in the absence of any simulated interaction has no positive effects on attitudes; Turner, Crisp, & Lambert, 2007, Experiment 2). Second is a positive tone. We know that this is important for direct contact, and it is the same for imagined contact. Empirically, we have shown that imagined contact works better when it is positive compared to neutral (Stathi & Crisp, 2008, Experiment 1). A positive tone is also important to guard against a possible negative tone, which might emerge if participants are left to their own devices (this may be likely, especially in contexts of conflict or extreme segregation). Other than these two core elements, we have found that other embellishments have very little impact on the basic effect. For instance, describing the imagined encounter as interesting has no additional impact (Stathi & Crisp, 2008, Experiments 1 and 3), and there are no effects of adding detail like that used in the narrative at the start of this article (Turner, Crisp, & Lambert, 2007, Experiment 1).

In summary, unlike actual contact, from the outset the imagined contact effect seems unfettered by a raft of necessary conditions, other than the two core principles we have identified. Indeed, its applicability and effectiveness are part of the power and flexibility of the approach. Of course, as with actual contact, further research may well uncover a range of facilitating conditions that improve its effectiveness. We return to a discussion of these possible conditions at the end of the article. Next, however, we discuss the empirically observed impacts of imagined contact, before finally discussing its potential applications for policy and practice.

Impacts of Imagined Contact

Improved Intergroup Attitudes

In three studies, we found that participants who were asked to imagine a positive interaction with an outgroup member subsequently expressed more positive attitudes and stereotyped less than participants who did not (Turner, Crisp, & Lambert, 2007). Two studies showed that young participants who imagined a scenario in which they participated in a short positive interaction with an older person showed less ingroup favoring bias in subsequent evaluations (assessed immediately after the task). This was the case whether participants imagined contact compared to simply imagining an outdoor scene (Experiment 1) or compared to simply thinking about an older person (Experiment 2; i.e., without any interaction involved). In a third study, we focused on attitudes of heterosexual men toward homosexual men (see Herek & Capitanio, 1996; Vonofakou, Hewstone, & Voci, 2007, for actual contact studies with these groups). Participants who imagined talking to a homosexual man on a train subsequently evaluated homosexual men in general more positively and stereotyped homosexual men less (perceived less homogeneity) than participants who imagined an outdoor scene.

Projection to Outgroups

Research has shown that positively toned imagined contact leads to greater projection of positive traits to the target outgroup (Stathi & Crisp, 2008). Projection is a process by which traits and attitudes are attributed to others and can constitute a fundamental "cognitive basis for ingroup fa-

voritism" (Robbins & Krueger, 2005, p. 42; see also Cadinu & Rothbart, 1996). This is because projection of positive self traits to similar others (i.e., the ingroup) is generally stronger for ingroups than outgroups (Clement & Krueger, 2002) and occurs in lieu of stereotyping (Ames, 2004). If positive contact can make relevant outgroup members seem more similar to self, which we know is the case for actual and extended contact (Eller & Abrams, 2004; Wright et al., 1997), then those outgroup members should benefit from the positive projection that ingroup members typically benefit from (Robbins & Krueger, 2005). Imagined contact did indeed lead to more positive trait projection to outgroups following imagined contact, compared to controls, with a variety of target groups, including Mestizos in Mexico and international students in the United Kingdom (Stathi & Crisp, 2008). Notably, this projection was consistent with the lower perceived homogeneity of outgroups observed by Turner, Crisp, and Lambert (2007, Experiment 3).

Consistent with projection theory and the idea that imagined contact activates cognitive–behavioral processes similar to those of actual contact, projection was greatest under three conditions. Projection should be higher when the personal self is more salient than the collective self because the personal self is the informational base used for projection (Cadinu & Rothbart, 1996). Correspondingly, majorities (who have low personal self-salience) projected more than minorities (who have high collective self-salience). Moreover, lower identifiers (who have high personal self-salience) projected more than higher identifiers (who have high collective self-salience), and a direct manipulation of personal self-salience versus social self-salience also led to greater projection (Stathi & Crisp, 2008).

Reduced Anxiety

A key mediating process that accounts for the positive impact of actual contact on intergroup attitudes is anxiety (Islam & Hewstone, 1993). Correspondingly, our research has established intergroup anxiety as a mediator of imagined contact effects (Turner, Crisp, & Lambert, 2007). Intergroup anxiety is the negative emotional reaction that can occur at the prospect of having to engage in an intergroup encounter. It is most likely to arise when there has been minimal previous contact and when there are large differences in status (Stephan & Stephan, 1985). When individuals have had a successful interaction with an outgroup member, however, their level of intergroup anxiety is likely to be reduced, as they come to realize they have nothing to fear from such interactions. Consistent with this reasoning, a number of studies in diverse intergroup settings have found the effect of intergroup contact on reducing prejudice to be mediated by intergroup anxiety (Islam & Hewstone, 1993; Paolini et al., 2004; Turner, Hewstone, &Voci, 2007; Voci & Hewstone, 2003).

In one study, male heterosexual participants were asked to imagine a positive interaction with a homosexual man (Turner, Crisp, & Lambert, 2007, Experiment 3). As noted earlier, participants who spent a few minutes imagining intergroup contact subsequently had a more positive attitude toward gay men in general and also perceived there to be greater variability among the outgroup than participants in the control condition. We found that the positive relationship between imagined contact and outgroup attitude was mediated by reduced intergroup anxiety. Anxiety did not, however, mediate the relationship between imagined contact and outgroup variability. This parallels the relationships observed in research on actual contact. Although some direct contact studies have found intergroup anxiety to mediate the effect of intergroup contact on outgroup variability (e.g., Islam & Hewstone, 1993; Voci & Hewstone, 2003), the evidence for this is less consistent than the effect of intergroup anxiety on affective outcome measures, such as feelings of intergroup comfort and liking (e.g., Tropp & Pettigrew, 2005; Turner, Hewstone, & Voci, 2007).

Reduced Stereotype Threat

Imagined contact can also reduce self-stereotyping and, correspondingly, the impact of negative self-stereotypes on quantitative performance (the *stereotype threat effect,* Steele, 1997; see Abrams et al., 2008; Crisp & Abrams, 2008). Imagined contact could serve a protective function for older people exposed to contexts where they might otherwise suffer performance decrements. Research with older people has found that self-stereotyping affects a range of cognitive abilities consistent with the stereotype that cognitive performance declines with age (Hess, Hinson, & Statham, 2004; Levy, 1996). The application of imagined contact to this domain was based on the premise that intergenerational contact is generally limited (Hagestad & Uhlenberg, 2005) and that actual contact has been found to reduce threat effects in older people through reduced anxiety (Abrams, Eller, & Bryant, 2006). Research has found that older people (all over 60 years old) who imagined a short social interaction with a young stranger (compared to a control) were subsequently immune to the depleting effects of a threat comparison (i.e., a stated comparison of the performance of older and younger people) on cognitive test performance (see Abrams et al., 2008).

Alternative Explanations

Although the research programs outlined here demonstrate the range of benefits that accrue from imagined contact, we have also been careful to rule out alternative explanations, such as cognitive load, demand characteristics, priming, and generalized positive affect.

Cognitive Load

Perhaps imagined contact effects are not about imagining contact at all but are just about the cognitive activity required to engage with the task. A number of studies have demonstrated, however, that imagined contact has benefits not only compared to baseline (no task), but also relative to control conditions that have equivalent cognitive load and require identical mental operations. We have found, for example, that imagined contact reduced the expression of biased evaluations compared to imagining an outdoor scene

(Turner, Crisp, & Lambert, 2007, Experiments 1 and 3). This was similarly the case when we examined the effect of imagined contact on trait projection (Stathi & Crisp, 2008, Experiment 3). Although a priori it is difficult to see how simply engaging in mental imagery in and of itself might lead to more positive attitudes (i.e., vs. specifically engaging in imagined contact), these studies help to rule this possibility out as a competing explanation.

Demand Characteristics

Perhaps the imagined contact effect is not about imagining contact at all but is just about participants guessing what the task is meant to do. We have, however, found no evidence to suggest that imagined contact effects can be explained by demand characteristics. Typically, no participants report any awareness of the experimental hypotheses at feedback. For instance, in Turner, Crisp, and Lambert (2007) only four participants reported any suspicion about the purpose of the experiment, and not one participant successfully identified the aims of the experiment. Nonetheless, to better rule out this explanation, we have examined the effects of imagined contact on implicit measures of attitudes (Turner & Crisp, in press). Whereas explicit attitudes are conscious, deliberative, and controllable (and are usually captured by traditional self-report measures), implicit attitudes are unintentionally activated by the mere presence (actual or symbolic) of an attitude object and are therefore less likely to be influenced by social desirability than are explicit measures. We asked young participants to imagine talking to an older stranger, using the same instructions as in Turner, Crisp, and Lambert (2007), before completing an explicit outgroup attitude measure and a measure of implicit attitude, the Implicit Association Test (Greenwald, McGee, & Schwartz, 1998). Participants who had imagined contact with an older person not only subsequently showed more positive explicit, self-reported, outgroup attitudes toward older people in general, but also showed more positive implicit outgroup attitudes on a young–older version of the Implicit Association Test.

Stereotype Priming

Perhaps the imagined contact effect is not about imagining contact at all but is just about thinking about the outgroup. The argument here is that imagined contact simply primes participants to think of the outgroup (e.g., older people), which then invokes a conscious attempt to regulate behavior to appear nonprejudiced (e.g., Devine & Monteith, 1999). On the basis of feedback received from participants, we are confident that a priming effect cannot account for our findings. However, to empirically rule out this explanation, we carried out an experiment in which we sought to replicate the imagined contact effect but used a control condition in which we simply primed the outgroup (Turner, Crisp, & Lambert, 2007, Experiment 2). We observed less bias in the imagined contact condition compared to the control condition. This is consistent with the idea that imagined contact does not simply involve category priming and associated self-regulation, but that there is something special about mentally simulating the intergroup interaction.

Positive Affect

Perhaps the imagined contact effect is not about imagining contact at all but is just about the positive feelings that are associated with the interactive nature of the task. It is certainly the case that contact works better when it is positively toned (Pettigrew & Tropp, 2006). Consistent with this, imagining positive interactions is more effective than imagining neutrally valenced interactions (Stathi & Crisp, 2008, Experiment 1). However, this also raises the question of whether it is, in fact, just the positive characteristics of imagined contact that are responsible for the positive effects. In other words, perhaps simply thinking about some positive interaction (regardless of whether it features the outgroup) yields more positive evaluations.

To rule out this possibility, an experiment tested whether imagined contact has benefits (for perceptions of French targets by British participants) because of the identity of the target or just because of the interactive nature of the imagined scene (Stathi & Crisp, 2008, Experiment 2). This was achieved by comparing imagined scenarios that were identical in both conditions, except that the interacting partner was a specified outgroup member in only one condition (in this case, a French person for our British participants). In both conditions, participants imagined interacting with a stranger at a party, but only in the experimental condition was the interaction partner an outgroup member. Imagined contact was significantly more effective in the condition featuring the outgroup member.

Future Research

It is important to extend our knowledge of imagined contact effects in several areas. We must (a) specify optimizing conditions, (b) distinguish underlying mechanisms, and (c) elaborate on the range of positive impacts that the intervention can have.

Optimizing Conditions

Future research should establish the conditions that best facilitate the positive impacts of imagined contact. It is important to be mindful that the same intervention can mean different things to different people (see Crisp, Stone, & Hall, 2006, for a detailed discussion of such issues). For instance, imagined contact can lead to greater projection of positive traits to outgroups for those individuals who are less committed to their ingroup (Stathi & Crisp, 2008). Uncovering how such individual differences moderate imagined contact effects is an important endeavor, especially if psychologists are to move toward effective implementation. Perceived authenticity of the imagined encounter is also important. In clinical and counseling psychology, role playing is perceived as a more authentic representation of reality when it features actors who are culturally similar (Pedersen, 2000). In imagined contact, by definition, the actors are mismatched (and the lower likelihood of actual interactions is the motivation to encourage imagined inter-

actions). Nonetheless, perceived authenticity of the imagined encounter may be an important variable in future research.

Other important questions are how long do the effects of the intervention last (in the studies we have reported, attitudes are typically assessed immediately after the imagined contact task), and how many times must the task be repeated to internalize attitude change? These are implementation issues that are common to all forms of contact intervention (or, indeed, to all attitude change interventions). However, there may be some possible routes for further research that are unique to imagined contact. For instance, longer term experience of imagined contact may help to promote an internalized self-supervision process, whereby more general adherence to egalitarian norms becomes a guiding principle. How many times imagined contact should be implemented to achieve such internalized changes and what form this implementation should take are pertinent questions for future research.

Underlying Mechanisms

We have found that, like actual and extended contact, imagined contact can improve attitudes by reduced anxiety (Turner, Crisp, & Lambert, 2007). A reasonable question is whether imagined contact shares other mediating mechanisms with established forms of contact. For instance, extended contact works not only by reducing intergroup anxiety, but also by generating positive norms for intergroup relations and increasing the extent to which the outgroup is included in the self. These processes are based on a strong theoretical rationale (Wright et al., 1997) and are supported by empirical evidence in a variety of intergroup contexts testing extended contact (e.g., British children's attitudes toward refugees, Cameron et al., 2006; Catholics and Protestants in Northern Ireland, Paolini et al., 2004; Whites and Asians in the United Kingdom, Turner et al., 2008; Turner, Hewstone, & Voci, 2007). To appropriately position imagined contact in line with other methods, researchers should examine the possible role these multiple mediators play in imagined contact effects.

We believe that although imagined contact shares a number of similarities with extended contact, it may be distinct in terms of the social norm mechanism. In extended contact, participants observe an ingroup member behaving positively toward an outgroup member, apparently reflecting positive regard. This positive model constitutes an ingroup norm that uniquely mediates extended contact but not actual contact (see Turner et al., 2008). This is because extended contact involves a perceptual focus on another ingroup member, whereas actual contact does not. In actual contact, the perceiver is focused only on the outgroup and has no ingroup model from which to derive a behavioral norm. Because the instructional set used in imagined contact, like that for actual contact, focuses participants on the outgroup, it is likely that ingroup norms will be unaffected. Thus, although extended and imagined contact are both indirect forms of contact, they can be distinguished by (at least) one mechanism. This also highlights a similarity between actual and imagined contact that extended contact does not share: the mental simulation of one's personal engagement with the outgroup. This brief analysis illustrates some of the theoretical similarities and differences among actual, extended, and imagined contact. Further specifying the psychological and functional distinctions among all three approaches is an important task for future research.

Positive Impacts

We have seen that imagined contact reduces anxiety about the prospect of future intergroup encounters (Turner, Crisp, & Lambert, 2007). As such, the positive impact of imagined contact may not be restricted to changes in attitudes but could have more direct benefits for actual interactions.

To elaborate, intergroup anxiety can arise as a consequence of negative expectations of rejection or discrimination during cross-group interactions or because of fears that the interaction partner, or the respondents themselves, may behave in an incompetent or offensive manner (Stephan & Stephan, 1985). These fears may lead people to avoid intergroup contact altogether. It has been found, for example, that the more negative White participants' expectations were about interacting with Black people, the more they reported avoiding interracial encounters (Plant & Devine, 2003). Similarly, people often explain their failure to initiate intergroup contact in terms of their fear of being rejected by the outgroup member (Shelton & Richeson, 2005). Even if contact is initiated, intergroup anxiety may increase the likelihood that individuals will enter the encounter with feelings of hostility. In turn, this increases the likelihood that group members will interpret the interaction in a negative light, with negative consequences for intergroup relations. If, however, participants first spend some time imagining the encounter, their levels of anxiety will be lower and their attitudes more positive when they subsequently enter the interaction. Imagined contact may therefore increase the chances that a subsequent intergroup encounter will be of a high quality and will result in further positive attitude change. Examining the direct behavioral impact of imagined contact is therefore an important focus for future research.

Limitations, Implications, and Applications

We have demonstrated the benefits of imagined contact in a variety of intergroup contexts. We have, for example, showed how imagined contact can change young people's attitudes toward older people (Turner, Crisp, & Lambert, 2007, Studies 1 and 2), straight men's attitudes toward gay men (Turner, Crisp, & Lambert, 2007, Study 3), and Mexican people's attitudes toward Mestizos in Mexico (Stathi & Crisp, 2008). We have also observed benefits for implicit intergroup attitudes (Turner & Crisp, in press) and even a positive impact on self-stereotyping and stereotype threat (Abrams et al., 2008; Crisp & Abrams, 2008). Nonetheless, there are some things that imagined contact cannot do, and understanding its limitations is an essential part of developing effective implementation programs.

The most important limitation is that imagined contact probably does not have as powerful or long lasting an effect as more direct forms of intergroup contact. This is because direct experiences are thought to produce stronger attitudes on an issue than indirect experiences (Fazio, Powell, & Herr, 1983; Stangor, Sullivan, & Ford, 1991). Supporting this premise, research comparing actual and extended contact typically shows actual contact to have the stronger impact on prejudice (Paolini et al., 2004; Turner, Hewstone, & Voci, 2007). Given that imagined contact, like extended contact, is less direct than actual contact, we might expect it to also have a weaker or more temporary effect on intergroup attitudes.

To counter this limitation, imagined contact has a distinctive advantage over both direct and extended contact. As we discussed at the start of this article, actual contact can yield benefits only when there is opportunity for contact. Although extended contact avoids this problem to some extent, it still requires knowledge of outgroup contact somewhere in one's wider social network. Imagined contact requires no experience of outgroup contact, either direct or extended.

It is this unique contribution of imagined contact that we believe presents the most exciting prospects for future application. This is not because it can serve as a replacement for existing approaches—it cannot. We know that existing contact interventions have a highly significant (and stronger) impact on intergroup attitudes. Rather, it is because it provides access to these other forms of contact where they might otherwise be unavailable. We believe that one of the most tangible benefits of imagined contact is its ability to break inhibitions that go hand in hand with existing prejudices. Imagined contact encourages people to seek out contact and prepares them to engage members of outgroups with an open mind. We know that imagining an event reliably increases the likelihood that the event will occur and that individuals are more likely to carry out an imagined target behavior (Carroll, 1978); imagined contact may have a similar impact on future contact intentions. Used in this way, imagined contact might be highly effective as a first step on the route toward reconciliation and reduced prejudice. For this reason, imagined contact might be usefully applied immediately before an intervention that involves extended or direct contact.

Thinking a little more broadly, an intriguing possibility is that imagined, extended, and actual contact might form a continuum of psychological interventions that are maximally effective at different stages of social integration. At early stages of coexistence, there may be high segregation and little opportunity for contact. In this situation, imagined contact may be the only viable intervention to help encourage attitude change and intentions to engage in preliminary contact (or to ensure that when that contact does occur, it does so with open minds and an increased chance of success). At intermediate stages, when boundaries have begun to permeate and some positive interactions have been initiated, extended contact works well to reinforce the impact of isolated (but known) contact encounters. Increasing extended contact may then lead to a cascade of positive interactions, along with all the benefits associated with actual intergroup contact.

From a practical perspective, imagined contact may prove important for the application of contact interventions by policymakers and educators. Community leaders in areas with pervasive segregation and tensions between communities recognize that positive intergroup contact might reduce prejudice, but they are often faced with practical difficulties that make such changes difficult. *White flight* from inner city areas to the suburbs has resulted in ethnic minority enclaves in the inner cities of Britain, whereas White communities dominate the outer suburbs. A similar phenomenon has occurred in public schools in San Jose, California, where the proportion of White students has dropped by half over the past 10 years (Hwang, 2005). Such situations cannot easily be remedied because they are often related to economic and social inequalities in the wider society. When intergroup contact does occur, the anticipation of the encounter for those who have had little prior experience with the outgroup may lead to intergroup anxiety, with potentially negative consequences.

Imagined contact, however, is an inexpensive and practical means of reducing intergroup anxiety and improving attitudes, and it can yield benefits even when opportunities for direct and extended contact are limited. In social settings where positive contact is not possible because of segregation or lack of opportunity, the knowledge that imagining contact can create positive attitudes that approximate those associated with actual contact is invaluable for policymakers and educators. For example, schools could develop and apply teaching techniques that encourage contact imagery to bring groups closer together and promote tolerance. To date, relatively few social psychological interventions to reduce prejudice have been implemented in schools. However, we believe that imagined contact—either alone or in combination with existing interventions—can provide a simple and practical means of injecting social psychological content into educational interventions.

Concluding Remarks

In this article, we described a new intervention strategy for improving intergroup relations: imagined intergroup contact. Preliminary empirical research has shown that the approach is deceptively simple but remarkably effective. Encouraging people to mentally simulate a positive encounter with someone from an outgroup promotes more positive attitudes toward that group. Imagined contact provides a firmly grounded intervention strategy with significant potential application for policymakers and educators seeking to promote tolerance for social diversity. We believe this is the strongest testament to the power, flexibility, and enduring appeal of the contact hypothesis. Further refinement of this and other applications of the contact concept will elaborate, extend, and establish such methods as viable, defined, and tested strategies for improving intergroup relations.

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