TPM

THE AFFECTIVE CONSEQUENCES OF IMAGINED CONTACT: A REVIEW AND SOME SUGGESTIONS FOR FUTURE RESEARCH

LORIS VEZZALI
UNIVERSITY OF MODENA AND REGGIO EMILIA

RICHARD J. CRISP
UNIVERSITY OF SHEFFIELD

SOFIA STATHI
UNIVERSITY OF GREENWICH

DINO GIOVANNINI
UNIVERSITY OF MODENA AND REGGIO EMILIA

Recent research has provided consistent support for imagined intergroup contact (Crisp & Turner, 2012), a new indirect contact strategy for reducing prejudice. In the present review, we focus on the affective consequences of imagined contact. In particular, we review studies showing that imagined contact has powerful effects on reduced intergroup and performance anxiety, as well as increased trust and empathy toward outgroup members. Moreover, these effects extend to the affective part of intergroup attitudes tapped at both an explicit and at an implicit level. We also present evidence that some of these variables mediate the effects of imagined contact on reduced prejudice. Finally, we discuss the double nature, cognitive and affective, of imagined contact.

Key words: Imagined contact; Indirect contact; Intergroup relations; Prejudice reduction; Intergroup contact.

Correspondence concerning this article should be addressed to Loris Vezzali, Università di Modena e Reggio Emilia, Dipartimento di Educazione e Scienze Umane, Viale Allegri 9, 42121 Reggio Emilia (RE), Italy. Email: loris.vezzali @unimore.it

There is a general agreement among social psychologists that direct, face-to-face intergroup contact is an effective method for reducing prejudice, as supported by impressive evidence over almost 60 years from the initial formulation of the contact hypothesis (Allport, 1954; Pettigrew & Tropp, 2006, 2011). Research has consistently demonstrated that intergroup contact is related to more positive intergroup attitudes, and that this is largely a function of its effects on intergroup emotions. Ample studies have shown that contact reduces prejudice because it affects emotions toward the outgroup, that in turn play a pivotal role in the formation of intergroup attitudes. The affective mediators of the contact-prejudice relationship can be further divided into negative affective processes (such as intergroup anxiety), which are generally alleviated by positive contact, and positive affective processes (such as empathy), which are enhanced by intergroup contact (Galinsky, Gilin, & Massux, 2011; Stephan & Stephan, 1985; for a meta-analysis

highlighting the mediating role of intergroup emotions in the relation between contact and prejudice, see Pettigrew & Tropp, 2008; for a review, see Brown & Hewstone, 2005).

However, strategies based on direct intergroup contact have some important shortcomings. One of the most relevant relates to limitations of applicability. Some scholars argued that contact research has been detached from practice, that is, from consideration of real-word social contexts. This is true especially in contexts where high segregation between groups still persists and, essentially, implementing the optimal contact conditions originally proposed by Allport is rather unrealistic (Dixon, Durrheim, & Tredoux, 2005). In such contexts, contact opportunities are by definition scarce, and people may even feel threatened at the prospect of meeting an outgroup member, which increases the possibility of contact avoidance (Stephan & Stephan, 2000). Contact may also be difficult to apply in less segregated contexts, due to practical and organizational restrictions. So, despite the popularity of the contact hypotheses (Allport, 1954) among social psychologists, only a small number of experimental studies and interventions conducted in the field have attempted to reduce prejudice via direct, face-to-face contact (see Paluck & Green, 2009).

With the aim of enhancing the applicability of intergroup contact, recent research focused on *indirect* forms of contact, which can be easily implemented precisely in those contexts where there is little opportunity for direct contact (Dovidio, Eller, & Hewstone, 2011; Vezzali, Hewstone, Capozza, & Giovannini, 2013). In the present work, we focus on *imagined* intergroup contact — a relatively new (indirect) prejudice reduction technique recently proposed by Crisp and colleagues (see Crisp & Turner, 2009, 2012). In particular, we review evidence showing that, paralleling evidence for direct contact, imagined contact is strongly related to affective variables, a psychological impact that can explain (at least in part) its effectiveness in ameliorating intergroup relations. Previous reviews of imagined contact by Crisp and collaborators (e.g., Crisp, Husnu, Meleady, Stathi, & Turner, 2010) have mainly presented evidence for mediation by intergroup anxiety and did not include a range of the affective variables and mediators more recently identified by other scholars. Since affect is a key antecedent of reduced prejudice (Pettigrew, 1998), we believe that it is important and timely to carry out a review of whether and how imagined contact influences a range of affective variables, and if these variables help explain its effects on intergroup relations.

Before presenting studies investigating the relation between imagined contact and affective variables, we will briefly review evidence that intergroup affect is an important mediator of direct intergroup contact.

INTERGROUP CONTACT

Intergroup contact is undoubtedly the most popular approach for prejudice reduction identified by social psychologists. According to the contact hypothesis, face-to-face contact between groups, if characterized by optimal conditions (equal status, cooperation for superordinate goals, institutional support), can foster more harmonious intergroup relations (Allport, 1954). The contact hypothesis has received impressive support by hundreds of studies across a large variety of target groups, situations and cultural contexts (Pettigrew & Tropp, 2011). Moreover, Pettigrew and Tropp's (2006) meta-analysis revealed that prejudice reduction even occurs when optimal conditions are not met, although contact effects are strengthened when they are present.

Over the last two decades research has shown that contact reduces both blatant (Hamberger & Hewstone, 1997; Pettigrew, 1997) and subtle forms of intergroup bias, such as implicit prejudice (Turner, Hewstone, & Voci, 2007; Vezzali & Giovannini, 2011; Vezzali, Giovannini, & Capozza, 2012) and infrahumanization (Brown, Eller, Leeds, & Stace, 2007; Capozza, Trifiletti, Vezzali, & Favara, 2013). Moreover, its effects generalize to outgroups uninvolved in the contact situation (see Pettigrew, 2009; Tausch et al., 2010). Over the last 15 years, scholars have focused their attention on the mediators of direct contact, so as to understand *why* contact reduces prejudice. Originally, Allport (1954) proposed that contact allows members of different groups to know each other, and this increased knowledge of the outgroup creates the basis for the improvement of intergroup attitudes. However, the recent meta-analysis by Pettigrew and Tropp (2008) revealed that, although outgroup knowledge plays a mediation role, affective factors are the most potent mediators of contact. In particular, according to Pettigrew and Tropp (2008; see also Brown & Hewstone, 2005), intergroup anxiety (Stephan & Stephan, 1985), and intergroup empathy/perspective-taking (Stephan & Finlay, 1999) represent two pivotal mediators of contact effects. Specifically, contact reduces prejudice because it lowers intergroup anxiety (e.g., Swart, Hewstone, Christ, & Voci, 2011; Vezzali, Giovannini, & Capozza, 2010; Voci & Hewstone, 2003) and increases intergroup empathy (e.g., Capozza, Vezzali, Trifiletti, Falvo, & Favara, 2010; Pagotto, Voci, & Maculan, 2010; Vezzali & Giovannini, 2012). In addition, research has identified numerous other affective mediators of direct contact, such as outgroup trust (Tam, Hewstone, Kenworthy, & Cairns, 2009), forgiveness (Cehajic, Brown, & Castano, 2008), closeness to the self (Stathi & Crisp, 2010). Indeed, Pettigrew (1997, 1998) stated that intergroup contact is primarily an affective, rather than a cognitive, experience. A meta-analysis by Tropp and Pettigrew (2005) that focused on the affective and cognitive dimensions of contact revealed that affective factors contributed more importantly toward improved attitudes than cognitive factors, and that the affective outcomes of intergroup interactions are more likely to generalize beyond the contact situation (see also Stangor, Sullivan, & Ford, 1991).

IMAGINED INTERGROUP CONTACT

According to Crisp and collaborators, direct contact is not always strictly necessary in order to improve intergroup attitudes. Instead, they focused on a new indirect contact technique that capitalizes on the power of mental imagery (for a review on the effects of mental imagery on perceptions and behaviors, see Crisp, Birtel, & Meleady, 2011); a technique based on the idea that simply *imagining* an intergroup interaction will reduce prejudice.

Imagined intergroup contact is defined as "the mental simulation of a social interaction with a member or members of an outgroup category" (Crisp & Turner, 2009, p. 234). There is now consistent evidence that imagined contact has beneficial effects on intergroup relations (for reviews, see Crisp et al., 2010; Crisp, Stathi, Turner, & Husnu, 2009; Crisp & Turner, 2009, 2012; Stathi, Crisp, Turner, West, & Birtel, 2012). It has been found that imagined contact improves intergroup attitudes (Turner, Crisp, & Lambert, 2007; West, Holmes, & Hewstone, 2011), enhances projection of positive traits to the outgroup (Stathi & Crisp, 2008), increases perceptions of self-efficacy concerning future contact (Stathi, Crisp, & Hogg, 2011) and of outgroup variability (Turner, Crisp, et al., 2007), fosters self-disclosure (Vezzali, Capozza, Giovannini, &

Stathi, 2012) and positive behavioral intentions (Husnu & Crisp, 2010a, 2010b). In addition, imagined contact reduces negative stereotypes (Stathi, Tsantila, & Crisp, 2012) and stereotype threat (Abrams et al., 2008; see also Crisp & Abrams, 2008). Notably, the effects of imagined contact are not restricted to overt attitudes; instead, they extend to bias expressed in subtle and indirect ways, such as implicit prejudice (Turner & Crisp, 2010; Vezzali, Capozza, Giovannini, et al., 2012) and infrahumanization of the outgroup (Vezzali, Capozza, Stathi, & Giovannini, 2012). Recent evidence also indicated that its effects generalize to outgroups uninvolved in the imagined contact scene (secondary transfer effects; see Harwood, Paolini, Joyce, Rubin, & Arroyo, 2011) and to intergroup behavior (Birtel & Crisp, 2012a; Turner & West, 2012; Vezzali, Crisp, Stathi, & Giovannini, 2013, Study 2).

Despite the fact that research on imagined contact is relatively recent, it has already identified various mediators and moderators of its effects. This is important in order to understand why imagined contact works and the conditions that limit its effectiveness (see Crisp & Turner, 2012). Several studies have identified mediators related to the cognitive sphere. This is not surprising, since imagined contact primarily represents a cognitive experience; that is, the mental simulation of a cross-group interaction. However, there are indications that, as is the case for direct contact, imagined contact also influences affective variables, and that affect plays a pivotal role in explaining the observed effects. With respect to the two types of mediators of imagined contact (i.e., cognitive and affective), Crisp et al. (2010) proposed a dual route model of imagined contact effects, with one route based on cognitive factors (such as script availability and vividness of the imagined interaction), and the other based on affective factors. Given the increasing evidence supporting this latter route, in the next section we review the main affective variables influenced by imagined contact experimental manipulations. The studies reviewed can be found in Table 1.

IMAGINED CONTACT AND AFFECTIVE FACTORS

As we stated above, narrative and meta-analytic reviews have identified affective factors as the most important mediators of direct contact effects (Brown & Hewstone, 2005; Pettigrew & Tropp, 2008). Despite the clear cognitive element of simulated contact experiences, research has also highlighted that imagined contact impacts on affective factors, many of which have mediating roles.

INTERGROUP ANXIETY

Mediation

Intergroup anxiety is the uncertainty and discomfort that arise when interacting or expecting to interact with outgroup members (Stephan & Stephan, 1985, 2000). It is one of the most investigated variables in contact research and the most commonly supported mediator of the direct contact-reduced prejudice relationship (Brown & Hewstone, 2005; Pettigrew & Tropp, 2008).

TABLE 1
Studies showing effects of imagined contact on affective variables

Study	Ingroup of participants	Target outgroup	Dependent variable influenced by the affective variable (mediation by the affective variable)
Effects on intergroup anxiety			
Birtel & Crisp, 2012b, Study 1	Non-disabled people	People with schizophrenia	/
Birtel & Crisp, 2012b, Study 2a	Heterosexual men	Gay men	Behavioral intentions
Husnu & Crisp, 2010a, Study 2	British non-Muslims	British Muslims	Affective intergroup attitudes[a] /Behavioral intentions
Kuchenbrandt, Eyssel, & Seidel, 2013	Germans	Roma people	/
Stathi, Tsantila, et al., 2012	British non-disabled people	People with schizophrenia	Stereotyping/Behavioral intentions
Turner, Crisp, et al., 2007, Study 3	Heterosexual men	Gay men	Affective intergroup attitudes[c]
Turner, West, & Christie, 2013, Study 2	Heterosexuals	Homosexuals	Behavioral intentions
Vezzali, Crisp, et al., 2013, Study 2	Italian Erasmus students	Natives of the country of destination of Italian Erasmus students	Time spent with natives of the country of destination/Affective intergroup attitudes[a]
West & Bruckmuller, 2013, Study 1	British non-disabled people	People with schizophrenia	/
West et al., 2011, Study 3	British non-disabled people	People with schizophrenia	Affective intergroup attitudes[d]
West et al., 2011, Study 4	British non-disabled people	People with schizophrenia	Affective intergroup attitudes[d]
Effects on performance anxiety			
Abrams et al., 2008, Study 2	White British individuals over the age of 60 years	Young people	Math performance
Effects on outgroup trust			
Kuchenbrandt et al., 2013	Germans	Roma people	/
Pagotto, Visintin, De Iorio, & Voci, 2013	Italian non-Muslims	Muslim immigrants	Cooperation/Affective intergroup attitudes[b]
Turner et al., 2013, Study 1	British non-Muslims (high school students)	Asylum seekers	Behavioral intentions
Turner et al., 2013, Study 2	Heterosexuals	Homosexuals	Behavioral intentions

(table 1 continues)

Table 1 (continued)

Study	Ingroup of participants	Target outgroup	Dependent variable influenced by the affective variable (mediation by the affective variable)
Vezzali, Capozza, Stathi, et al., 2012	Italian elementary school children	Immigrant children	Outgroup infrahumanization (attribution of secondary emotions to the outgroup)/ Behavioral intentions
Effects on outgroup infrahumanization			
Vezzali, Capozza, Stathi, et al., 2012	Italian elementary school children	Immigrant children	/
Effects on intergroup empathy			
Kuchenbrandt et al., 2013	Germans	Roma people	/
Effects on affective intergroup attitudes			
Birtel & Crisp, 2012b, Study 3[a]	British non-Muslims	British Muslims	Behavioral intentions
Harwood et al., 2011[b]	White Americans	Illegal immigrants	Affective attitudes toward similar secondary outgroups[b]
Husnu & Crisp, 2010a, Study 2[a]	British non-Muslims	British Muslims	Behavioral intentions
Pagotto et al., 2013[b]	Italian non-Muslims	Muslim immigrants	/
Turner & Crisp, 2010, Study 1[a]	Young females	Older people	/
Turner, Crisp, et al., 2007, Study 3[c]	Heterosexual men	Gay men	/
Turner & West, 2012, Study 2[b]	British non-Muslims	Muslims	/
Turner et al., 2013, Study 1[b]	British non-Muslims (high school students)	Asylum seekers	Behavioral intentions
Turner et al., 2013, Study 2[b]	Heterosexuals	Homosexuals	Behavioral intentions
Vezzali, Crisp, et al., 2013, Study 1[b]	International students	Italians	
West & Bruckmuller, 2013, Study 2[a]	German Christians	Muslims	/
West et al., 2011, Study 3[d]	British non-disabled people	People with schizo-phrenia	/
West et al., 2011, Study 4[d]	British non-disabled people	People with schizophrenia	/

(table 1 continues)

Table 1 (continued)

Study	Ingroup of participants	Target outgroup	Dependent variable influenced by the affective variable (mediation by the affective variable)
Effects on implicit prejudice			
Turner & Crisp, 2010, Study 1	Young females	Older people	/
Turner & Crisp, 2010, Study 2	British non-Muslims	British Muslims	/
Vezzali, Capozza, Giovannini, et al., 2012	Italian elementary school children	Immigrant children	/

Note. Superscripts refer to the measure used to assess affective intergroup attitudes: (a) Wright, Aron, McLaughlin-Volpe, and Ropp's (1997) scale; (b) feeling thermometer; (c) combination of items from Wright et al.'s (1997) scale with items assessing cognitive and affective (i.e., disgust) responses to the outgroup from the scale by Herek and Capitanio (1996); (d) combination of items from Wright et al.'s (1997) scale with items assessing avoidance of outgroup members from the scale by Corrigan et al. (2002). In the study by Harwood et al. (2011), imagined contact improved attitudes toward the following secondary outgroups: Mexican Americans, legal immigrants, Asian Americans, homeless people, political refugees, Black people, Democrats, professors.

According to Stephan and Stephan (1985) anxiety regarding the negative consequences of intergroup contact (such as rejection, embarrassment or discrimination) derives from previous experiences with the outgroup and/or beliefs regarding the interaction. Overall, intergroup anxiety is with no doubt one of the most disruptive variables for harmonious intergroup relations. It can have detrimental consequences such as reduction in cognitive control (Amodio, 2009) and task performance (Mendes, Blascovich, Hunter, Lickel, & Jost, 2007), changes in physiological responses (Mendes, Blascovich, Lickel, & Hunter, 2002), increased reliance on stereotypes (Wilder, 1993). Importantly, intergroup anxiety also leads to contact avoidance (Plant & Devine, 2003) and prejudice (Stephan & Stephan, 2000). Given that imagined contact has been proposed as a "pre-contact" tool (Crisp & Turner, 2009), it is crucial to show that it can limit anxiety at the prospect of meeting outgroup members.

The first evidence that imagined contact reduces intergroup anxiety was provided by Turner, Crisp, et al. (2007, Study 3). Participants were male heterosexual university students. Results revealed that imagined contact, relative to a control condition, not only improved attitudes toward gay men and increased perceived outgroup variability, but it also reduced intergroup anxiety. It is worth noting that, whereas in the control condition the level of anxiety was around the mid-point of the response scale used, in the imagined contact condition anxiety was lower than the mid-point of the scale. Moreover, reduction in anxiety fully mediated the relationship between imagined contact, on one hand, and improved outgroup attitudes, on the other. In a further study by Husnu and Crisp (2010a, Study 2), British non-Muslim university students in an imagined contact condition reported less anxiety, improved attitudes and contact intentions toward British Muslims than those in a control group. A path analysis revealed that imagined contact affected contact intentions via two routes. The first route was affective (reduced anxiety, that in turn was associated with improved attitudes, that were predictive of better intentions), the second was cognitive (via increased vividness of the imagined contact scenario). Further demonstration

of the mediating role of intergroup anxiety was offered by Turner et al. (2013, Study 2), who found that the effect of imagined contact on intentions to approach homosexuals was partly explained by reduced anxiety toward homosexuals.

An especially powerful demonstration of the mediating role of intergroup anxiety and of its importance in allowing the effects of imagined contact was provided by Vezzali, Crisp, et al. (2013, Study 2). At Phase 1 of the study, the authors asked Italian university students leaving with the Erasmus program[1] to imagine a pleasant interaction with an unknown native of the country they were leaving for. At Phase 2, after the participants concluded the exchange program and returned to Italy, they were asked to complete an online questionnaire (within 30 days after their return). Phase 2 took place after an average of almost eight months from the completion of the experimental task in Phase 1. Compared to participants in a control condition, those in the imagined contact condition reported less anxiety toward natives of the country they had visited. More relevant, imagined contact had an indirect effect, via reduced intergroup anxiety, on self-reported time spent with natives during the Erasmus and on their evaluation. Interestingly, similar effects were not observed when considering other Erasmus students as the target outgroup, thus showing that the effects were specific to natives of the country of destination. Moreover, results did not change when statistically controlling for length of stay, initial intergroup attitudes and direct contact with natives. To the extent that Erasmus students generally socialize more with non-host (for example other Erasmus students) rather than with host country members (Sigalas, 2010), these results are very encouraging.

Delimiting Conditions

Recent research revealed that imagined contact is an effective technique also when considering deeply stigmatized outgroups that are likely to arise high level of anxiety at the prospect of encountering them, such as people with schizophrenia. Mentally simulating an interaction with such stigmatized categories can reduce the effectiveness of imagined contact, thus constituting a serious delimiting condition of this technique. In this context, reducing anxiety is a particularly important task to promote positive cross-group relations. West et al. (2011, Studies 3, 4) found in two studies that positive imagined contact reduced perceptions and feelings of dangerousness, fear and anxiety toward people with schizophrenia. Reduced perceived dangerousness, reduced fear and lower anxiety, in turn, fully mediated the effects of imagined contact on more positive attitudes toward people with schizophrenia. Notably, in other two studies, West et al. (2011, Studies 1 and 2) found that neutral (i.e., not explicitly positive) imagined contact failed to reduce intergroup anxiety, which was instead increased by the imagined contact manipulation. Thus, especially when considering deeply stigmatized outgroups, a positively toned imagined contact scenario is crucial to produce beneficial effects on intergroup relations (see also Stathi & Crisp, 2008, Study 1). A similar finding was obtained by West and Bruckmuller (2013, Study 1). They examined the role of difficulty of the task, by comparing a standard positive imagined contact condition with a condition where the task was made more difficult by making the font in which it was written less easy to read. According to the results, when the font was easier to read, positive imagined contact, compared with a control condition, reduced fear and perceptions of dangerousness regarding people with schizophrenia. In contrast, prejudice was greater in the imagined con-

tact than in the control condition when the font was difficult to read. Further evidence for the effectiveness of imagined contact in improving attitudes toward people with schizophrenia was provided by Stathi, Tsantila, et al. (2012). They showed that imagining a positive encounter with a schizophrenic individual, relative to a control condition, reduced outgroup stereotyping and increased future contact intentions via lowering intergroup anxiety.

Facilitating Conditions

Birtel and Crisp (2012b) tested whether imagined contact can decrease intergroup anxiety in the same way as clinical treatments based on psychotherapeutic principles limit anxiety disorders. In other words, the authors examined mental imagery (i.e., imagined contact) as a desensitization approach. In this case, however, instead of reducing anxiety stemming from specific phobias, the treatment was aimed to decrease anxiety at the prospect of meeting a member of a deeply stigmatized outgroup, that is, an adult with schizophrenia (Study 1) or a gay man (Study 2a). Specifically, in two studies, participants were asked to first imagine a *negative* intergroup encounter (individuals may spontaneously have negative intergroup expectations) followed by a *positive* intergroup encounter (negative-positive condition). In the control condition, more closely corresponding to the standard imagined contact procedure, participants imagined a positive intergroup encounter followed by another positive intergroup encounter (positive-positive condition). Results revealed that intergroup anxiety was lower after first imagining a negative (rather than a positive) intergroup encounter, followed by a positive imagined encounter. Thus, similarly to psychotherapy, being first confronted with personal fears (in this case, imagining a negative intergroup encounter) and gradually face them, by then imagining a positive intergroup encounter, attenuates the anxiety and discomfort generally associated with cross-group meetings. Moreover, decreased intergroup anxiety fully mediated the effects of this desensitization approach on future contact intentions with gay men (Study 2a).

Finally, Kuchenbrandt et al. (2013) have recently demonstrated that imagining oneself to cooperate with an outgroup member is more effective than standard imagined contact in reducing intergroup anxiety; however, no formal test of mediation on reduced prejudice was applied (this study is described in more detail below in the section of intergroup empathy).

Performance Anxiety

Imagined contact has also been shown to be effective in limiting another dangerous type of anxiety. Specifically, it was found that imagined contact reduces *performance anxiety*, that is, anxiety at the prospect of engaging in some kind of task. Performance anxiety is a key factor in promoting stereotype threat (Steele, 1997), defined as the perception of possibly confirming that the negative stereotype of one's own ingroup applies to the self (Steele & Aronson, 1995). Abrams et al. (2008, Study 2) examined imagined contact as a strategy to reduce stereotype threat among older people. The main hypothesis was that imagined contact should change the perceived affective consequences stemming from intergroup comparisons, thereby reducing stereotype threat. Consistently, the authors found that White British participants over the age of 60 years

who engaged in a mentally simulated interaction with a young individual, compared to those in a control condition, subsequently were more confident in themselves and displayed less anxiety for an upcoming test. Reduced anxiety, in turn, was associated with improved performance in responding to math items. It is possible that positive, albeit imagined, contact with a young person reduces the accessibility of negative stereotypic expectations and increases self-perceived confidence, in turn limiting stereotype threat.

OUTGROUP TRUST

Outgroup trust is an important factor promoting positive intergroup relations. It consists of positive expectations about others' intentions and behaviors (Kramer & Carnevale, 2001; Tropp, 2008; see also Trifiletti & Capozza, 2011) and is associated with feelings of transparency and certainty. Building trust is a difficult task, often requiring several positive encounters (Worchel, Cooper, & Goethals, 1991). However, once trust is formed, it fosters intergroup cooperation and positive attitudes (Lewicki & Wiethoff, 2000). There is some evidence that imagined contact can favor the development of trust toward the outgroup. Turner et al. (2013, Study 1) examined imagined contact as a strategy to improve behavioral intentions toward asylum seekers. Their results revealed that imagined contact favored the adoption of an approach orientation toward asylum seekers. Moreover, this effect was mediated by trust and improved attitudes toward asylum seekers. In Study 2, the authors examined the relation between heterosexuals and homosexuals. Once again, imagined contact was effective in fostering outgroup trust among heterosexuals. Participants in the imagined contact condition, compared with those in a control condition, also revealed less anxiety, more positive attitudes, reduced avoidance orientation and increased approach orientation toward homosexuals. Path analysis revealed that outgroup trust mediated the effects of imagined contact on reduced tendency to avoid the outgroup; additional mediation effects were found for reduced intergroup anxiety (on increased approach behavioral tendencies) and improved intergroup attitudes (on reduced avoidance and increased approach behavioral tendencies).

Further evidence for the mediator role of outgroup trust was provided by Pagotto et al. (2013). The authors first asked participants (Italian university students and full-time employees) to complete a warm-up task aimed at promoting reciprocal self-disclosure. After this they asked them to imagine a conversation with a Muslim immigrant by making salient interpersonal characteristics (interpersonal condition) or enhancing the salience of group distinctions (intergroup condition). There was also a control condition, where a standard no-contact task was used. In line with previous research (Stathi et al., 2011), imagined contact was effective when it was structured to enhance membership salience. In particular, intergroup attitudes and the choice to use a cooperative strategy (assessed with Tajfel's matrices; Tajfel, Billig, Bundy, & Flament, 1971), as well as outgroup trust, were more positive in the intergroup than in the interpersonal and control conditions; the differences between the two latter conditions were nonsignificant (somewhat surprisingly, the manipulation did not affect intergroup anxiety). In line with findings by Turner et al. (2013), trust toward Muslim immigrants fully mediated the effects of imagined contact (intergroup condition vs. interpersonal and control conditions) on attitudes and cooperation intentions toward Muslim immigrants. Evidence for the role of imagined contact in fostering outgroup trust

was also found by Kuchenbrandt et al. (2013); the authors, however, did not test outgroup trust as a mediator of imagined contact on reduced prejudice.

Finally, Vezzali, Capozza, Stathi, et al. (2012) showed that outgroup trust can also be a crucial mediator of the effects of imagined contact on reduced prejudice in young children. Because reduced prejudice was assessed by means of a measure of outgroup infrahumanization based on intergroup emotions, the study will be presented in the following section.

Outgroup Infrahumanization

Outgroup infrahumanization consists in perceiving the outgroup as less human than the ingroup (Haslam, Loughnan, Kashima, & Bain, 2008; Leyens, Demoulin, Vaes, Gaunt, & Paladino, 2007). There is evidence that individuals infrahumanize the outgroup by attributing more uniquely human emotions (e.g., pride, shame) to the ingroup than to the outgroup, whereas non-uniquely human emotions (e.g., joy, anger) are equally assigned to ingroup and outgroup members. Denying humanness to the outgroup has pervasive detrimental effects on intergroup relations (e.g., Goff, Eberhardt, Williams, & Jackson, 2008; Vaes, Paladino, Castelli, Leyens, & Giovanazzi, 2003; see also Capozza, Boccato, Andrighetto, & Falvo, 2009) and, to the extent that infrahumanization can be activated automatically (Boccato, Capozza, Falvo, & Durante, 2008; Paladino et al., 2002), it can be difficult to combat, especially in contexts characterized by a history of violence.

Vezzali, Capozza, Stathi, et al. (2012), in the context of the relationship between Italians and immigrants, examined the effects of imagined contact on outgroup infrahumanization (assessed as the differential attribution of uniquely human emotions to ingroup and outgroup; Leyens et al., 2007). In this study, in the imagined contact condition, Italian elementary school children engaged once a week for three consecutive weeks in an imagined contact session, where they were asked to imagine a positive encounter with an unknown immigrant child at school (first week), at home (second week), and at the park (third week). In the control condition children did not complete any experimental task. One week after the last imagined contact session, children were administered a questionnaire. Results indicated that participants in the control condition revealed evidence of infrahumanization, since they assigned more uniquely human emotions to the ingroup than to the outgroup. In contrast, the differential attribution of uniquely human emotions was not evident in the imagined contact condition, suggesting that imagined contact is an effective strategy to combat infrahumanization. Moreover, outgroup trust fully mediated the relationship between imagined contact, on one hand, and stronger attribution of uniquely human emotions to the outgroup and improved intergroup contact intentions, on the other.

Intergroup Empathy

Batson and colleagues (1997) defined empathy as "an other-oriented emotional response congruent with another's perceived welfare" (p. 105). Research has shown that fostering intergroup empathy has beneficial effects for relations between conflicting groups. For instance, it reduces prejudice and increases prosocial behavior and altruism (Batson, 2010; Stephan & Finlay,

1999). Batson et al. (1997) suggested that the effectiveness of empathy in improving intergroup relations relies on three steps: first, people empathize with individuals who are suffering. Second, after the empathic reaction to an individual, people realize the importance of the wellbeing of the individual and third, the concern about the welfare of the person who suffers generalizes to the whole group that the person belongs to. As noted above, intergroup empathy is the second affective factor, in addition to intergroup anxiety, that has been highlighted as a key mechanism explaining the positive effects of direct contact on reduced prejudice (Brown & Hewstone, 2005; Pettigrew & Tropp, 2008).

Initial evidence for the role of imagined contact in improving intergroup empathy was provided by Kuchenbrandt et al. (2013), who tested whether adding cooperation to the standard imagined contact task benefits the improvement of intergroup attitudes. Participants were Germany university students, and the outgroup was that of Roma people. In the positive imagined contact condition, participants were asked to imagine a positive encounter with a Roma stranger at university. In the positive cooperative imagined contact condition, in addition to imagining a positive contact with a Roma stranger at university, participants also imagined to cooperate with him/her by grabbing some chairs to seat in the classroom. In the neutral contact condition, the instructions for imagining an encounter with a Roma stranger did not include neither the positive tone (which has been shown to strengthen contact effects; see Crisp & Turner, 2012) nor the cooperation element. Results showed that empathy toward Roma people was higher in the positive cooperative imagined contact than in the neutral contact condition; however, the difference between positive cooperative imagined contact and positive imagined contact condition only approached statistical significance (similar findings emerged for intergroup anxiety, outgroup trust, subtle prejudice). Unfortunately, no formal tests were conducted to assess the role of empathy as a mediator. However, given its mediating role observed for direct contact (Pettigrew & Tropp, 2008), intergroup empathy may also be a likely mediator of imagined contact effects.

(Affective) Intergroup Attitudes

According to the tripartite model, attitudes are formed by three different components: cognitive, affective, and behavioral (Zanna & Rempel, 1988). In line with the aims of the present review, we will present studies on imagined contact that tapped the affective component of intergroup attitudes. Indeed, research consistently showed that imagined contact has a reliable effect on the improvement of "affective" intergroup attitudes. Several studies (Birtel & Crisp, 2012b, Study 3; Husnu & Crisp, 2010a, Study 2; Turner & Crisp, 2010, Study 1; Turner, Crisp, et al., 2007, Study 3; Vezzali, Crisp, et al., 2013, Study 2; West & Bruckmuller, 2013, Study 2; West et al., 2011, Studies 3, 4) found that imagined contact improves attitudes toward the outgroup assessed with adaptations of the scale by Wright et al. (1997). This scale focuses on intergroup affect, asking participants to evaluate outgroup members on six bipolar scales: warm-cold, positive-negative, friendly-hostile, trusting-suspicious, respect-contempt, admiration-disgust. Other studies found beneficial effects of imagined contact on attitudes assessed with a feeling thermometer (Harwood et al., 2011; Pagotto et al., 2013; Turner & West, 2012; Turner et al., 2013; Vezzali, Crisp, et al., 2013, Study 1).

Moreover, there is evidence that affective attitudes explain why imagined contact improves behavioral intentions. In the previously described study by Husnu and Crisp (2010a, Study 2), imagined contact increased the desire to have contact with outgroup members by reducing intergroup anxiety, that in turn predicted more positive affective intergroup attitudes; affective attitudes were then associated with more positive contact intentions. Birtel and Crisp (2012b, Study 3), by employing the desensitization procedure described above (i.e., imagining a negative followed by a positive intergroup encounter) found that compared to a control condition (a standard imagined contact condition, where participants imagined a single positive encounter with an outgroup member), this empowered form of imagined contact fostered positive contact intentions toward British Muslims among non-Muslim British students. This effect was fully mediated by the improvement of affective attitudes (assessed with Wright et al.'s 1997 scale). Also Turner et al. (2013) found that improved affective intergroup attitudes mediated the relationship between imagined contact and more positive behavioral intentions toward asylum seekers (Study 1) and homosexuals (Study 2).

Harwood et al. (2011) also examined the mediating role of affective attitudes by testing whether the secondary transfer effect can be applied to imagined contact. The secondary transfer effect refers to the generalization of positive attitudes developed during contact to outgroups not directly involved in the encounter situation (Pettigrew, 2009). It corresponds to one of the types of generalization identified by Pettigrew, which is arguably the most difficult to achieve (1998; the other two types of generalizations being from the contact situation to different contexts and from known to unknown outgroup members, respectively). Research has shown that the positive effects of direct contact with a primary outgroup indeed generalize to attitudes toward a secondary outgroup (Tausch et al., 2010), even when the secondary outgroup is very dissimilar from the contact outgroup (Vezzali & Giovannini, 2012). However, it is crucial to also test whether imagined contact effects generalize beyond the imagined contact situation to different outgroups. Indeed, if the positive effects of imagined contact with a specific group do not generalize to different outgroups, then the usefulness of this strategy for reducing prejudice is severely narrowed. Harwood and collaborators (2011) asked White undergraduates to imagine a positive interaction with an illegal immigrant, a negative interaction with an illegal immigrant, or an outdoor scene (control condition). Results revealed that affective attitudes toward illegal immigrants, assessed with a feeling thermometer, where more positive in the positive condition than in the negative and in the control (marginal effect) conditions. More interestingly, the effects of positive (vs. negative) imagined contact generalized to attitudes toward similar outgroups (i.e., Mexican Americans, legal immigrants, Asian Americans, homeless people, political refugees, Black people, Democrats, professors (!)) via attitudes toward the primary outgroup (i.e., illegal immigrants).

Implicit Attitudes

According to Gawronski and Bodenhausen (2006, 2011), implicit attitudes represent the affective reaction to an attitude object. In terms of the tripartite model, they represent the affective part of attitudes (Zanna & Rempel, 1988). As such, we present studies showing that imagined contact can reduce implicit prejudice. These studies add to the others reviewed in the previous section by showing that imagined contact can influence the affective part of attitudes tapped

not only at an explicit, but also at an implicit level. Whereas explicit attitudes are mainly associated with controlled behaviors, implicit attitudes, which are unintentional and are activated automatically at the mere presence of the attitude object, predict a wide range of subtle and nonverbal prejudicial behaviors (Greenwald, Poehlman, Uhlmann, & Banaji 2009). Moreover, they influence how others perceive and evaluate people (Dovidio, Kawakami, & Gaertner, 2002). It is thus important to examine ways to reduce implicit negative intergroup attitudes, which may be detrimental for intergroup relations and impede the formation of cross-group friendships (Towles-Schwen & Fazio, 2006).

The first demonstration that imagined contact can reduce implicit prejudice was provided by Turner and Crisp (2010). In their first study, undergraduates under a standard imagined contact task displayed more positive explicit and implicit attitudes (measured with an Implicit Association Test, IAT; Greenwald, McGhee, & Schwartz, 1998) toward older people, compared with a group imagining an outdoor scene. These results were replicated in a second study, considering a different target-outgroup (i.e., Muslims) and a different control condition, which allowed to conclude that the effects were not due to simply priming the outgroup category, but were instead a function of the simulated intergroup interaction.

Vezzali, Capozza, Giovannini, et al. (2012) demonstrated that imagined contact is also effective in reducing implicit prejudice among young children. The study was similar to the one described above by Vezzali, Capozza, Stathi, et al. (2012): Italian elementary school children were asked to imagine in three weekly sessions a positive encounter with an immigrant child. One week after the last imagined contact session, children were administered a questionnaire and a Child IAT (Baron & Banaji, 2006). The Child IAT, administered by means of a computer located in the computer room of the school, is a simplified version of a standard IAT. In this case, ingroup and outgroup target-stimuli were exemplified by pictures of Italian and immigrant children, whereas positive and negative stimuli for the attribute dimensions were presented by audio (through speakers), so as to eliminate possible confounds related to children's differential reading ability. Results closely replicated those by Turner and Crisp (2010), showing that implicit prejudice was lower in the imagined contact than in the control condition (where children did not perform any task). Results additionally showed that, whereas the effects of imagined contact on behavioral intentions were mediated by self-disclosure, the effect on implicit prejudice was unmediated. This is in line with dual-process theories (Gawronski & Bodenhausen, 2006), stating that, although related, explicit and implicit attitudes are a function of distinct processes.

SUGGESTIONS FOR FUTURE RESEARCH

Research on direct contact has identified numerous mediators of contact effects, most of which can be classified as cognitive or affective (Brown & Hewstone, 2005). In contrast, research on imagined contact is still in its infancy. Initial evidence has revealed that intergroup anxiety, which is probably the most potent mediator of direct contact (Pettigrew & Tropp, 2008), is also a crucial factor allowing imagined contact to reduce prejudice (e.g., Turner, Crisp, et al., 2007, Study 3). More recently, researchers have found that several variables, in addition to intergroup anxiety, can play a role in mediating the effects of imagined contact. Concerning cognitive mediators, for instance, the effects of imagined contact were explained by vividness of the imag-

ined scenario (Husnu & Crisp, 2010a), attribution to the self of a positive outgroup orientation (Crisp & Husnu, 2011), self-disclosure toward the outgroup (Vezzali, Capozza, Giovannini, et al., 2012). Relative to affective mediators, that were the focus of the present review, evidence was found, in addition to intergroup anxiety, for outgroup trust (e.g., Turner et al., 2013), affective intergroup attitudes (e.g., Birtel & Crisp, 2012b, Study 3).

A first avenue for researchers might be that of identifying new mediators, which could help explain why imagined contact has positive effects on intergroup relations. For instance, we have reviewed evidence that imagined contact increases intergroup empathy (Kuchenbrandt et al., 2013). To the extent that empathy toward the outgroup is a key mediator of direct contact (Pettigrew & Tropp, 2008), this variable is an especially likely candidate to explain the imagined contact effects. Moreover, imagined contact was found to reduce outgroup infrahumanization (Vezzali, Capozza, Stathi, et al., 2012). Andrighetto, Mari, Volpato, and Behluli (2012) found that infrahumanization acted as a mediator of the relationship between extended contact and common ingroup identity, on one hand, and competitive victimhood (the tendency to feel, in the context of intractable conflicts, that the ingroup has been victimized more than the outgroup; Noor, Brown, & Prentice, 2008) on the other. Similarly, to the extent that imagined contact reduces outgroup infrahumanization, it may be potentially used in the context of intractable conflicts to reduce competitive victimhood. Other variables may be affected by outgroup infrahumanization, such as intentions to aggress the outgroup (Vaes et al., 2003). Thus, a hypothesis to be tested is whether imagined contact, by reducing outgroup infrahumanization, can be effective in improving intergroup relations and promote peace attempts in highly conflictual contexts.

Turner and West (2012) demonstrated in two studies that imagined contact has an impact on actual behavior. In particular, they showed that mentally simulating an intergroup interaction reduces seating distance toward the outgroup, indicating more positive nonverbal behavior following imagined contact. Combining evidence showing that implicit attitudes (capturing the affective component of attitudes; Gawronski & Bodenhausen, 2006) are important predictors of nonverbal behaviors (Greenwald et al., 2009) and that implicit prejudice is reduced by imagined contact (e.g., Turner & Crisp, 2010), it is possible to anticipate that implicit prejudice may mediate the effects of imagined contact on more positive nonverbal behaviors. However, despite this reasonable expectation, this hypothesis still needs empirical support.

There are several other additional affective mediators, identified by direct contact research, that could be tested as mediators of imagined contact, such as intergroup forgiveness (Cehajic et al., 2008). Other potential mediators can be guilt, shame (Brown, Gonzalez, Zagefka, Manzi, & Cehajic, 2008), anger (Cehajic et al., 2008). The identification of further mediator of imagined contact can allow a better understanding of the effects of this technique, by investigating how it works and the different variables affected by it. It can also help delimiting the potentialities and the boundaries of imagined contact, by showing for instance whether it also works in highly conflictual contexts, where variables such as forgiveness, guilt, shame, etc. can have a major role in influencing a peaceful coexistence between conflicting groups.

Additionally, researchers should identify how affective and cognitive mediators of imagined contact work in conjunction. A first step in this direction was done by Husnu and Crisp (2010a, Study 2), who demonstrated that imagined contact affected behavioral intentions toward the outgroup via two ways, one cognitive (vividness of the imagined scenario) and one affective (reduced anxiety and, in turn, more positive intergroup attitudes). However, it is also possible

that, as for direct contact, the two types of processes operate interactively or sequentially. For instance, imagined contact could foster the perceptions that ingroup and outgroup belong to a common group, which in turn should improve intergroup attitudes by reducing anxiety and fostering empathy toward the outgroup (for a similar model tested with direct contact as the predictor, see Capozza et al., 2010, 2013).

CONCLUSIONS

The accumulating empirical evidence firmly supports that imagined contact has the potential to be a highly effective strategy for improving intergroup relations (Crisp & Turner, 2009, 2012). Due to its flexibility and ease of application, we believe that this technique has a great potential for fostering positive intergroup behavior. In order to better understand the limits and the effectiveness of imagined contact, however, it is important to understand when and how it reduces prejudice. Previous reviews (Crisp et al., 2009, 2010; Crisp & Turner, 2009, 2012) have shown that imagined contact exerts its effects via a cognitive *and* an affective route. However, despite these reviews are very recent, due to the rapid increase of the research on imagined contact, most of the studies on affective variables were conducted or presented after these reviews were published. The aim of the present review was to specifically focus on the impact that imagined contact has on affective factors. Given that affect plays a major role in prejudice reduction (Pettigrew, 1998; Pettigrew & Tropp, 2008), it is crucial to understand whether imagined contact influences intergroup affect and, in turn, improved intergroup relations. We have shown that, despite research on this strategy being relatively recent, there are several results demonstrating effects on affective factors. In particular, imagined contact was shown to reduce intergroup (Birtel & Crisp, 2012b; Husnu & Crisp, 2010a; Turner, Crisp, et al., 2007, Study 3) and performance (Abrams et al., 2008) anxiety, to increase outgroup trust (Turner et al., 2013) and empathy (Kuchenbrandt et al., 2013), to improve the affective component of attitudes (West & Bruckmuller, 2013, Study 2), even at an implicit level (Turner & Crisp, 2010). Moreover, most of these variables also served as mediators of imagined contact effects. Since affective, more than cognitive, factors, have been shown to be strong predictors of reduced prejudice (Pettigrew & Tropp, 2008), the fact that the effects of imagined contact are strongly related to affective consequences is encouraging.

Importantly, evidence from various studies reviewed here demonstrated that imagined contact is effective at both alleviating negative affective factors, that is, anxiety, *and* enhancing positive affective factors, such as empathy and trust. The findings that support reductions in anxiety are particularly important because high intergroup anxiety can lead to contact avoidance or even more negative outgroup evaluations following contact (Plant & Devine, 2003; Vorauer Hunter, Main, & Roy, 2000). However, the reviewed literature suggests that imagined contact can reduce anxiety and outgroup infrahumanization and enhance trust, attitudes and empathy toward the outgroup, and thus prepare people for a more positive intergroup contact experience (for recent reviews focusing on this dimension, see Crisp et al., 2010; Crisp & Turner, 2012; Stathi, Crisp, et al., 2012).

To the extent that imagined contact has its roots in mental imagery, and is clearly a cognitive experience of mentally practicing intergroup interactions, it may apparently seem surpris-

ing that this technique has powerful effects on affective, in addition to cognitive, factors. However, we argue that, despite being a cognitive experience, it is based on simulating an experience deeply intertwined with affect. Indeed, intergroup contact has been defined as a primarily affective experience (see Pettigrew, 1997, 1998; Pettigrew & Tropp, 2011). Given that mental imagery shares neurological mechanisms involved in memory, emotion and motor control (Kosslyn, Ganis, & Thompson, 2001) and elicits motivational and emotional responses similar to those produced by real experiences (Dadds, Bovbjerg, Redd, & Cutmore, 1997), we argue that imagined contact, similar to direct contact, is not only a cognitive experience, but also largely an affective one (i.e., the experience of contact with the outgroup). When participants are asked to imagine an interaction with a stranger from the outgroup, we suggest that they engage in a process of exploring what they think of and how they feel toward the outgroup. So, mentally simulating positive contact experiences activates concepts that are normally associated with successful intergroup interactions, such as increased knowledge and more positive affect toward the outgroup. As such, it is not surprising that its effects extend to several affective variables.

We suggest that social psychologists and practitioners may fruitfully capitalize on this double nature, cognitive and affective, of imagined contact, and base future studies and interventions on both aspects. Cognitive and affective factors that are linked to direct and indirect contact processes can jointly contribute to the goal of fostering smooth and friendly relations between members of different groups.

NOTE

1. The Erasmus program is a University student exchange program, where students attend for a specified time, ranging from one term to one academic year, a University abroad.

REFERENCES

Abrams, D., Crisp, R. J., Marques, S., Fagg, E., Bedford, L., & Provias, D. (2008). Threat inoculation: Experienced and imagined intergenerational contact prevents stereotype threat effects on older people's math performance. *Psychology and Aging*, *23*, 934-939. doi:10.1037/a0014293

Allport, G. W. (1954). *The nature of prejudice*. New York, NY: Addison-Wesley.

Amodio, D. M. (2009). Intergroup anxiety effects on the control of racial stereotypes: A psychoneuroendocrine analysis. *Journal of Experimental Social Psychology*, *45*, 60-67. doi:10.1016/j.jesp.2008.08.009

Andrighetto, L., Mari, S., Volpato, C., & Behluli, B. (2012). Reducing competitive victimhood in Kosovo: The role of extended contact and common ingroup identity. *Political Psychology*, *4*, 513-529. doi: 10.1111/j.1467-9221.2012.00887.x

Baron, A. S., & Banaji, M. R. (2006). The development of implicit attitudes: Evidence of race evaluations from ages 6 and 10 and adulthood. *Psychological Science*, *17*, 53-58. doi:10.1111/j.1467-9280. 2005.01664.x

Batson, C. D. (2010). Empathy-induced altruistic motivation. In M. Mikulincer & P. R. Shaver (Eds.), *Prosocial motives, emotions, and behavior: The better angels of our nature* (pp. 15-34). Washington, DC: American Psychological Association. doi:10.1037/12061-001

Batson, C. D., Polycarpou, M. P., Harmon-Jones, E., Imhoff, H. J., Mitchener, E. C., Bednor, L. L. ... Highberger, L. (1997). Empathy and attitudes: Can feelings for a member of stigmatised group improve feelings toward the group? *Journal of Personality and Social Psychology*, *72*, 105-118. doi:10.1037/0022-3514.72.1.105

Birtel, M. D., & Crisp, R. J. (2012a). Imagining intergroup contact is more cognitively difficult for people higher in intergroup anxiety but this does not detract from its effectiveness. *Group Processes and Intergroup Processes*, *15*, 744-761. doi:10.1177/1368430212443867

Birtel, M. D., & Crisp, R. J. (2012b). "Treating" prejudice: An exposure-therapy approach to reducing negative reactions toward stigmatized groups. *Psychological Science, 23*, 1379-1386. doi:10.1177/0956797612443838

Boccato, G., Capozza, D., Falvo, R., & Durante, F. (2008). The missing link: Ingroup, outgroup and the human species. *Social Cognition, 26*, 224-234. doi:10.1521/soco.2008.26.2.224

Brown, R., Eller, A., Leeds, S., & Stace, K. (2007). Intergroup contact and intergroup attitudes: A longitudinal study. *European Journal of Social Psychology, 37*, 692-703. doi:10.1002/ejsp.384

Brown, R., Gonzalez, R., Zagefka, H., Manzi, J., & Cehajic, S. (2008). Nuestra culpa: Collective guilt and shame as predictors of reparation for historical wrongdoing. *Journal of Personality and Social Psychology, 94*, 75-90. doi:10.1037/0022-3514.94.1.75

Brown, R., & Hewstone, M. (2005). An integrative theory of intergroup contact. *Advances in Experimental Social Psychology, 37*, 255-343. doi:10.1016/S0065-2601(05)37005-5

Capozza, D., Boccato, G., Andrighetto, L., & Falvo, R. (2009). Categorization of ambiguous human/ape faces: Protection of ingroup but not outgroup humanity. *Group Processes and Intergroup Relations, 12*, 777-787. doi:10.1177/1368430209344868

Capozza, D., Trifiletti, E., Vezzali, L., & Favara, I. (2013). Can contact improve humanity attributions? *International Journal of Psychology, 48*, 527-541. doi:10.1080/00207594.2012.688132

Capozza, D., Vezzali, L., Trifiletti, E., Falvo, R., & Favara, I. (2010). Improving intergroup relationships within and outside the contact situation: The role of common ingroup identity and emotions of anxiety and empathy. *TPM – Testing, Psychometrics, Methodology in Applied Psychology, 17*, 17-36.

Cehajic, S., Brown, R., & Castano, E. (2008). Forgive and forget? Antecedents and consequences of intergroup forgiveness in Bosnia and Herzegovina. *Political Psychology, 29*, 351-367. doi:10.1111/j.1467-9221.2008.00634.x

Corrigan, P. W., Rowan, D., Green, A., Lundin, R., River, P., Uphoff-Wasowski, K. ... Kubiak, M. A. (2002). Challenging two mental illness stigmas: Personal responsibility and dangerousness. *Schizophrenia Bullettin, 28*, 293-310.

Crisp, R. J., & Abrams, D. (2008). Improving intergroup attitudes and reducing stereotype threat: An integrated contact model. *European review of Social Psychology, 19*, 242-284. doi:10.1080/10463280802547171

Crisp, R. J., Birtel, M. D., & Meleady, R. (2011). Mental simulation of social thought and action: Trivial tasks or tools for transforming social policy? *Current Directions in Psychological Science, 20*, 261-264. doi:10.1177/0963721411413762

Crisp, R. J., & Husnu, S. (2011). Attributional processes underlying imagined contact effects. *Group Processes and Intergroup Relations, 14*, 275-287. doi:10.1177/1368430210390721

Crisp, R. J., Husnu, S., Meleady, R., Stathi, S., & Turner, R. N. (2010). From imagery to intention: A dual-route model of imagined contact effects. *European Review of Social Psychology, 21*, 188-236. doi:10.1080/10463283.2010.543312

Crisp, R. J., Stathi, S., Turner, R. N., & Husnu, S. (2009). Imagined contact: Theory, paradigm and practice. *Social and Personality Psychology Compass, 3*, 1-18. doi:10.1111/j.1751-9004.2008.00155.x

Crisp, R. J., & Turner, R. N. (2009). Can imagined contact interactions produce positive perceptions? Reducing prejudice through simulated social contact. *American Psychologist, 64*, 231-240. doi:10.1037/a0014718

Crisp, R. J., & Turner, R. N. (2012). The imagined contact hypothesis. In J. Olson & M. P. Zanna (Eds.), *Advances in Experimental Social Psychology* (Vol. 46, pp. 125-182). Orlando, FL: Academic Press. doi:10.1016/B978-0-12-394281-4.00003-9

Dadds, M. R., Bovbjerg, D. H., Redd, W. H., & Cutmore, T. R. (1997). Imagery in human classical conditioning. *Psychological Bulletin, 122*, 89-103. doi:10.1037/0033-2909.122.1.89

Dixon, J., Durrheim, K, & Tredoux, C. (2005). Beyond the optimal contact strategy: A reality check for the contact hypothesis. *American Psychologist, 60*, 697-711. doi:10.1037/0003-066X.60.7.697

Dovidio, J. F., Eller, A., & Hewstone, M. (2011). Improving intergroup relations through direct, extended and other forms of in direct contact. *Group Processes and Intergroup Relations, 14*, 147-160. doi:10.1177/1368430210390555

Dovidio, J. F., Kawakami, K., & Gaertner, S. L. (2002). Implicit and explicit prejudice and interracial interaction. *Journal of Personality and Social Psychology, 82*, 62-68. doi:10.1037/0022-3514.82.1.62

Galinsky, A. D., Gilin, D., & Massux, W. W. (2011). Using both your head and your heart: The role of perspective taking and empathy in resolving social conflict. In J. P. Forgas, A. W. Kruglanski, & K. D. Williams (Eds.), *The psychology of social conflict and aggression* (pp. 103-118). New York, NY: Psychology Press.

Gawronski, B., & Bodenhausen, G. V. (2006). Associative and propositional processes in evaluation: An integrative review of implicit and explicit attitude change. *Psychological Bulletin, 132*, 692-731. doi:10.1037/0033-2909.132.5.692

Gawronski, B., & Bodenhausen, G. V. (2011). The associative-propositional evaluation model: Theory, evidence, and open questions. *Advances in Experimental Social Psychology, 44*, 59-127. doi:10.1016/B978-0-12-385522-0.00002-0

Goff, P. A., Eberhardt, J. L., Williams, M. J., & Jackson, M. C. (2008). Not yet human: Implicit knowedge, historical dehumanization, and contemporary consequences. *Journal of Personality and Social Psychology*, *94*, 292-306. doi:10.1037/0022-3514.94.2.292

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology*, *74*, 1464-1480. doi:10.1037/t03782-000

Greenwald, A. G., Poehlman, T. A., Uhlmann, E. L., & Banaji, M. R. (2009). Understanding and using the implicit association test: III. Meta-analysis of predictive validity. *Journal of Personality and Social Psychology*, *97*, 17-41. doi:10.1037/a0015575

Hamberger, J., & Hewstone, M. (1997). Inter-ethnic contact as a predictor of blatant and subtle prejudice: Tests of a model in four West European nations. *British Journal of Social Psychology*, *36*, 173-190. doi:10.1111/j.2044-8309.1997.tb01126.x

Harwood, J., Paolini, S., Joyce, N., Rubin, M., & Arroyo, A. (2011). Secondary transfer effects from imagined contact: Group similarity affects the generalization gradient. *British Journal of Social Psychology*, *50*, 180-189. doi:10.1348/014466610X524263

Haslam, N., Loughnan, S., Kashima, Y., & Bain, P. (2008). Attributing and denying humanness to others. *European Review of Social Psychology*, *19*, 55-85. doi:10.1080/10463280801981645

Herek, G. M., & Capitanio, J. P. (1996). "Some of my best friends": Intergroup contact, concealable stigma, and heterosexuals' attitudes toward gay men and lesbians. *Personality and Social Psychology Bulletin*, *22*, 412-424. doi:10.1177/0146167296224007

Husnu, S., & Crisp, R. J. (2010a). Elaboration enhances the imagined contact effect. *Journal of Experimental Social Psychology*, *46*, 943-950. doi:10.1016/j.jesp.2010.05.014

Husnu, S., & Crisp, R. J. (2010b). Imagined intergroup contact: A new technique for encouraging greater inter-ethnic contact in Cyprus. *Peace and Conflict: Journal of Peace Psychology*, *16*, 97-108. doi: 10.1080/10781910903484776

Kosslyn, S. M., Ganis, G., & Thompson, W. L. (2001). Neural foundations of imagery. *Nature Reviews Neuroscience*, *2*, 635-642. doi:10.1038/35090055

Kramer, R. M., & Carnevale, P. J. (2001). Trust and intergroup negotiation. In R. Brown & S. L. Gaertner (Eds.), *Blackwell handbook of social psychology: Intergroup processes* (pp. 431-450). Oxford, UK: Blackwell.

Kuchenbrandt, D., Eyssel, F., & Seidel, S. K. (2013). Cooperation makes it happen: Imagined intergroup cooperation enhances the positive effects of imagined contact. *Group Processes and Intergroup Relations*, *16*, 635-647. doi:10.1177/1368430212470172

Lewicki, R. J., & Wiethoff, C. (2000). Trust, trust development, and trust repair. In M. Deutsch & P. Coleman (Eds.), *The handbook of conflict resolution: Theory and practice* (pp. 86-107). San Francisco: Jossey-Bass.

Leyens, J. Ph., Demoulin, S., Vaes, J., Gaunt, R., & Paladino, M. P. (2007). Infra-humanization: The wall of group differences. *Social Issues and Policy Review*, *1*, 139-172. doi:10.1111/j.1751-2409.2007. 00006.x

Mendes, W. B., Blascovich, J., Hunter, S. B., Lickel, B., & Jost, J. T. (2007). Threatened by the unexpected: Physiological responses during social interactions with expectancy-violating partners. *Journal of Personality and Social Psychology*, *92*, 698-716. doi:10.1037/0022-3514.92.4.698

Mendes, W. B., Blascovich, J., Lickel, B., & Hunter, S. (2002). Challenge and threat during social interactions with white and black men. *Personality and Social Psychology Bulletin*, *28*, 939-952. doi:10.1177/01467202028007007

Noor, M., Brown, R., & Prentice, G. (2008). Precursors and mediators of intergroup reconciliation in Northern Ireland: A new model. *British Journal of Social Psychology*, *47*, 481-495. doi:10.1348/ 014466607X238751

Pagotto, L., Visintin, E. P., De Iorio, G., & Voci, A. (2013). Imagined intergroup contact promotes cooperation through outgroup trust. *Group Processes and Intergroup Relations*, *16*, 209-216. doi: 10.1177/1368430212450057

Pagotto, L., Voci, A., & Maculan, V. (2010). The effectiveness of intergroup contact at work: Mediators and moderators of hospital workers' prejudice toward immigrants. *Journal of Community and Applied Social Psychology*, *20*, 317-330. doi:10.1177/1368430212450057

Paladino, M. P., Leyens, J. Ph., Rodriguez, R. T., Rodriguez, A. P., Gaunt, R., & Demoulin, S. (2002). Differential association of uniquely and non-uniquely human emotions to the ingroup and the outgroup. *Group Processes and Intergroup relations*, *5*, 105-117. doi:10.1177/1368430202005002539

Paluck, E. L., & Green, D. P. (2009). Prejudice reduction: What works? A critical look at evidence from the field and the laboratory. *Annual Review of Psychology*, *60*, 339-367. doi:10.1146/annurev.psych. 60.110707.163607

Pettigrew, T. F. (1997). Generalized intergroup contact effects on prejudice. *Personality and Social Psychology Bulletin*, *23*, 173-185. doi:10.1177/0146167297232006

Pettigrew, T. F. (1998). Intergroup contact theory. *Annual Review of Psychology*, *49*, 65-85. doi:10.1146/ annurev.psych.49.1.65

Pettigrew, T. F. (2009). Secondary transfer effect of contact: Do intergroup contact effects spread to noncontacted outgroups? *Social Psychology*, *40*, 55-65. doi:10.1027/1864-9335.40.2.55

Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, *90*, 751-783. doi:10.1037/0022-3514.90.5.751

Pettigrew, T. F., & Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology*, *38*, 922-934. doi:10.1002/ejsp.504

Pettigrew, T. F., & Tropp, L. (2011). *When groups meet: The dynamics of intergroup contact*. New York, NY: Psychology Press.

Plant, E. A., & Devine, P. G. (2003). The antecedents and implications of interracial anxiety. *Personality and Social Psychology Bulletin*, *29*, 790-801. doi:10.1177/0146167203029006011

Sigalas, E. (2010). Cross-border mobility and European identity: The effectiveness of intergroup contact during the Erasmus year abroad. *European Union Politics*, *11*, 241-265. doi:10.1177/1465116510363656

Stangor, C., Sullivan, L. A., & Ford, T. E. (1991). Affective and cognitive determinants of prejudice. *Social Cognition*, *9*, 359-380. doi:10.1521/soco.1991.9.4.359

Stathi, S., & Crisp, R. J. (2008). Imagining intergroup contact promotes projection to outgroups. *Journal of Experimental Social Psychology*, *44*, 943-957. doi:10.1016/j.jesp.2008.02.003

Stathi, S., & Crisp, R. J. (2010). Intergroup contact and the projection of positivity. *International Journal of Intercultural Relations*, *34*, 580-591. doi:10.1016/j.ijintrel.2010.04.002

Stathi, S., Crisp, R. J., & Hogg, M. A. (2011). Imagining intergroup contact enables member-to-group generalization. *Group Dynamics*, *15*, 275-284. doi:10.1037/a0023752

Stathi, S., Crisp, R. J., Turner, R. N., West, K., & Birtel, M. (2012). Using mental imagery to promote positive intergroup relations. In D. W. Russel & C. A. Russel (Eds.), *The psychology of prejudice: Interdisciplinary perspectives on contemporary issues* (pp. 235-250). New York, NY: Nova Science Pub. Incorp.

Stathi, S., Tsantila, K., & Crisp, R. J. (2012). Imagining intergroup contact can combat mental health stigma by reducing anxiety, avoidance and negative stereotyping. *Journal of Social Psychology*, *152*, 746-757. doi:10.1080/00224545.2012.697080

Steele, C. M. (1997). A threat in the air: How stereotypes shape the intellectual identities and performance of women and African Americans. *American Psychologist*, *52*, 613-629. doi:10.1037/0003-066X.52.6.613

Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, *69*, 797-811. doi:10.1037/0022-3514.69.5.797

Stephan, W. G., & Finlay, K. (1999). The role of empathy in improving intergroup relations. *Journal of Social Issues*, *55*, 729-743. doi:10.1111/0022-4537.00144

Stephan, W. G., & Stephan, C. W. (1985). Intergroup anxiety. *Journal of Social Issues*, *41*, 157-175. doi:10.1111/j.1540-4560.1985.tb01134.x

Stephan, W. G., & Stephan, C. W. (2000). An integrated theory of prejudice. In S. Oskamp (Ed.), *Reducing prejudice and discrimination* (pp. 23-45). Mahwah, NJ: Erlbaum.

Swart, H., Hewstone, M., Christ, O., & Voci, A. (2011). Affective mediators of intergroup contact: A three-wave longitudinal study in South Africa. *Journal of Personality and Social Psychology*, *101*, 1221-1238. doi:10.1037/a0024450

Tajfel, H., Billig, M. G., Bundy, R. P., & Flament, C. (1971). Social categorization and intergroup behaviour. *European Journal of Social Psychology*, *1*, 149-178. doi:10.1002/ejsp.2420010202

Tam, T., Hewstone, M., Kenworthy, J. B., & Cairns, E. (2009). Intergroup trust in Northern Ireland. *Personality and Social Psychology Bulletin*, *35*, 45-59. doi:10.1177/0146167208325004

Tausch, N., Hewstone, M., Kenworthy, J. B., Psaltis, C., Schmid, K., Popan, J. R. ... Hughes, J. (2010). Secondary transfer effects of intergroup contact: Alternative accounts and underlying processes. *Journal of Personality and Social Psychology*, *99*, 282-302. doi:10.1037/a0018553

Towles-Schwen, T., & Fazio, R. H. (2006). Automatically activated racial attitudes as predictors of the success of interracial roommate relationships. *Journal of Experimental Social Psychology*, *42*, 698-705. doi:10.1016/j.jesp.2005.11.003

Trifiletti, E., & Capozza, D. (2011). Examining group-based trust with the investment game. *Social Behavior and Personality*, *39*, 405-410. doi:10.2224/sbp.2011.39.3.405

Tropp, L. R. (2008). The role of trust in intergroup contact: Its significance and implications for improving relations between groups. In U. Wagner, L. R. Tropp, G. Finchilescu, & C. Tredoux (Eds.), *Improving intergroup relations: Building on the legacy of Thomas F. Pettigrew* (pp. 91-106). Malden, MA: Wiley-Blackwell. doi:10.1002/9781444303117.ch7

Tropp, L. R., & Pettigrew, T. F. (2005). Differential relationships between intergroup contact and affective and cognitive dimension of prejudice. *Personality and Social Psychology Bulletin*, *31*, 1145-1158. doi:10.1177/0146167205274854

Turner, R. N., & Crisp, R. J. (2010). Imagining intergroup contact reduces implicit prejudice. *British Journal of Social Psychology*, *49*, 129-142. doi:10.1348/014466609X419901

Turner, R. N., Crisp, R. J., & Lambert, E. (2007). Imagining intergroup contact can improve intergroup attitudes. *Group Processes and Intergroup Relations*, *10*, 427-441. doi:10.1177/1368430207081533

Turner, R. N., Hewstone, M., & Voci, A. (2007). Reducing explicit and implicit outgroup prejudice via direct and extended contact: The mediating role of self-disclosure and intergroup anxiety. *Journal of Personality and Social Psychology*, *93*, 369-388. doi:10.1037/0022-3514.93.3.369

Turner, R. N., & West, K. (2012). Behavioural consequences of imagining intergroup contact with stigmatized outgroups. *Group Processes and Intergroup Relations*, *15*, 193-202. doi:10.1177/1368430211418699

Turner, R. N., West, K., & Christie, Z. (2013). Outgroup trust, intergroup anxiety, and outgroup attitude as mediators of the effect of imagined intergroup contact on intergroup behavioural tendencies. *Journal of Applied Social Psychology*, *43*, E196-E205. doi:10.1111/jasp.12019

Vaes, J., Paladino, P. M., Castelli, L., Leyens, J. Ph., & Giovanazzi, A. (2003). On the behavioral consequences of infrahumanization: The implicit role of uniquely human emotions in intergroup relations. *Journal of Personality and Social Psychology*, *85*, 1016-1034. doi:10.1037/0022-3514.85.6.1016

Vezzali, L., Capozza, D., Giovannini, D., & Stathi, S. (2012). Improving explicit and implicit intergroup attitudes using imagined contact: An experimental intervention with elementary school children. *Group Processes and Intergroup Relations*, *15*, 203-212. doi:10.1177/1368430211424920

Vezzali, L., Capozza, D., Stathi, S., & Giovannini, D. (2012). Increasing outgroup trust, reducing infrahumanization, and enhancing future contact intentions via imagined intergroup contact. *Journal of Experimental Social Psychology*, *48*, 437-440. doi:10.1016/j.jesp.2011.09.008

Vezzali, L., Crisp, R. J., Stathi, S., & Giovannini, D. (2013). *Imagined intergroup contact facilitates intercultural communication for college students on academic exchange programs*. Manuscript submitted for publication.

Vezzali, L., & Giovannini, D. (2011). Intergroup contact and reduction of explicit and implicit prejudice towards immigrants: A study with Italian businessmen owning small and medium enterprises. *Quality and Quantity*, *45*, 213-222. doi:10.1007/s11135-010-9366-0

Vezzali, L. & Giovannini, D. (2012). Secondary transfer effect of intergroup contact: The role of intergroup attitudes, intergroup anxiety and perspective-taking. *Journal of Community and Applied Social Psychology*, *22*, 125-144. doi:10.1002/casp.1103

Vezzali, L., Giovannini, D., & Capozza, D. (2010). Longitudinal effects of contact on intergroup relations: The role of majority and minority group membership and intergroup emotions. *Journal of Community and Applied Social Psychology*, *20*, 462-479. doi:10.1002/casp.1058

Vezzali, L., Giovannini, D., & Capozza, D. (2012). Social antecedents of children's implicit prejudice: Direct contact, extended contact, explicit and implicit teachers' prejudice. *European Journal of Developmental Psychology*, *9*, 569-581. doi:10.1080/17405629.2011.631298

Vezzali, L., Hewstone, M., Capozza, D., & Giovannini, D. (2013). *Improving intergroup relations with extended and vicarious contact: An integrative review*. Manuscript submitted for publication.

Voci, A., & Hewstone, M. (2003). Intergroup contact and prejudice toward immigrants in Italy: The mediation role of anxiety and the moderation role of group salience. *Group Processes and Intergroup Relations*, *6*, 37-54. doi:10.1177/1368430203006001011

Vorauer, J. D., Hunter, A. J., Main, K. J., & Roy, S. A. (2000). Meta-stereotype activation: Evidence from indirect measures for specific evaluative concerns experienced by members of dominant groups in intergroup interaction. *Journal of Personality and Social Psychology*, *78*, 690-707. doi:10.1037/0022-3514.78.4.690

West, K., & Bruckmuller, S. (2013). Nice and easy does it: How perceptual fluency moderates the effectiveness of imagined contact. *Journal of Experimental Social Psychology*, *49*, 254-262. doi:10.1016/j.jesp.2012.11.007

West, K., Holmes, E., & Hewstone, M. (2011). Enhancing imagined contact to reduce prejudice against people with schizophrenia. *Group Processes and Intergroup Relations*, *14*, 407-428. doi:10.1177/1368430210387805

Wilder, D. A. (1993). The role of anxiety in facilitating stereotypic judgments of out-group behavior. In D. M. Mackie & D. L. Hamilton (Eds.), *Affect, cognition, and stereotyping* (pp. 87-109). San Diego, CA: Academic Press.

Worchel, S., Cooper, J., & Goethals, G. R. (1991). *Understanding social psychology*. Pacific Grove, CA: Brooks/Cole.

Wright, S. C., Aron, A., McLaughlin-Volpe, T., Ropp, S. A (1997). The extended contact effect: Knowledge of cross-group friendships and prejudice. *Journal of Personality and Social Psychology*, *73*, 73-90. doi:10.1037/0022-3514.73.1.73

Zanna, M. P., & Rempel, J. K. (1988). Attitudes: A new look at an old concept. In D. Bar-Tal & A. Kruglanski (Eds.), *The social psychology of knowledge* (pp. 331-334). New York, NY: Cambridge University Press.