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VICARIOUS, EXTENDED AND IMAGINED INTERGROUP CONTACT: A REVIEW OF INTERVENTIONS BASED ON INDIRECT CONTACT STRATEGIES APPLIED IN EDUCATIONAL SETTINGS

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Although research has shown that interventions within educational contexts based on direct, face-to-face contact are effective in reducing prejudice, they may be difficult to implement. Recent research has demonstrated that also indirect contact is a useful strategy to improve intergroup relations. In the present work, we focus on three forms of indirect contact which have received consistent attention by social psychologists in recent years: vicarious contact, extended contact, imagined contact. The interventions reviewed support indirect contact strategies as effective and flexible means of reducing prejudice within schools. In the final part of the article, we discuss the theoretical and practical implications of our literature review and provide some suggestions for future research.

Key words: Imagined contact; Extended contact; Vicarious contact; Indirect contact; Intergroup relations.

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Most social psychologists would agree that intergroup contact is possibly the most effective strategy for reducing prejudice. The contact hypothesis, originally proposed by Allport (1954), states that contact between groups can improve intergroup relations when optimal conditions (equal status between the groups, institutional support, cooperation for superordinate goals) are fulfilled. There is now consistent evidence supporting the effectiveness of strategies based on intergroup contact (Brown & Hewstone, 2005; Hodson & Hewstone, 2013; Pettigrew & Tropp, 2006). Although formulated more than 60 years ago, the premises of contact hypothesis continue to attract the attention of scholars, and research in the field is still developing. In the present narrative review we decided to focus on prejudice reduction in child and adolescent samples. In fact,

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children can show prejudice from the age of 2 and, although there is a slight decrease in explicit prejudice after the age of 7-8, it does not disappear (Nesdale, 2008; Raabe & Beelmann, 2011; Rutland, Cameron, Bennett, & Ferrell, 2005) and may remain at high levels across children's development, at least when assessed at the implicit level (Dunham, Baron, & Banaji, 2008; Dunham, Chen, & Banaji, 2013).

Most of the literature on intergroup contact pertains to face-to-face, direct contact between members of different groups rather than forms of contact that do not necessitate face-to-face interactions (i.e., indirect contact). This is also true when looking into research in the educational field, on which our review is focused. However, indirect contact proved to be highly effective and easy to apply in educational contexts (Miles & Crisp, 2014; Vezzali, Hewstone, Capozza, Giovannini, & Wöelfer, 2014), so the present work will focus on the effects of indirect contact when applied in the educational field. In particular, after a brief overview of research on direct contact applied in educational settings, we will focus on the application of three of the most acknowledged forms of indirect contact: vicarious contact (Mazziotta, Mummendey, & Wright, 2011), extended contact (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997), imagined contact (Crisp & Turner, 2009, 2012). We believe that the present narrative review can provide important insights to both researchers and practitioners on how to improve intergroup relations in young samples.

Direct Intergroup Contact

There is well-established evidence that intergroup contact can impact on prejudice in educational settings. In fact, schools provide an ideal environment where optimal contact conditions, as proposed by Allport (1954), can be fulfilled (cf. Killen, Crystal, & Ruck, 2007; Tropp & Prenovost, 2008). First, teachers can easily administer tasks that require cooperation among pupils to achieve superordinate goals (such as achieving better academic results while entertaining themselves, thus potentially impacting also on school motivation). This assertion is supported by research showing the effectiveness of cooperative learning programs, an approach consistent with approaches implementing cooperative intergroup contact (Aronson & Gonzalez, 1988; Roseth, Johnson, & Johnson, 2008; Schofield, 2004; Stephan & Stephan, 2005). Moreover, pupils in schools share equal status and their interactions are supported by institutions (i.e., teachers and school managers support integration). This sets the stage for the development of supportive norms toward integration, which is core in prejudice reduction (Tropp, O'Brien, & Migacheva, 2014).

Consistent with the fact that optimal contact conditions are likely present in educational settings, research has provided consistent evidence that face-to-face contact is an extremely effective tool for improving intergroup relations. Empirical effectiveness has been demonstrated on a wide range of outcome measures, including outgroup perceived variability (Turner, Tam, Hewstone, Kenworthy, & Cairns, 2013), behavioral intentions toward the outgroup (Abbott & Cameron, 2014; for a review, see Cameron & Turner, 2017). There are various reviews (Cameron & Turner, 2010; Killen et al., 2007; Paluck & Green, 2009; Stephan, 1999; Thijs & Verkuyten, 2014; Tropp & Prenovost, 2008) and meta-analyses (Aboud et al., 2012; Beelmann & Heinemann, 2014; Stephan, Renfro, & Stephan, 2004; Tropp & Prenovost, 2008) supporting the effectiveness of direct contact within school environments, although these interventions should not be considered a panacea for reducing prejudice (Stephan, 2002).

Cross-group friendships is an especially effective form of face-to-face contact among children and adolescents (Davies, Tropp, Aron, Pettigrew, & Wright, 2011; Turner, Hewstone, & Voci, 2007), and wherever possible interventions should aim at creating friendships rather than establishing "mere" positive contact between ingroup and outgroup members. Cameron and Turner (2017; Turner & Cameron, 2016) focused on the importance of creating the opportunity for children belonging to distinct groups to become friends. They note that cross-group friendships, in addition to producing benefits for the development of more positive intergroup relations (e.g., Bagci, Kumashiro, Smith, Blumberg, & Rutland, 2014; Feddes, Noack, & Rutland, 2009), can have positive effects beyond intergroup relations, such as increased social competence (Lease & Blake, 2005). Therefore, fostering cross-group friendships would represent a strong implementation of intergroup contact theory (Hodson & Hewstone, 2013).

Despite the strong potential of interventions based on direct intergroup contact, direct contact interventions may be difficult to implement in educational settings. The most evident case is in segregated contexts, where the outgroup is physically missing from the immediate context. However, direct contact may be difficult to apply also in less extreme situations. For instance, the ratios between the distinct groups may be unbalanced, when the larger part of a class is composed of majority pupils (ethnically or otherwise), so the likelihood of close intergroup contact for all class members is reduced. Moving (literally) pupils from one class and asking them to interact with outgroup members located in another class or school is technically possible (Maras & Brown, 1996). However, it can also be impractical, and time- and resource-consuming. These considerations are reflected in the finding that, despite the popularity of the contact hypothesis among social psychologists, only a limited number of interventions conducted in natural settings was based on direct contact (Paluck & Green, 2009).

The recent surge of studies focusing on indirect contact (i.e., contact with the outgroup which is not face-to-face) can be explained at least in part by its increased feasibility compared to direct contact. In the present review we will focus on three popular forms of indirect contact: vicarious contact (Mazziotta et al., 2011), extended contact (Wright et al., 1997), imagined contact (Crisp & Turner, 2012). Similar to direct contact research, most studies of indirect contact were conducted with adults. However, there are also studies where indirect contact was used as the theoretical basis to carry out interventions in educational settings with children and adolescents.

VICARIOUS INTERGROUP CONTACT

According to Wright et al. (1997), simply knowing about or observing ingroup and outgroup members interacting is sufficient to reduce prejudice. Vezzali et al. (2014; see also Dovidio, Eller, & Hewstone, 2011) differentiated between knowing about a cross-group interaction or observing it, labeling the first contact form as "extended contact" and the second as "vicarious contact."

Research has demonstrated that observing a positive interaction between individuals belonging to distinct groups, for instance in a video, has effects on several outcome variables, including implicit prejudice (Weisbuch, Pauker, & Ambady, 2009) and real behavior (Mallett & Wilson, 2010). There is also evidence from experimental studies conducted in educational settings that vicarious contact is effective among child and adolescent samples. Below we will review such evidence.

First, vicarious contact can be experienced and implemented via the media. This happens, for instance, in television programs, where a character belonging to the ingroup interacts positively with an outgroup character (e.g., Ortiz & Harwood, 2007; Paluck, 2009). Two popular programs with these characteristics are *Sesame Street* and *Different and the Same*, two programs for children where members of different ethnic groups have positive contact. Research demonstrated the positive effects of exposure to these programs on racial attitudes and friendship choices (e.g., Katsuyama, 1997; Vittrup & Holden, 2011; for a review, see Mares & Pan, 2013). Notably, these programs were shown to have beneficial effects also in conflictual contexts (e.g., Cole et al., 2003), thus demonstrating their role in creating the bases for a peaceful coexistence. It should be noted, however, that television programs, and media in general, can also depict *negative interactions* between members of different groups, which can result in increased prejudice (Weisbuch et al., 2009).

Vicarious contact has been operationalized in schools mostly by utilizing ad hoc created stories that depict ingroup and outgroup characters becoming friends. A pioneering study was conducted by Liebkind and McAlister (1999; see also Husnu, Mertan, & Cicek, 2016; Liebkind, Mähönen, Solares, Solheim, & Jasinskaja-Lahti, 2014; Slone, Tarrasch, & Hallis, 2000), who asked Finnish adolescents to read several stories prepared by researchers describing positive contact experiences between Finnish people and foreigners, as experienced by peers of similar age. Results showed that the intervention, compared to a control condition where participants were not asked to read any story, improved intergroup tolerance in schools with a high density of immigrants. In schools where density of immigrants was low, racial attitudes remained stable after the intervention, but worsened in control schools.

The benefits of reading stories on cross-group friendships were also shown by a series of studies by Cameron and colleagues, who demonstrated the effectiveness of vicarious contact among elementary school children. Cameron and Rutland (2006) created ad hoc stories based on pre-existing children's books, where non-disabled and disabled child characters engaged in friendship situations. These stories were read to non-disabled British children by an experimenter in small groups of two-three children, once a week for six consecutive weeks. After each session, children took part in a group discussion of the story with the experimenter. There were three experimental conditions. In the intergroup condition, membership of characters was clearly stated at the beginning of the story, and highlighted again in the final discussion. In the decategorization condition, the story and the final discussion included individuating information about the characters. In the neutral condition, group membership of characters was not highlighted and individuating information was not provided.[1] Results revealed an improvement in outgroup attitudes from pre-test to post-test only in the intergroup condition. Moreover, intentions to have contact with disabled children improved from pre-test to post-test only in the intergroup and decategorization conditions.

These results were replicated and extended in a series of other studies, showing the effectiveness of reading and discussing stories on cross-group friendship across target groups (refugees, Asians living in UK), and uncovering mediators (such as inclusion of the other in the self) and moderators (such as ingroup identification) of the vicarious contact effects (Cameron, Rutland, & Brown, 2007; Cameron, Rutland, Brown, & Douch, 2006; Cameron, Rutland, Hossain, & Petley, 2011).

Despite the effectiveness of ad hoc stories for prejudice reduction, one obvious limitation is that teachers may not have the specialized knowledge to create them by including the charac-

teristics needed to exert positive effects (e.g., positivity of the interaction, typicality of characters). Vezzali, Stathi, and Giovannini (2012) examined whether reading *real* books featuring intercultural topics, where characters belonging to distinct groups interacted positively, had also positive effects on intergroup attitudes. Participants were Italian high school students, who were asked before the summer holidays to read a book over the summer either on intercultural topics or a book unrelated to intercultural topics (both from a list created on the basis of books available in the local library); one third of participants was not asked to read any book. Results, obtained from a questionnaire administered at the beginning of the new school year, revealed that reading intercultural books, compared with the other two conditions, had widespread effects on more positive attitudes toward immigrants, reduced stereotyping of immigrants, and increased desire to have contact with immigrants. Moreover, it was found that these effects depended on increased inclusion of the other in the self and reduced identification with the Italian outgroup (thus indicating a process of "deprovincialization"; see Pettigrew, 1998).

One potential problem of using real books (as well as ad hoc stories) is that individuals may not be motivated to read them, thus potentially reducing their impact. On a more theoretical level, since books can be concerned with a specific target category (e.g., disabled people, immigrants), they can eventually improve attitudes only toward that category. We reasoned that fantasy books such as the Harry Potter novels could address both these issues. First, they are highly engaging (Knapp, 2003) and second they address important social issues, such as inequalities between groups (Fields, 2007). In the novels, Harry Potter and his friends fight against prejudice and discrimination toward stigmatized groups by having meaningful contact with stigmatized members and empathizing with them. The hypothesis was that reading passages of Harry Potter novels that related to prejudice while identifying with the character of Harry Potter would lead to improved outgroup attitudes. This represents a new type of vicarious contact, where individuals, by observing a character close to the self (a loved but imaginary character, i.e., Harry Potter) interacting with stigmatized outgroup members, improve their attitudes toward outgroups too. Some of these stigmatized groups in the book, such as elves and goblins, are imaginary, therefore one may wonder why reading about Harry Potter having positive interactions with them should reduce people's prejudice toward real-world categories. We argue that this is precisely the advantage of fantasy books: since stigmatized group members are presented as humanized regardless of their group membership, readers can freely associate them with real groups. Therefore, reading about Harry Potter having positive contact with stigmatized (albeit imaginary) groups can potentially tackle prejudice toward different stigmatized groups. Importantly, we expect this effect to only emerge among individuals who highly identify with Harry Potter: if a person does not identify with him, why should he/she adopt his positive attitude toward stigmatized groups?

Vezzali, Stathi, Giovannini, Capozza, and Trifiletti (2015, Study 1) conducted one experimental intervention with Italian elementary school children. In small groups, an experimenter read and discussed passages of Harry Potter with children once a week for six consecutive weeks. The passages either related to prejudice (experimental condition) or not (control condition). Data from a self-reported questionnaire administered one week after the end of the intervention revealed that, compared to the control condition, reading Harry Potter stories related to prejudice improved attitudes toward immigrants, but only among those children who identified more with Harry Potter.

EXTENDED INTERGROUP CONTACT

According to the extended contact hypothesis (Wright et al., 1997), it is sufficient to know that an ingroup member has outgroup friends in order to reduce prejudice. There are several studies supporting the positive effect of extended contact on intergroup relations (see Vezzali et al., 2014), also within educational contexts (Andrighetto, Mari, Volpato, & Behluli, 2012; De Tezanos-Pinto, Bratt, & Brown, 2010; Gomez, Tropp, & Fernandez, 2011; Munniksma, Stark, Verkuyten, Flache, & Veenstra, 2013; Turner, Hewstone, & Voci, 2007; Turner, Hewstone, Voci, & Vonofakou, 2008; Turner et al., 2013; Vezzali, Brambilla, Giovannini, & Colucci, 2016; Vezzali, Giovannini, & Capozza, 2012). Most of these studies were cross-sectional, with some exceptions (see, e.g., the longitudinal study by Munniksma et al., 2013). However, in addition to the empirical evidence that knowledge of positive cross-group interactions can foster prejudice reduction, it would be important to collect evidence that this knowledge can be used to design effective prejudice reduction intervention in schools.

In the previous section, we presented consistent evidence that vicarious contact, operationalized as story reading, has been applied in several interventions within schools. However, we are aware of only one study implementing extended contact in educational contexts, the study by Vezzali, Stathi, Giovannini, Capozza, and Visintin (2015). The first aim of the authors was to examine whether extended contact is a useful tool for improving intergroup relations among children and early adolescents. The second aim was to test the longevity of effects and the underlying processes. In order to test the hypotheses, a (self-reported) behavioral measure of cross-group friendships was used. This is important because, despite the fact that some authors argue that extended contact is not an alternative to direct contact and is instead a preparatory measure to facilitate future smoother face-to-face intergroup interactions (Turner, Hewstone, Voci, Paolini, & Christ, 2007), very few studies have included real behavioral measures to evaluate these predictions (for exceptions, see Mallett & Wilson, 2010; Schofield, Hausmann, Ye, & Woods, 2010; West & Turner, 2014).

Furthermore, one implicit assumption of research on extended contact is that individuals are aware that ingroup members actually know about the cross-group friendships of their ingroup friends. However, this is not necessarily true. First, individuals may not want to discuss their cross-group friendships with ingroup peers (Castelli, De Amicis, & Sherman, 2007), because of fear of acting counter-normatively and thus of being excluded from the ingroup (Clack, Dixon, & Tredoux, 2005). There is in fact evidence that individuals who express greater ingroup bias are preferred by ingroup peers (Castelli, Tomelleri, & Zogmaister, 2008). Additionally, more simply, individuals may not have had the opportunity to talk about their cross-group friendships with ingroup members. Consider the case of a school classroom: it would be clearly unrealistic to think that all pupils in a classroom who belong to the same ingroup have disclosed to *all* ingroup members their (cross-group) friendships outside the school. The conclusion is that many people may be unaware that their ingroup peers have outgroup friends.

Based on these premises, Vezzali, Stathi, Giovannini, Capozza, and Visintin (2015) asked Italian elementary school children and pre-adolescent high school students to take part in a competition for the best essay reporting personal experiences of successful intercultural friendships. Participants were asked to work in small groups of two to three persons, all composed by ingroup (Italian) members. This way, in order to write the essay, they had to be informed by in-

group peers about their positive cross-group experiences. In order to favor the generalization of the belief that ingroup members actually have cross-group friends, they were also asked to evaluate the essay written by other anonymous ingroup members. The control condition was identical: in this case, however, participants were asked to take part in a competition for the best essay on friendship, with no mention of intercultural friendships. Interestingly, while all participants in the extended contact condition reported personal experiences of cross-group friendships (between them and immigrants) in their essay, none of the essays in the control condition included references to friendships with immigrants. This finding indirectly supports the contention that ingroup members are not necessarily aware of their ingroup peers' cross-group experiences and are not readily willing to disclose their own experiences.

Results of the study revealed that the intervention increased perceptions that both ingroup and outgroup members had positive norms toward intergroup acceptance, a process that in turn was associated with more positive attitudes and intentions to get acquainted with outgroup members. These variables were assessed one week after the end of the intervention. Three months after the intervention, participants were also asked to indicate their three best friends and their nationality. Notably, results showed that the intervention was indirectly associated with a greater number of outgroup friends in one's inner circle of friendships, an effect sequentially mediated by ingroup and outgroup norms, and by intentions to meet outgroup members.

The results of this study provide preliminary evidence that extended contact can be used to improve intergroup relations and foster cross-group friendships in schools, thus highlighting the behavioral implications and longevity of extended contact interventions.

IMAGINED INTERGROUP CONTACT

Crisp and Turner (2009, 2012; see also Turner, Crisp, & Lambert, 2007) argued that the mental simulation of positive intergroup interactions is sufficient to improve outgroup attitudes. This prejudice reduction strategy, if effective, would have several advantages over direct or even extended contact, the most obvious being that it can be used in highly segregated contexts and that it is extremely flexible. Also due to the easiness with which it can be studied, imagined contact has been the focus of several studies in the last decade and resulted in numerous reviews (e.g., Crisp, Husnu, Meleady, Stathi, & Turner, 2010; Crisp & Turner, 2009, 2012; Meleady & Crisp, 2017; Stathi, Crisp, Turner, West, & Birtel, 2012). The meta-analysis by Miles and Crisp (2014) provided strong support for the benefits of imagined contact, confirming its potential for prejudice reduction.

Despite this success, some skepticism remains (Bigler & Hughes, 2010), mainly relating to the fact that effects of imagined contact may be subject to demand characteristics. There is, however, sufficient disconfirming evidence about this criticism. For instance, it has been demonstrated that imagined contact can improve unconscious attitudes (Turner & Crisp, 2010), nonverbal intergroup behavior and physiological responses (West, Turner, & Levita, 2015), and that its effects can last for several months (Vezzali, Crisp, Stathi, & Giovannini, 2015). However, since evidence for imagined contact is mainly provided by laboratory studies, in order to demonstrate the "real" effectiveness of this strategy it is essential to test it in real-world contexts, such as educational settings.

The first published study testing imagined contact in schools was conducted by Cameron, Rutland, Turner, Holman-Nicolas, and Powell (2011). Participants were non-disabled children aged between 5 and 11 years, allocated to an imagined contact or to a control condition. In the imagined contact condition, children met individually with an experimenter and were given three minutes to imagine a positive encounter at the park with a physically disabled child. To favor the imagery activity, children were provided with photographs of a non-disabled and of a disabled child. At the end, children were prompted by the experimenter to describe what they imagined in order to favor the creation of a vivid scene. Afterward, they were administered the dependent measures by means of an interview. Children in the control condition simply responded to the interview. Results revealed the positive effect of the intervention on attitudes toward physically disabled children, stereotypes of warmth and competence, and intentions to know outgroup members in the future. These results provide preliminary evidence that imagined contact can be effective among children. Some of the limitations of this work are that only a single intervention session was conducted, and dependent variables were administered immediately after the experimental session.

Vezzali and colleagues (Vezzali, Capozza, Giovannini, & Stathi, 2012; Vezzali, Capozza, Stathi, & Giovannini, 2012) went a step further, by adapting the imagined contact paradigm to a real educational intervention and testing for the first time the durability of its effects. Moreover, they included outcome variables, such as implicit prejudice and outgroup infrahumanization, which are less sensitive to social desirability and thus could provide strong support for the imagined contact theory. Since implicit prejudice and outgroup dehumanization, albeit difficult to change, can be reduced by interventions based on intergroup contact (Capozza, Falvo, Di Bernardo, Vezzali, & Visintin, 2014; Lai, Hoffman, & Nosek, 2013), finding effects on these variables would also increase confidence in the theoretical underpinnings of imagined contact strategies. In two studies, the authors asked Italian elementary school children aged 8-11 years to spend some minutes imagining a positive interaction with an unknown immigrant child. The intervention was conducted in small groups of five to six children each (the imagery task was performed individually) and was repeated once a week for three consecutive weeks. Each week the task was slightly different: children were asked to meet the immigrant child at school (Week 1), in the neighborhood (Week 2), at the park (Week 3). This variation was motivated by the need to avoid subtyping the outgroup child, which would reduce generalization of positive attitudes stemming from the intervention to the wider outgroup category. In each session, the imagery task was followed by a 10-minute discussion led by the researcher and focusing on what the children had imagined. Outcome measures were administered approximately one week after the last intervention session. In the control condition, participants completed the dependent variables without participating in the intervention.

Results revealed that the intervention fostered the intentions to meet and spend time with outgroup members in the future. Notably, it also reduced implicit prejudice, as assessed by a Child Implicit Association Test (Baron & Banaji, 2006). Moreover, the results showed that imagined contact fostered outgroup trust, which in turn was associated with increased attribution of secondary emotions to outgroup members. Finally, outgroup trust and self-disclosure emerged as mediators of the effects of imagined contact on intentions to have contact with outgroup members.

Together, these two studies demonstrate that (a) imagined contact can be adapted to real interventions in educational settings, (b) its effects extend to prejudice expressed subtly, tangen-

tially increasing confidence in the effectiveness of imagined contact by showing that it exerts effects on variables not sensitive to experimental demands, (c) effects on outcome variables last at least a week.

Stathi, Cameron, Hartley, and Bradford (2014) conducted an intervention among elementary school children in the United Kingdom, by testing a more elaborated version of the technique tested by Cameron, Rutland, Turner, et al. (2011). The children (all White British) were randomly allocated to the imagined contact or a control condition. Those in the imagined contact condition took part in the intervention once a week, for three weeks, and completed the activity of the intervention individually with the researcher. Those in the control condition did not participate in this intervention. Children in the experimental (imagined contact) condition used large drawn pictures (A3 size), different in every session, of either a park setting (Week 1), a birthday party (Week 2), or the beach (Week 3) to create stories. They were also given laminated pictures of related objects that would prompt their imagination, as well as a photograph of themselves and a photograph of an Asian child (gender-matched to participant). Importantly, in every session, children were presented with a different Asian child in order to enhance the generalizability of these imagined intergroup interactions. During the activity, children used the photographs and the pictures to create a story that featured themselves and the Asian child. Approximately one week after the last session, participating children were interviewed and data regarding their perceived ingroup (White British) and outgroup (Asian) similarity, ingroup and outgroup attitudes, and willingness to interact with ingroup and outgroup children were collected. The results showed that, compared to the control condition in which children did not participate in the intervention, those in the experimental condition expressed more similarity, positive attitudes, and willingness to have contact with outgroup children. There were no significant effects of condition on any of the variables with respect to the ingroup. Results further showed that the path to willingness for contact was mediated by ameliorated outgroup attitudes.

Vezzali, Stathi, Crisp, Giovannini, et al. (2015, Study 1) examined the conditions that may strengthen the effects of imagined contact. In particular, they proposed an integration between the imagined contact theory (Crisp & Turner, 2012) and the common ingroup identity model (CIIM; Gaertner & Dovidio, 2000). According to the CIIM, fostering perceptions that ingroup and outgroup belong to a superordinate category should extend the benefits accorded to ingroup members to former outgroup members, thus reducing bias. Additional aims were (a) testing whether imagined contact was also effective in favoring intentions to help outgroup members, a variable that had not been tested in previous imagined contact studies but which should be relevant in school settings, especially when minority children need help, (b) evaluate the longevity of imagined contact effects, by administering dependent variables one and two weeks after the intervention, (c) examine effects on real behavior (and specifically, on helping behavior), a variable generally neglected in imagined contact research (for exceptions, all obtained with adults samples and not concerning helping behavior, see Birtel & Crisp, 2012; Turner & West, 2012; Vezzali, Crisp, et al., 2015, Study 2; West et al., 2015).

Participants were Italian elementary school children aged 7-11 years, who were allocated to one of three experimental conditions. In the common ingroup identity imagined contact condition, they were asked to imagine being in a group with an unknown immigrant child and to take part with him/her in a competition as members of the same team. The intervention was conducted once a week for four consecutive weeks and was administered collectively to the class by the

children's teachers. Each week the contact scenario and the imagined contact partner varied: participants imagined taking part in a cooking competition the first week, in a sports competition the second week, in a theatrical play competition the third week, in a learning competition the fourth week. After having imagined the required situation for a few minutes, children were asked to write down what they had just imagined in order to reinforce the effects of the manipulation (Crisp et al., 2010). The control condition was identical: in this case, however, the origin of the imagined contact partner was not specified. Finally, a standard imagined contact condition similar to that used in previous studies (e.g., Vezzali, Capozza, Stathi, et al., 2012) was included in order to test whether imagined contact when a common ingroup identity is salient was more effective than standard imagined contact in improving outgroup helping intentions and behavior. In this condition, children were asked to imagine having a positive encounter with an unknown immigrant child in different situations (park, school, neighborhood), with no mention of superordinate groups including both of them.

Differently from previous interventions, the imagery task was not followed by a group discussion. However, in order to strengthen the effects of the manipulation, in all conditions participants were asked to imagine a detailed situation from a third-person perspective and while keeping their eyes closed (see Crisp & Turner, 2012).

One week after the last session, participants were administered a questionnaire assessing general helping intentions, that is, intentions to help an immigrant child in need at school (e.g., helping him/her write an essay). Results revealed that, although helping intentions were not significantly higher in the imagined contact common ingroup identity condition than in the standard imagined contact condition, the former condition was the only one to be significantly different, in the expected direction, from the control condition.

Two weeks after the last session, the behavioral measure regarding helping the outgroup was administered. Children met individually with an experimenter and were informed that an immigrant child was about to join them in their school. They were then asked how many afternoons, if any, they would spend with the immigrant child helping him/her during his/her first days in the new school. Results mirrored those obtained with the general helping intentions measure, showing that helping behavior was higher in the imagined contact common ingroup identity condition than in the control condition, whereas the standard imagined contact condition fell in between and was not significantly different from the other two conditions.

Vezzali, Stathi, Crisp, and Capozza (2015) conducted an intervention aimed at testing a new way to implement imagined contact, by showing that the imagery task can also be performed collectively, with possible benefits on the motivation to cooperate with peers. An additional aim was to test whether imagined contact has weaker effects than those of direct contact. Although this is a likely possibility, given that indirect experiences produce weaker attitudes than direct experiences (Fazio, Powell, & Herr, 1983), this is still an empirical question that needs to be investigated.

Participants were Italian elementary school children aged 8-10 years. The task was performed in small groups of three to six children each. Participants were randomly allocated to a 2 (imagined contact: intergroup vs. intragroup) × 2 (direct contact: intergroup vs. intragroup) experimental between-subjects design. Regarding the first manipulated variable (imagined contact), in the intergroup imagined contact condition, in each small group, children were provided with a minimal group classification, yellow or blue children, so that each small group included members

from both the yellow and blue group. Children were asked to cooperate in spite of the yellow/blue distinction, like two groups cooperating for a superordinate goal. In the intragroup imagined contact condition, instead, children imagined being all from the blue group. In other words, in this condition we did not make group differences or cooperation between distinct groups salient. This was, half of the participants imagined an *inter*group contact (yellow vs. blue children), whereas the other half imagined an *intra*group contact (blue children only): intergroup imagined contact served as the experimental condition, intragroup imagined contact served as a control.

Direct contact was manipulated orthogonally to imagined contact. In the intergroup direct contact condition, small groups were composed of both Italian and immigrant children; in the intragroup direct contact condition, small groups were only composed of Italian children. Intergroup direct contact represented our experimental group, intragroup direct contact served as control. This experimental design produced four conditions: direct intergroup contact/imagined intergroup contact; direct intergroup contact/imagined intragroup contact; direct intragroup contact/imagined intergroup contact; direct intragroup contact/imagined intragroup contact.

Dependent measures were administered one week after the end of the intervention. Results revealed the positive effects of both direct and imagined contact on reduced stereotypes of immigrants and intentions to help them in case of need. Moreover, mirroring results obtained with adults (Giacobbe, Stukas, & Farhall, 2013; but see Koball & Carels, 2015), we obtained no evidence that direct contact has stronger effects than imagined contact. These results confirm that imagined contact is a flexible strategy that can be easily adapted in real-world interventions and can be performed collectively. Moreover, the results indicate that imagined contact can have similar effects to an intervention based on face-to-face contact (at least, when effects are assessed one week after the end of the intervention).

Despite the studies reviewed all being conducted among elementary school children, there is initial evidence that imagined contact can also be effective among other age groups (e.g., Turner, West, & Christie, 2013, Study 1, showing effects of imagined contact on behavioral intentions in a sample of high school students). In sum, there is evidence that imagined contact can be a useful tool for reducing prejudice in educational settings.

FUTURE DIRECTIONS AND CONCLUSIONS

The studies reviewed above argue that interventions in educational settings based on indirect contact (vicarious contact, extended contact, imagined contact) can be effective in improving children's outgroup attitudes and behavior. This conclusion is extremely encouraging, given the practical difficulties that emerge in conducting face-to-face contact interventions. There are, importantly, several directions in which research can develop. We will outline two directions that in our opinion are especially relevant.

First, academics and practitioners should try to combine interventions based on the same or also different approaches in order to maximize their benefits (see also Cameron & Rutland, 2016). Although indirect contact interventions are effective, combining different interventions based on the same theoretical underpinnings (e.g., two vicarious contact interventions based on story reading or videos) or on different theoretical perspectives (e.g., extended and imagined contact, or direct and vicarious contact) might be the best strategy to achieve strong effects. First, ef-

fects from different interventions can be additive and/or interactive, thus potentially strengthening effects of a single intervention. Second, they are likely to increase children's attention and motivation, by engaging them in several tasks. Supporting this hypothesis, although interventions based on direct or indirect contact proved to be effective, multiple-component interventions have been shown to produce especially stronger effects (Beelmann & Heinemann, 2014).

A second but related point refers to collaboration between researchers and practitioners, which we believe to be very important (Stephan, 2006; for an extensive discussion on the importance and on the benefits of researchers-practitioners collaboration, see Cameron & Rutland, 2016). Non theory-driven and carefully evaluated interventions implemented by teachers may have null or even unwanted effects. Furthermore, collaboration between researchers and teachers can motivate teachers to continue highlighting the topic of prejudice, by showing that certain activities are effective and that the reduction of prejudice requires time and effort. Finally, researchers can help teachers to incorporate prejudice reduction interventions based on academic research interventions in school curricula, so that reducing prejudice becomes an ordinary activity that does not need to "borrow" time from other curricular subjects. Including prejudice reduction interventions in school curricula would also have the consequence of rendering them more frequent, thus avoiding the risks that even effective interventions fade off over time (Stephan & Vogt, 2004).

A common assumption among social psychologists is that laboratory research is more "pure" and that applied research is less noble, "only" representing the translation of basic research to naturalistic contexts. In other words, researchers often assume that the "real" research is the one conducted in the laboratory, and that applied research comes second and simply tests whether the effects found in the laboratory persist when tested in real-world contexts. Although largely unchallenged, we cannot agree with this implicit assumption. We argue that also applied research often contributes to theoretical innovation, and that testing in naturalistic contexts hypotheses based on laboratory findings is not a simple application of theoretical concepts developed in the laboratory, but represents in itself a theoretical novelty. Consider for instance the translation to the applied field of findings (in this case, obtained mainly from correlational studies, most of which with university student samples) showing that simply knowing about or observing ingroup members interacting with outgroup friends can reduce prejudice (extended and vicarious contact). This information is not very useful in itself, but strictly depends on how it is operationalized. The choice to implement vicarious contact by means of story reading or video watching (for instance, via the media) was largely suggested by the need to translate or adapt the basic finding of extended/vicarious contact literature to the field (and thus, was motivated by applied considerations). In addition, asking individuals to change attitudes based on a short text, a whole book, an ad hoc video, a sitcom, or a radio program is clearly very different also from a theoretical point of view.

Returning to the two points that we highlighted earlier, we believe that creating multi-component interventions and building on the collaboration between researchers and practitioners represent important theoretical advancements. Coupling a direct contact intervention with an imagined contact intervention can be very different from running the two interventions separately. For instance, consider the simple case of conducting the imagined contact intervention before the direct contact intervention, which can result in smoother face-to-face interactions (Crisp & Turner, 2012). We also know that simply imagining contact can be difficult for people with high initial intergroup anxiety (Birtel & Crisp, 2012), potentially causing the intervention to backfire.

In this case, running the direct contact intervention before the imagined contact intervention (by adopting strategies to reduce initial anxiety, such as decategorizing initial direct contact; Brewer & Miller, 1984) changes the theoretical meaning of the intervention. Naturalistic contexts in general, and educational settings in particular, are ideal contexts to test combination of interventions, and thus represent a unique opportunity to understand how to effectively fight prejudice.

Related to this point, researchers-practitioners collaborations can result in important theoretical novelties. A personal, anecdotal example can highlight this point. We recently discussed with teachers how to implement an imagined contact intervention aimed to improve attitudes toward disabled people, and one important point made by teachers was that repeating the intervention three times, even varying the imagined contact setting, would be tedious for children, with potential negative effects on the strength of effects. Therefore, we engaged in meetings where we elaborated on activities based on imagined contact that involved, each time, a different sensorial channel (in addition to varying the setting of the imagined contact scenario and the disability of the imagined partner): children were asked to first imagine and then describe what they imagined to their best friend (first session), imagine and then draw what they imagined while describing it to the researcher (second session), imagine and then draw what they imagined, cut it and create a poster, on which all the class worked in turn (third session). Reinforcing the imagery task in the way we have just described (and also, understanding the implications of varying the order of sessions) is theoretically very different from asking children to write down what they imagined, and can impact on the strength of effects. This example serves to make the point that applying a strategy to the field is often not just a "practical" task, but produces theoretical innovation. Practitioners should also consider, with the help of researchers, that application of consolidated psychological theories to the field is theory-driven, in order to obtain the desired effects.

In conclusion, substantial evidence points to the effectiveness of indirect contact interventions. Researchers have the exciting and challenging task to examine how to best capitalize on the potential of indirect contact strategies.

NOTE

1. The experimental design was more complicated, as characters' type of disability was also manipulated between subjects. However, this additional factor did not produce any significant result and is not discussed further.

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