DIRECT AND MASS-MEDIATED CONTACT: THE ROLE OF DIFFERENT INTERGROUP EMOTIONS

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The present research investigates the effectiveness of direct and mass-mediated contact for reducing prejudice toward immigrants among Italian nationals. We considered separately the impact of positive and negative experiences of contact, and tested the mediating role of intergroup emotions, that is, anxiety, empathy and trust. Results show that both direct and mass-mediated contact contributed to predict intergroup emotions and prejudice, yielding independent effects that varied upon the valence of the contact experience. Specifically, our findings indicate that the beneficial effects of positive interpersonal contact were counteracted by negative contact through mass media and in particular through TV news. Contact effects were mediated by intergroup anxiety, empathy, and especially trust, which emerged as the most powerful mediator.

Key words: Positive contact; Negative contact; Prejudice reduction; Mass media; Intergroup emotions.

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The Contact Hypothesis (Allport, 1954) is one of the most theoretically important and practically useful strategies for prejudice reduction. According to this hypothesis, encounters between people belonging to different groups, under specific conditions (i.e., equal status, common goals, intergroup cooperation, and support of authorities), can improve intergroup attitudes and relations. The benefits of direct, positive contact with outgroup members are well established and widely recognized (for a review, see Brown & Hewstone, 2005). Meta-analytic results by Pettigrew and Tropp (2006) have shown that contact is effective for reducing prejudice across a variety of target groups and contexts (mean effect size, $r = –.21$, $p < .0001$), even when optimal conditions are not met.

In the last decades, advances in the intergroup contact theory have deepened our knowledge in different ways (Pettigrew, 2008). First, several studies have investigated the psychological processes involved in intergroup contact experiences and have identified a number of potential mediators, among which affective factors seem to play a prominent role compared to cognitive ones (see Pettigrew & Tropp, 2008). Second, a growing body of research has shown that, besides direct contact, also indirect forms of contact, such as vicarious contact occurring through mass media, can contribute to prejudice reduction (see Dovidio, Eller, & Hewstone, 2011). Third, more recently, scholars started to focus on the effects of negative contact experiences, and to

study whether the detrimental effects of negative contact are equal or stronger than, or counterbalanced by, the benefits of positive contact (Aberson & Gaffney, 2008; Barlow et al., 2012).

Starting from these theoretical premises, in the present research we examined the effects of both direct and mass-mediated contact with immigrants on prejudice and attitudes toward immigrants in general. To assess the potentially different impact of pleasant and unpleasant experiences, we considered separately positive and negative episodes of reported contact. Furthermore, we tested the mediating role of intergroup emotions, one negative, that is, intergroup anxiety, and two positive, that is, empathy and trust for the outgroup. Actually, past research has tended to examine the impact of different forms of contact and the role of mediators in isolation. This is the first time, to our knowledge, that the effects of qualitatively different contact experiences are compared within a single investigation, and also that three affective mediators are taken into account simultaneously.

Mediators of the Contact Effects: Intergroup Emotions

With the aim of understanding how contact works, scholars have started to study the psychological processes involved in cross-group interactions and have tried to identify the factors that underlie the contact effects, that is, the mediating mechanisms. Although Allport in his seminal work "The nature of prejudice" defined prejudice as "an antipathy" (1954, p. 9), he believed that the effectiveness of contact relied on its potential for learning new information about the outgroup and changing stereotypical beliefs. Accordingly, he devoted much of his attention to the study of cognitive processes involved in the development, maintenance, and reduction of prejudice. A recent meta-analysis (Pettigrew & Tropp, 2008), however, has demonstrated that affective factors play a more crucial role than cognitive ones. The authors compared the mediating role of the three most studied variables and concluded that the two strongest mediators were reduced intergroup anxiety and increased empathy (mean Sobel $Z = –26.55$ and $Z = –12.43$, respectively, $ps < .0001$), while the contribution of increased knowledge about the outgroup was somewhat modest (Sobel $Z = –3.87$, $p < .001$).

Research over the last 15 years has focused on the study of affective processes and has found increasingly stronger support to the idea that intergroup contact experiences have the potential to change prejudicial attitudes and beliefs because they reduce negative affect associated with intergroup encounters, for example, feelings of anxiety and threat, and generate positive affect toward members of the outgroup, for example, empathy and trust (see Pettigrew & Tropp, 2008).

Intergroup anxiety is a negative affective state that stems from the anticipation of negative consequences for the self during interactions with outgroup members (Stephan & Stephan, 1985). Anxiety has been associated with a number of negative consequences, both for the person experiencing it (e.g., increased stress and reduced cognitive ability) and for the quality of the interaction (e.g., negative evaluation of contact and of the partner). Empirical research, however, has also demonstrated that feelings of anxiety and threat are typically alleviated through positive contact experiences; in turn, reduced anxiety leads to improved intergroup attitudes or reduced ingroup bias (e.g., Harwood, Hewstone, Paolini, & Voci, 2005; Islam & Hewstone, 1993; Paolini Hewstone, Cairns, & Voci, 2004; Turner, Hewstone, & Voci, 2007; Voci & Hewstone, 2003; Voci & Pagotto, 2010; Vonofakou, Hewstone, & Voci, 2007).

Empathy can be defined as an affective state that stems from and is congruent with the perceived welfare of another, and is often accompanied with taking the perspective of the other person to understand his or her situation (Batson, 1991). Empathy has been associated with a number of prosocial consequences, such as positive evaluations, benevolent attitudes and helping, both at the interpersonal and intergroup levels (for reviews, see Batson, 1991; Batson & Ahmad, 2009). Moreover, a growing body of research has shown that intergroup contact, especially when positive and intimate, is associated with an increase of empathy for outgroup members, which is in turn associated with more positive outgroup attitudes (e.g., Harwood et al., 2005; Pagotto, Voci, & Maculan, 2010; Swart, Hewstone, Christ, & Voci, 2010, 2011; Tam, Hewstone, Voci, & Kenworthy, 2006). Several studies have demonstrated that empathy toward outgroup members mediated the relation between contact and prejudice reduction, over and above the mediating effect of intergroup anxiety (Pagotto et al., 2010; Swart et al., 2011; Voci & Hewstone, 2007).

Besides these two emotions, outgroup trust has been recently proposed as a possible mediating mechanism in the relation between contact and reduced prejudice (e.g., Čehajić, Brown, & Castano, 2008; Tam, Hewstone, Kenworthy, & Cairns, 2009; Turner, Hewstone, & Voci, 2007). Trust can be broadly defined as a positive, optimistic expectation about the behavior of the other party (e.g., Deutsch, 1958; Lewicki, McAllister, & Bies, 1998), and it implies feelings of confidence and certainty in the other's intentions. Although trust between members of different groups is difficult to establish, repeated and positive encounters can efficiently contribute to its development and, once formed, it engenders cooperation and benevolence (e.g., Kramer & Carnevale, 2001). Indeed, research has shown that trust in the outgroup mediated the effects of direct contact on forgiveness (Čehajić et al., 2008) and behavioural tendencies (Tam et al., 2009).

Direct and Indirect Forms of Contact

Since the first formulation of the intergroup contact hypothesis, research has widely demonstrated the effectiveness of direct contact in reducing prejudice and ameliorating intergroup relations (see Pettigrew & Tropp, 2006). Research has further shown that frequent and pleasant cross-group interactions that develop into friendships have the most powerful beneficial effects (Pettigrew, Tropp, Wagner, & Christ, 2011; for a review, see Davies, Tropp, Aron, Pettigrew, & Wright, 2011). However, direct contact is sometimes difficult to implement, for instance in segregated areas, where opportunity for contact is rare, or when motivation for disclosure is low (e.g., for highly stigmatized groups), or when the groups have a history of prolonged conflict and relationships are characterized by reciprocal mistrust, or finally when the outgroup is perceived as particularly threatening and encounters are avoided. To address these situations, scholars have proposed a number of interventions, generally labeled "indirect contact," that do not involve actual interactions.

Three forms of indirect contact can be identified (Dovidio et al., 2011): (1) *extended contact*, which refers to knowing that an ingroup member has an outgroup friend (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997); (2) *imagined contact*, which involves mentally simulating a positive encounter with a member of the outgroup (Crisp & Turner, 2009); (3) *vicarious contact*, which includes observing an interaction between an ingrouper and an outgrouper (e.g., Mazziotta, Mummendey, & Wright, 2011). Although the study of these forms of contact is quite recent, em-

pirical evidence is encouraging. For instance, several studies have shown that learning that an ingroup member has a friend in the outgroup, that is, extended contact, can lead to more positive attitudes toward the outgroup (e.g., Turner, Hewstone, & Voci, 2007; Turner, Hewstone, Voci, & Vonofakou, 2008), less implicit prejudice (Vezzali, Giovannini, & Capozza, 2012), greater perceived outgroup variability (Paolini et al., 2004), lower perceived ignorance about the outgroup and greater awareness of more positive outgroup behavior (Eller, Abrams, & Zimmermann, 2011). Similarly, interventions based on imagined contact have been shown to positively impact on both explicit and implicit outgroup attitudes (e.g., Turner & Crisp, 2010; Turner, Crisp, & Lambert, 2007), to foster stereotype change (Brambilla, Ravenna, & Hewstone, 2012), and also to enhance future contact intentions (Crisp & Husnu, 2011) and cooperation (Pagotto, Visintin, De Iorio, & Voci, 2012).

As regards vicarious contact, empirical research has shown that observing or simply witnessing an ingroup member having a successful interaction with an outgroup member can positively impact intergroup relations. Among others, mass media can be a source of vicarious experience of contact and play an important role in shaping intergroup attitudes and stereotypes (Graves, 1999; Mutz & Goldman, 2010). Indeed, several studies have demonstrated that exposure to positive portrayals of members of stigmatized groups can lead to a reduction of prejudiced attitudes (Ortiz & Harwood, 2007; Paluck, 2009; Schiappa, Gregg, & Hewes, 2005). In three experiments, Schiappa and colleagues (2005) found that watching television programs that depicted positive contact of straight people with gay men (Experiments 1 and 2) and with transvestites (Experiment 3) led to lower levels of prejudice toward the respective target group. Similarly, Ortiz and Harwood (2007) found in a correlational study that exposure to positive straight-gay and white-black interactions in television was associated with better attitudes toward the respective outgroup. Further evidence of the potential of mass-mediated contact comes from a field experiment by Paluck (2009), set in very tough post conflictual context such as Rwanda. In this experiment, the author tested the impact of a radio soap opera featuring educational messages about reducing intergroup prejudice and violence between two fictional Rwandan communities and found that, compared to a control soap opera about health, it fostered a change in listeners' perceptions of social norms and promoted the expression of empathy for other Rwandans. Finally, Mazziotta and colleagues (2011) found that participants who watched videos depicting successful interactions between an ingroup and an outgroup member, compared to control, not only expressed more positive outgroup attitudes, but were also more inclined to engage in future actual contact with the outgroup.

With regard to mechanisms underlying the effects of vicarious contact, two general accounts have been proposed, which are likely to be complementary rather than opposing. On the one hand, observing an intergroup interaction can be seen as a form of social learning (Bandura, 1986), and thus it can increase observers' self-efficacy and lead to the acquisition of behavioral knowledge, as found by Ortiz and Harwood (2007) and Mazziotta and colleagues (2011). On the other hand, according to the Parasocial Contact Hypothesis (Schiappa et al., 2005), people process mass-mediated communication in a manner similar to interpersonal interactions. Thus, mediating mechanisms may be, at least in part, the same as those involved in direct contact. Specifically, mass-mediated contact may affect outgroup attitudes through changes in intergroup emotions (but see Pagotto et al., 2010).

To conclude, vicarious forms of contact seem to be particularly useful in contexts where opportunity for face-to-face contact is less frequent, as they may serve as substitution or prepara-

tion for successful actual encounters (e.g., Mazziotta et al., 2011). Nonetheless, experiences of vicarious contact have an important role even when direct contact does occur, as engendered emotions and impressions can influence intergroup perceptions and attitudes, working either in synergy or in contrast with direct contact effects. However, the number of studies that simultaneously examined the effects of direct and vicarious contact, and more specifically of contact through mass-media, is still limited (for an exception, see Pagotto et al., 2010).

Positive and Negative Contact

While research has fruitfully focused on how to attain and implement the beneficial effects of positive contact, considerable less attention has been devoted to the study of the consequences of negative contact experiences (Pettigrew, 2008; Pettigrew & Tropp, 2006). This issue, however, is critical as episodes of direct and indirect intergroup contact in everyday life are likely to be both positive and negative. Fortunately, positive contact experiences are generally more frequent than negative, as found in European probability samples (see Pettigrew & Tropp, 2011) and in American samples (e.g., Barlow et al., 2012, Study 2). Nevertheless, episodes of negative contact may have detrimental effects, poisoning intergroup perceptions and emotions, and thus may undermine and/or counteract the benefits of positive contact.

Only a few studies have compared the effects of positive and negative contact, though yielding inconsistent results. Wilder (1984) found that pleasant interactions with a typical outgroup member had the greatest impact on outgroup attitudes compared to negative contact or contact with an atypical outgrouper. In contrast, Barlow and colleagues (2012) found that negative contact was a stronger and more consistent predictor of higher levels of prejudice than positive contact of lower levels of prejudice. In a similar vein, Paolini, Harwood, and Rubin (2010) showed that negative contact, compared to positive, made group memberships more salient, and found some evidence that these increases in category salience predicted expectations of negative contact. The authors concluded that, because category salience facilitates generalization, intergroup contact is naturally, that is, in unsupervised, unstructured settings, biased toward worsening rather than improving intergroup perceptions. Finally, Aberson and Gaffney (2008) found that positive contact reduced intergroup anxiety, realistic threat, and symbolic threat, while negative contact promoted threats; threat perceptions and intergroup anxiety were, in turn, negatively related to both explicit and implicit outgroup attitudes. In sum, research comparing the effects of positive direct contact and of negative direct contact suggest that positive and negative contact are two separate phenomena, but do not provide definitive evidence about which one has stronger effects. Additionally, it is important to note that items typically used to measure contact either concern only quantity of contact (e.g., “How many outgroup members do you know?”) or assess separately quantity and quality of contact pushing respondents to “average” between different contact experiences (e.g., “When you meet outgroup members, in general do you find the contact…pleasant, cooperative, superficial?”). This procedure may hide the presence of opposite effects. It is thus crucial to further examine the independent effects of positive and negative contact.

The importance of keeping distinct the measures of positive and negative contact experiences may be particularly relevant with regard to mass-mediated communication, which provides both positive and negative portrayals of outgroup members (see Mutz & Goldman, 2010). For in-

stance, minority group members are often associated with violence and criminal activities in newspapers and television news, thus fueling threat perceptions, as well as anxiety and mistrust (e.g., Latrofa, Vaes, Vieno, & Pastore, 2012). Also, as Pettigrew and colleagues (2011, p. 277) pointed out, "negative intergroup encounters are often publicized, while the more numerous positive encounters go unrecognized or are not viewed as newsworthy." However, maybe less frequently, minority group members can also be presented in a pleasant and positive fashion, for instance in movies and in television or radio series. As mentioned before, theses vicarious experiences of positive contact can engender positive emotions toward the outgroup, such as empathic feelings (Paluck, 2009), and promote more favorable intergroup perceptions (e.g., Ortiz & Harwood, 2007; Schiappa et al., 2005). Thus, depending on the content of the communication, the effects of this vicarious contact can affect outgroup attitudes and intergroup perceptions either positively or negatively. In the current research, we aimed to assess the distinct effects of positive and negative experiences of both direct, face-to-face contact and mass-mediated contact on intergroup emotions and on prejudice toward the outgroup.

THE PRESENT RESEARCH

The present research investigates the effectiveness of different types of intergroup contact, that is, direct and mass-mediated contact, for reducing prejudice toward immigrants among Italian nationals. Specifically, we consider simultaneously positive and negative episodes of direct and mass-mediated contact, and we examine their effects on intergroup emotions and on several indexes of prejudice. Furthermore, we tested the mediating role of intergroup emotions, and specifically of intergroup anxiety, empathy, and trust.

METHOD

Participants

Participants were 153 Italian nationals, 67 males and 86 females (M_{age} = 36.84 years, *SD* = 15.89). Respondents were part of a convenience sample and were recruited by a young researcher in Northern Italy, gave informed consent to the recruiter and completed the questionnaire on a voluntary basis.

Measures

Direct contact. The amount of positive and negative episodes of direct contact with immigrants was measured by four items. For positive direct contact, the items were: "How often do you interact with the immigrants you know and perceive the experience as positive?" and "How often, meeting the immigrants you know, do you feel calm and comfortable?" For negative direct contact, the items were "How often do you interact with the immigrants you know and perceive the experience as negative?" and "How often, meeting the immigrants you know, do you feel dis-

comfort?" The response scales ranged from 0 to 4 (0 = *never*, 1 = *rarely*, 2 = *sometimes*, 3 = *often*, 4 = *very often*). The respective items were averaged to form a reliable index of positive (r = .61, p < .001) and negative (r = .51, p < .001) direct contact.

Contact through mass-media. The amount of positive and negative mass mediated contact was measured by single items, separately for contact through newspapers and TV news and for contact through movies and TV series (adapted from Pagotto et al., 2010). For contact through newspapers and TV news, the items were: "How often do you get a positive [negative] impression of immigrants you hear about on TV news, radio news, newspapers?" For contact through movies and TV series, the items were: "How often do you get a positive [negative] impression of immigrants you see on movies and TV series?" Response scales ranged from 0 to 4 (0 = *never*, 1 = *rarely*, 2 = *sometimes*, 3 = *often*, 4 = *very often*).

Intergroup emotions. To assess *empathy*, respondents were asked to think about discriminations and difficulties experienced by immigrants living in Italy and to report their strongest and immediate reactions (see Pagotto et al., 2010; Voci & Hewstone, 2007). A list of 16 emotions or brief statements was provided and respondents had to indicate the degree to which they experienced each state on a scale from 0 (*not at all*) to 4 (*very much*). These reactions referred to both emotional empathy (e.g., tenderness, sympathy, feelings of injustice, sadness) and cognitive empathy (e.g., I try to understand their way of thinking, I see things from their point of view). Responses to the items were averaged to form a synthetic index of empathy, which proved to have high internal consistency (α = .94), with higher scores indicating more empathy.

As a measure of *intergroup anxiety*, respondents were asked to imagine being the only Italian, in Italy, among unknown immigrants of their own gender and to indicate the degree they would they would feel "cautious," "relaxed" [R], "troubled," "embarrassed," and "quiet" [R] (see Voci & Hewstone, 2003). Participants had to rate each emotional state on a 5-point scale from 0 (*not at all*) to 4 (*very much*). A reliable index of intergroup anxiety was obtained by averaging the six items (α = .89), with higher scores representing more anxiety.

To measure outgroup *trust*, six items were used (adapted from Voci, 2006). Participants were asked how often they experienced "caution" [R], "reliability," "trust," "positive expectations," "suspicion" [R], "security" thinking about immigrants. Responses ranged from 0 (*never*) to 4 (*very often*). Items were averaged to form a reliable composite score (α = .86), with higher scores indicating more trust.

Prejudice indexes. Three different indexes of prejudice toward immigrants were employed. First, we used a shortened version of Pettigrew and Meertens' (1995) scale, adapted to measure *subtle prejudice* toward immigrants in Italy (see Voci & Hewstone, 2003). Eight items were used (e.g., "How different do you think Italians and Immigrants are in terms of the importance attributed to traditions?"; "Immigrants teach their children values that are different from those necessary to be good Italian citizens") and respondents were asked to indicate their accord to each statement on a scale from 0 to 4 (*not different — very different* or *totally disagree — totally agree*). All items were then collapsed to form a reliable index (α = .78), in which higher scores reflected more subtle prejudice.

The second measure intended to assess prejudice was an index of general *attitude* toward immigrants who live in Italy. Respondents were asked to indicate how "positive," "unfavorable" [R], "friendly," and "negative" [R] was their attitude toward immigrants, on a scale from 0 to 4

(*not at all — very much*). The ratings formed a reliable scale (α = .87), with higher scores indicating more positive attitude.

The last measure of prejudice was the *estimate of crimes* committed by outgroup members (see Pagotto et al., 2010). Participants were asked the following question: "Considering all crimes committed in Italy, what do you think is the percentage of crimes committed by immigrants?"

RESULTS

Introductory Analyses

Descriptive statistics. Means, standard deviations, and correlations between measures are presented in Table 1. Interestingly, participants reported that positive episodes of direct contact with immigrants were quite frequent, while negative episodes were less frequent, $t(152) = 15.30$, $p < .001$. As regards contact through mass media, a clear asymmetry between the two kinds of media emerged. Contact through TV news and newspapers was mainly negative: participants got a negative impression of immigrants more often than a positive one, $t(152) = –4.98$, $p < .001$. In contrast, contact through movies and fictions was more frequently positive than negative, $t(152) = 5.28$, $p < .001$. On average, participants' level of intergroup anxiety was not high, mean score was below the scale midpoint, $t(152) = –1.78$, $p < .01$, while level of empathy was quite high, mean score was above the scale midpoint, $t(152) = 4.22$, $p < .001$, and level of trust was intermediate, mean score was not different from the scale midpoint, $t(152) = .74$, *ns*. Finally, participants reported quite positive attitudes toward immigrants, mean score was above the scale midpoint, $t(152) = 14.06$, $p < .001$, had moderately low levels of subtle prejudice, mean score was below the scale midpoint, $t(152) = –3.77$, $p < .001$, and estimated that around one third of crimes in Italy is committed by immigrants.

Correlations. As shown in Table 1, positive direct contact was reliably related to the three intergroup emotions (positively with empathy and trust, and negatively with anxiety) as well as with the three indexes of prejudice (positively with outgroup attitude, and negatively with subtle prejudice and crime estimate). As expected, the reversed pattern of correlations emerged negative direct contact. Moreover, positive contact through TV news and newspapers was positively associated with empathy, trust, and outgroup attitude, negatively to crime estimate and, marginally, to subtle prejudice. Negative contact through TV news and newspaper was instead positively associated with anxiety and negatively with outgroup trust and empathy, and was associated to less positive outgroup attitude and higher levels of subtle prejudice and crime estimate. As regards contact through movies and TV movies, positive episodes of this type of contact were positively associated only with empathy, but not with prejudice measures, while the negative form of this type of contact was associated with more anxiety, stronger subtle prejudice and higher crime estimate, while being negatively related to trust and outgroup attitude. Moreover, it is worth noting that trust was positively correlated with empathy and negatively with anxiety, while empathy and anxiety are not significantly correlated. Finally, intergroup emotions were correlated to all prejudice indexes: empathy and trust were positively related to outgroup attitude, and negatively to subtle prejudice and crime estimate, whereas intergroup anxiety presented correlations in the opposite directions.

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TABLE 1
Means, standard deviations, and correlations of variables

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
1. Positive direct contact	2.72	.91	–											
2. Negative direct contact	1.04	.76	–.32***	–										
3. Positive news contact	1.60	.87	.15	–.09	–									
4. Negative news contact	2.24	1.07	–.14	.25**	–.33***	–								
5. Positive movies contact	1.88	1.00	.03	.10	.19*	.07	–							
6. Negative movies contact	1.34	.99	–.12	.39***	–.04	.38***	.20**	–						
7. Empathy	2.28	.83	.37***	–.32***	.20*	.27***	.25**	–.09	–					
8. Trust	2.04	.75	.42***	–.46***	.25**	–.50***	.03	–.26***	.59***	–				
9. Anxiety	1.77	.88	–.23**	.36***	–.10	.33***	.10	.24**	–.11	–.56***	–			
10. Outgroup attitude	2.83	.73	.43***	–.35***	.23**	–.39***	.13	–.21**	–.35***	.68***	.58***	–		
11. Subtle prejudice	1.78	.73	–.33***	.32***	–.15	.37***	–.02	.23**	.47***	–.57***	–.37***	–.51***	–	
12. Crime estimate	32.95	22.32	–.24**	.29***	–.21**	.30***	–.06	.22**	.40***	–.61***	–.41***	–.50***	.46***	–

Note. *p < .05. **p < .01. ***p < .001.

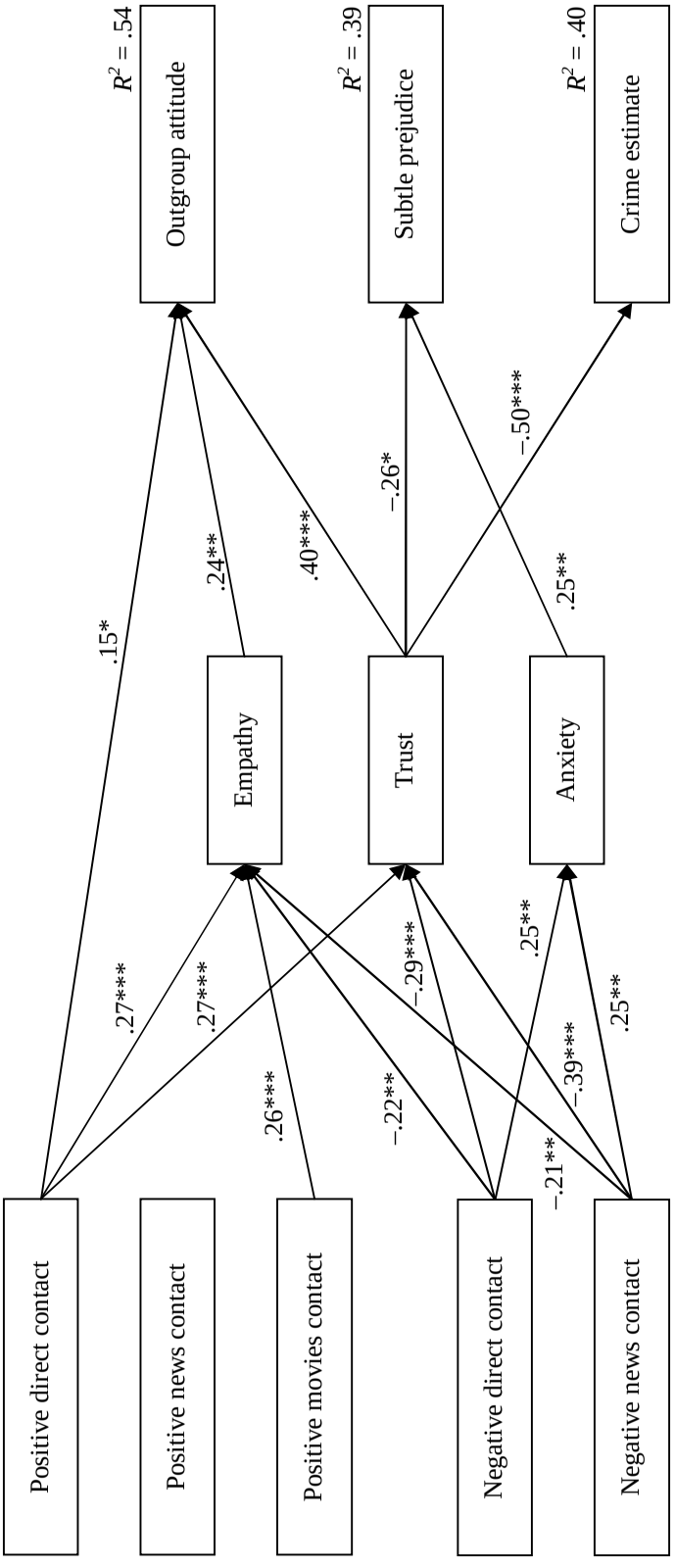
Path Analysis

To analyze the relations between contact, intergroup emotions and prejudice, we conducted path analysis with observed variables using LISREL 8.71 (Jöreskog & Sörbom, 2004). The covariance matrix was used as input and estimates were derived using the maximum likelihood method. The six indexes of contact were simultaneously entered as predictors, the three intergroup emotions as mediators, and the three indexes of prejudice as criterion variables. We tested a saturated model in which all paths were estimated, and we then carried out an effects decomposition analysis to assess the overall effect exerted by each variable on the criterion variables and the strength of indirect effects (Lohelin, 1998). In addition, to test the significance of specific mediated paths, that is, the indirect effect of one predictor variable on each criterion variable via each of the proposed mediators, we applied a bootstrapping procedure (Preacher & Hayes, 2008).

As shown in Figure 1, positive direct contact was associated with more empathy and trust (both βs = .27, $p < .001$), while negative direct contact was associated with less empathy and trust (β = –.22, $p < .01$, and β = –.29, $p < .001$, respectively), and with higher intergroup anxiety (β = .25, $p < .01$). In addition, positive direct contact had a significant direct effect, although modest in size, on outgroup attitude (β = .15, $p < .05$). As regards contact through movies and TV series, positive contact was positively associated, among the intergroup emotions, only with empathy (β = .26, $p < .001$), while negative contact through these media did not influence any of the dependent variables. The reversed pattern emerged for contact through TV news and newspaper: only negative contact affected intergroup emotions, being associated with more intergroup anxiety (β = .25, $p < .01$) and with less empathy and trust (β = –.21, $p < .01$, and β = –.39, $p < .001$, respectively), while positive contact of this type did not yield any significant effect on the dependent variables. Moreover, empathy was associated with more positive outgroup attitudes (β = .24, $p < .01$), anxiety was related to higher levels of subtle prejudice (β = .25, $p < .01$), while outgroup trust yielded significant effects on all three indexes of prejudice (on outgroup attitude: β = .40, $p < .001$; on subtle prejudice: β = –.26, $p < .05$; on crime estimate: β = –.50, $p < .001$). Overall, the model accounted for the 54% of the variance in attitude toward immigrants, 39% of the variance in subtle prejudice and 40% of the variance in crime estimate.

Total and Indirect Effects

To assess the predictive role of the different types of intergroup contact, we considered the total effect exerted by each predictor on the criterion variables, and then decomposed it into direct causal effect (the effect of one variable on another controlling for all prior variables and all proposed mediators) and indirect causal effect (the total causal effects minus the direct effect). As reported in Table 2, the analysis revealed that positive direct contact had significant total effects on outgroup attitude and crime estimate (TE = .32, $p < .001$, and TE = –.23, $p < .01$, respectively), while indirect effects were significant on all the outcome variables (outgroup attitude, IE = .18, $p < .001$; subtle prejudice, IE = –.13, $p < .01$; crime estimate, IE = –.18, $p < .001$). Similarly, negative direct contact yielded significant total effects on outgroup attitude (TE = –.18, $p < .05$),



Note. *$p < .05$. **$p < .01$. ***$p < .001$.

FIGURE 1
Path analysis.

TABLE 2
Decomposition analysis

Predictor	Criterion	Direct effect	Indirect effect	Total effect
Positive direct contact	Outgroup attitude	.15*	.18***	.32***
	Subtle prejudice	–.10	–.13**	–.23**
	Crime estimate	.05	–.18***	–.13
Negative direct contact	Outgroup attitude	.00	–.18***	–.18*
	Subtle prejudice	–.01	.16***	.16(*)
	Crime estimate	–.04	.20***	.16(*)
Positive news contact	Outgroup attitude	.02	.02	.04
	Subtle prejudice	.02	–.01	.01
	Crime estimate	–.07	–.02	–.09
Negative news contact	Outgroup attitude	–.08	–.21***	–.30***
	Subtle prejudice	.10	.19***	.29***
	Crime estimate	–.06	.25***	.18*
Positive movies contact	Outgroup attitude	.07	.09*	.15*
	Subtle prejudice	–.02	–.04	–.06
	Crime estimate	–.02	–.06	–.08
Negative movies contact	Outgroup attitude	–.03	.02	–.01
	Subtle prejudice	.05	–.01	.04
	Crime estimate	.10	–.01	.08

Note. *$p < .05$. **$p < .01$. ***$p < .001$. (*)$p < .06$.

marginally significant total effects on subtle prejudice and crime estimate (both TEs = .16, *ps* < .06), and significant indirect effects on all the outcome variables (outgroup attitude, IE = –.18, $p < .001$; subtle prejudice, IE = .16, $p < .001$; crime estimate, IE = .20, $p < .001$). Moreover, negative contact through TV news and newspapers had strong effects, both total and indirect, as it influenced all three indexes of prejudice: it predicted less positive attitudes toward the outgroup (TE = –.30, IE = –.21, *ps* < .001), higher levels of subtle prejudice (TE = .29, IE = .19, *ps* < .001), and higher crime estimate (TE = .18, $p < .001$; IE = .25, $p < .05$). Finally, positive contact through movies had a significant impact only on outgroup attitude (TE = .15, IE = .09, *ps* < .05).

Bootstrapping Analysis

The decomposition analysis is not informative of the significance of *specific* indirect effects. To test whether and which of the proposed intergroup emotions mediated the effects of a specific type of contact on each of the prejudice indexes, we used the bootstrap method (Preacher & Hayes, 2008; Shrout & Bolger, 2002). Bootstrapping is a resampling procedure that involves extracting a large number of samples from the data set and computing the indirect effect in each sample. The bootstrap sampling distribution is then used to calculate confidence intervals for the

indirect effect: when the 95% confidence interval does not include zero, the indirect effect is statistically significant at the .05 level. We used bias-corrected 95% confidence intervals based on 5,000 bootstrap resamples (see Table 3).We conducted this analysis only for predictors that exert a reliable effect on prejudice indexes (see Table 2). Results showed that the indirect effects of positive direct contact via trust on outgroup attitude, subtle prejudice, and crime estimate were all significant, while the mediation of empathy was significant only for outgroup attitude. For negative direct contact, results indicated that the indirect effects through outgroup trust on the three prejudice indexes were also all significant; in addition, empathy mediated contact effect on outgroup attitude, and anxiety mediated its effect on subtle prejudice. Similarly, for negative contact through TV news and newspaper, trust significantly mediated the effects on all the three prejudice indexes, while empathy mediated the effect on outgroup attitude, and anxiety mediated the effect on subtle prejudice. Finally, positive contact through TV series and movies had a significant indirect effect on outgroup attitude through the mediation of empathy.

TABLE 3
Bootstrapping analysis

		Criterion variables		
		Outgroup attitude	Subtle prejudice	Crime estimate
Predictor	Mediator	95%CI	95%CI	95%CI
Positive direct contact	Empathy	**[0.016, 0.104]**	[–0.075, 0.013]	[–2.379, 0.112]
	Trust	**[0.022, 0.174]**	**[–0.139, –0.001]**	**[–6.345, –1.092]**
	Anxiety	[–0.011, 0.033]	[–0.084, 0.003]	[–1.564, 0.112]
Negative direct contact	Empathy	**[–0.118, –0.014]**	[–0.010, 0.088]	[–0.268, 2.665]
	Trust	**[–0.203, –0.054]**	**[0.012, 0.162]**	**[2.001, 7.803]**
	Anxiety	[–0.051, 0.028]	**[0.012, 0.147]**	[**v**0.160, 3.025]
Negative news contact	Empathy	**[–0.084, –0.008]**	[–0.005, 0.061]	[–0.169, 1.870]
	Trust	**[–0.187, –0.030]**	**[0.002, 0.152]**	**[2.120, 6.667]**
	Anxiety	[–0.039, 0.019]	**[0.012, 0.095]**	[–0.174, 1.913]
Positive movies contact	Empathy	**[0.015, 0.102]**	[–0.070, 0.008]	[–2.347, 0.279]
	Trust	[–0.012, 0.079]	[–0.064, 0.008]	[–2.445, 0.500]
	Anxiety	[–0.024, 0.006]	[–0.019, 0.051]	[–0.236, 1.177]

Note. Confidence intervals in bold indicate that zero is not comprised, that is, the indirect effect is significant.

DISCUSSION

In the current research, we examined the effects of direct and mass-mediated intergroup contact of Italian respondents on prejudice toward immigrants, considering separately positive

and negative experiences. Additionally, we assessed the mediating role of three intergroup emotions, that is, anxiety, empathy and trust. Overall, and consistent with the literature, results showed that both direct and indirect contact contributed to predict intergroup emotions and prejudice, yielding independent effects that varied upon the positive or negative valence of the experience.

Direct, personal contact experiences had the most powerful effects, as they affected all three intergroup emotions and all three indexes of prejudice. In particular, positive direct contact was directly associated with more positive attitudes toward immigrants, and indirectly associated with more positive attitudes, less subtle prejudice and lower crime estimates through the mediation of increased empathy and trust for the outgroup. In contrast, negative direct contact was related to a decrease of empathy and trust, and also to an increase of intergroup anxiety, which then were associated with more prejudice. Although we did not directly compare the predictive power of positive and negative contact, we can note that they have simultaneous and opposing effects that seem to counterbalance each other. As suggested by the results of decomposition analysis, however, positive episodes had greater overall effects, but negative episodes yielded more numerous indirect effects.

As regards mass-mediated contact, a clear asymmetry emerged: for contact through TV news and newspapers only negative episodes were relevant, while for contact through serials and movies only positive episodes had an impact. It is important to note, though, that the effects of negative mass-mediated contact through TV news and newspapers were far more evident: this type of contact was able to influence, in a detrimental fashion, expressions of empathy, trust, and anxiety, and also all three indexes of prejudice. The opposing effect of positive episodes of contact portrayed in serials and movies was rather weak, as it regarded only an improvement of outgroup attitudes through the mediation of empathy. In line with previous studies (Graves, 1999; Mutz & Goldman, 2010), this finding confirms that mass media, and specifically TV news and newspapers, exert a great, though often negative, impact on people's emotions and attitudes toward immigrants. This negative influence, unfortunately, seems not to be sufficiently counterbalanced by other types of communication that could provide positive portrayals of the outgroup and thus be a source of positive vicarious contact experiences.

As concerns the mediating role of intergroup emotions, results indicate that trust was the most powerful mediator, as it was involved in both direct and mass-mediated contact and mediated the contact effects on all three indexes of prejudice. Empathy mediated the effects of both positive and negative contact, but only on intergroup attitudes, while anxiety was involved only in negative episodes of contact and affected only subtle prejudice. These results suggest that trust in the outgroup plays a crucial part in explaining the contact positive effects, and thus should be taken in greater consideration in future research. Moreover, the finding that intergroup anxiety was involved only in negative contact episodes (but see Aberson & Gaffney, 2008) further supports the idea that positive and negative contact constitute two distinct phenomena that involve processes that are, at least in part, different.

These results have important implications both at theoretical and practical levels. Theoretically, they point to the importance of distinguishing between positive and negative episodes of contact, and thus to the use of separate measures. They also suggest that future research on contact should take into account the influence of information conveyed by mass media in shaping intergroup emotions and perceptions. Practically, these findings warn us about how powerful mass

media may be, and indicate that greater attention should be paid to the content of communication by journalists, film-makers, and all those responsible for the programming and production.

Although the results here reported are clear and consistent with past research, we acknowledge that our data are cross-sectional and conclusions about causal direction cannot be drawn. Additionally, our sample size was quite small and we could not apply structural equation modeling with latent variables, which is recommended to control for measurement error. Moreover, some of the measures that we used were single items, which are less reliable and accurate compared to multi-item measures; thus, caution must be taken when considering our results concerning the effects of mass-mediated contact. Further research is thus needed to replicate our findings, as the study of this type of vicarious contact is quite novel and requires further examination and richer measures. For instance, future research could investigate the content of the communication in more detail, and analyze which are the messages that are best remembered and thus, supposedly, influence more strongly intergroup perceptions. It would also be interesting to test whether and how mass-mediated contact can change ingroup and outgroup norms, which have been proved to be implicated as mediators in explaining the effects of extended contact (Turner et al., 2008).

In conclusion, we believe that distinguishing between positive and negative episodes may help unravel the complexity of everyday intergroup contact experiences, and may shed new light on the underlying mechanisms of prejudice reduction.

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