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THE RELATIONSHIP BETWEEN DIRECT AND INDIRECT CROSS-GROUP FRIENDSHIPS AND OUTGROUP HUMANIZATION: EMOTIONAL AND COGNITIVE MEDIATORS

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In the current study, we tested a model in which cross-group friendships and extended contact are related to improved outgroup humanization through the mediation of emotional, identity, and normative factors. As first-level mediators, we used ingroup norms, outgroup norms, and the inclusion of the outgroup in the self mechanism (IOS); as second-level mediators, we used intergroup anxiety, trust, and empathy. The outcome variable was outgroup humanization, namely the attribution of uniquely human traits to the outgroup. The intergroup context investigated was that between Northern and Southern Italians. Participants were Northern Italian students. Data — correlational — were analyzed by using structural equation models, and bootstrap procedures for mediation. Findings revealed that IOS was the only significant first-level mediator for direct friendships, and ingroup norms was the only significant first-level mediator for extended contact. All the three emotions were involved in the relationship between friendships and outgroup humanization. Limitations of the study, future research, and potential applications of findings are discussed.

Key words: Cross-group friendships; Extended contact; Outgroup humanization; Ingroup and outgroup norms; Inclusion of the outgroup in the self.

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In the current work, we propose a model in which direct and indirect cross-group friendships are associated with enhanced outgroup humanization. In this model, two mediation levels are assumed: at the first level, the mechanisms involved are intimacy-related or normative; at the second level, they are emotional, namely driven by the emotions of empathy, trust, and anxiety. To our knowledge, this is the first time that direct and indirect cross-group friendships have been simultaneously analyzed as predictors of outgroup humanization.

Outgroup Infrahumanization and Dehumanization

In the last 13 years, many researchers in social psychology have systematically analyzed whether people assign a different degree of humanity to one's group compared to other groups.

The most prominent contribution to this problem has been offered by Leyens and his colleagues (Leyens, Demoulin, Vaes, Gaunt, & Paladino, 2007; Vaes, Leyens, Paladino, & Miranda, 2012), who invented a fertile research paradigm, finding an outgroup infrahumanization effect. Leyens and colleagues used the paradigm of secondary and primary emotions. The first (e.g., regret and hope) — more cognitively complex — are only felt by humans; the latter (e.g., rage and surprise) are felt both by humans and animals. These authors found that people tend to ascribe more uniquely human (secondary) emotions to the ingroup than to the outgroup, and called this effect outgroup infrahumanization. A large body of research has shown that this effect is robust and concerns a wide range of outgroups. Infrahumanization has been revealed also using other uniquely human and non-uniquely human attributes, for instance: "rationality" versus "impulse" (see Capozza, Trifiletti, Vezzali, & Favara, 2013), "cultured" and "refined" versus "unsophisticated" (Bastian, Jetten, & Radke, 2012; see also MacInnis & Hodson, 2012). It is worth noting that outgroup infrahumanization is not limited to extreme situations characterized by intergroup violence and conflict.

However, other groups are not only assigned a lower human status, they can even be dehumanized, namely assimilated to animals or robots (see, e.g., Haslam, Loughnan, Kashima, & Bain, 2008). Animalistic dehumanization takes place when others are denied the unique characteristics of the human species (for cases of animalistic dehumanization, see Capozza, Andrighetto, Di Bernardo, & Falvo, 2012; Capozza, Boccato, Andrighetto, & Falvo, 2009; Goff, Eberhardt, Williams, & Jackson, 2008). Mechanistic dehumanization is revealed when others are denied the essential features of the human species — e.g., curiosity and emotionality — which can be shared by humans and animals (see, e.g., Loughnan, Haslam, & Kashima, 2009). In the current study, we will consider the ascription or denial to the outgroup of uniquely human characteristics.

Infrahumanization and dehumanization can have detrimental consequences. Infrahumanization may foster aggression, discrimination, and violence (see Greitemeyer & McLatchie, 2011; Pereira, Vala, & Leyens, 2009; Viki, Osgood, & Phillips, 2013; Waytz & Epley, 2012). It may restrain helping intentions (Cuddy, Rock, & Norton, 2007), hinder intergroup forgiveness (e.g., Wohl, Hornsey, & Bennett, 2012), and may be used to justify ingroup's misdeeds against the outgroup (Castano & Giner-Sorolla, 2006).

Strategies, therefore, must be identified to curb this pervasive bias, deeply rooted in the human cognitive system. One possibility of intervention is offered by intergroup contact (Allport, 1954), which, after 60 years of research, has emerged as the most effective strategy for ameliorating intergroup relationships (Pettigrew & Tropp, 2006).

Intergroup Contact and Humanity Attributions

There is now initial evidence that intergroup contact can have beneficial effects on humanity attributions to outgroups. The types of contact considered in this research are direct contact (Brown, Eller, Leeds, & Stace, 2007; Capozza et al., 2013; Tam et al., 2007) or imagined contact (Vezzali, Capozza, Stathi, & Giovannini, 2012), the latter being a mental simulation of a positive encounter with an outgroup member (see Crisp & Turner, 2012). However, Pettigrew (1997) has proposed, and research has demonstrated (Pettigrew & Tropp, 2006; see also Davies, Tropp, Aron, Pettigrew, & Wright, 2011), that cross-group friendship typically yields greater ef-

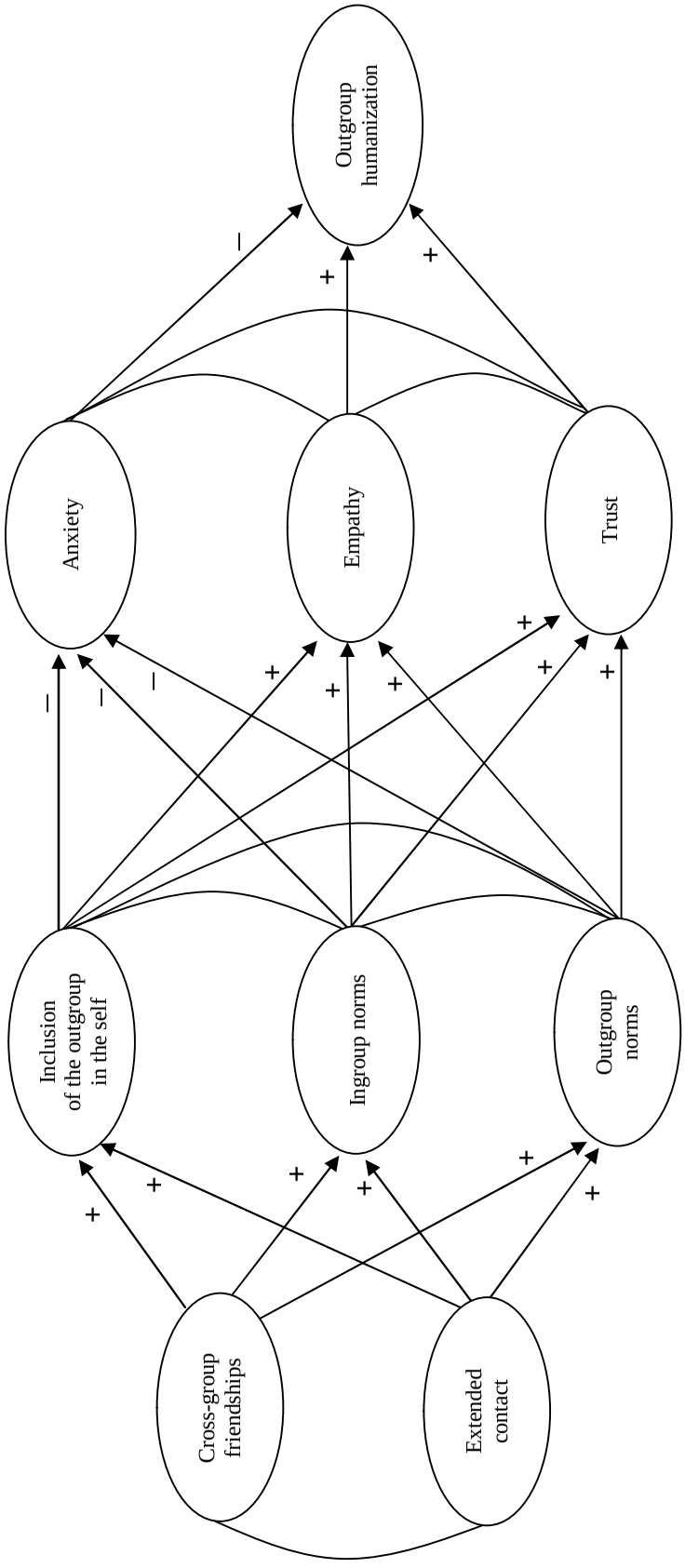
fects than other less intimate forms of contact. Interestingly, also extended contact — namely, the mere knowledge that an ingroup member has a close relationship with an outgroup member (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997) — may lead to more positive intergroup relationships (for reviews, see Turner, Hewstone, Voci, Paolini, & Christ, 2007; Vezzali & Giovannini, 2013). In our model, we expect that both cross-group friendships and extended contact are effective in improving outgroup humanization.

According to Davies and colleagues (Davies, Wright, Aron, & Comeau, 2013), both direct and indirect cross-group friendships affect intergroup relationships through three main mechanisms: one, the inclusion of the outgroup in the self (IOS), is an intimacy-related mechanism; the other two are mechanisms related to a better understanding of ingroup and outgroup norms about cross-group contact.

According to the IOS model (e.g., Aron, Aron, Tudor, & Nelson, 2004), when we develop feelings of closeness toward another person, the image of the self comes to overlap with that of the other person; some of the friend's attributes and identities become parts of our identity. If the friend is an outgroup member, the inclusion process is generalized to the outgroup as a whole. The consequence of this inclusion is a more positive attitude toward the outgroup. In the case of extended contact, the inclusion occurs through a transitive process: from the spontaneous incorporation into the self of the ingroup exemplar (Smith & Henry, 1996) to that of his/her outgroup partner (they are represented as a single unit; Sedikides, Olsen, & Reis, 1993) to the incorporation of the outgroup as a whole. Some studies support the hypothesized relationship between direct and indirect cross-group friendships and IOS (for cross-group friendships, see, e.g., Turner, Hewstone, Voci, & Vonofakou, 2008; for extended contact, see Turner et al., 2008; Vezzali, Stathi, & Giovannini, 2012).

In our model (Figure 1) the IOS mechanism is linked to improved outgroup humanization through the mediation of emotional processes. IOS should, in fact, be related to increased empathy toward outgroup members and, thus, to the discovery of the richness of their feelings which may also include sophisticated (secondary) emotions. In addition, IOS should be related to greater trust toward outgroup members and, thus, to stronger expectations that the outgroup is reliable and capable of behaving in a moral (human) way. Actually, Tausch, Hewstone, Schmid, Hughes, and Cairns (2011) have discovered that extended contact, IOS, and intergroup trust are interrelated concepts, IOS being a moderator of the extended contact/trust relationship. Finally IOS should be related to lower intergroup anxiety and, thus, to a weaker inclination to describe the outgroup in a biased, stereotypic way (for the effects of intergroup anxiety, see Paolini, Hewstone, Voci, Harwood, & Cairns, 2006). In addition, lower anxiety should lead to using less infrahumanization as a means to justify discrimination against a threatening outgroup (the IOS/decreased anxiety relationship has been shown, e.g., by Eller & Abrams, 2004).

It is worth noting that the intermediary role of the above emotions, in the association between contact and humanness perceptions, has been demonstrated by previous works (see Capozza et al., 2013, for face-to-face contact, and Vezzali, Capozza, et al., 2012, for imagined contact). A relation between cross-group friendships and empathy, trust, reduced anxiety has been found by Turner, Hewstone, and Voci (2007); for reduced anxiety, also the work by Page-Gould, Mendoza-Denton, and Tropp (2008) is relevant. Regarding extended contact, its association with lower anxiety has been shown, for instance, by: De Tezanos-Pinto, Bratt, and Brown (2010);



Note. The sign (+ or –) indicates an expected positive or negative relationship.

FIGURE 1
Mediation model explaining the relationship of cross-group friendships and extended contact with outgroup humanization.

Gómez, Tropp, and Fernández (2011); Paolini, Hewstone, Cairns, and Voci (2004); Turner, Hewstone, and Voci (2007); Turner et al. (2008). Evidence for the extended contact/outgroup trust link is offered, for instance, by: Andrighetto, Mari, Volpato, and Behluli (2012); Paolini, Hewstone, and Cairns (2007); Tam, Hewstone, Kenworthy, and Cairns (2009); Tausch et al. (2011).

According to Davies et al. (2013), a second intervening mechanism, which can explain the relationship between friendships and attenuated prejudice, is based on ingroup norms. In cross-group friendships, a self-anchoring process (Otten & Epstude, 2006) may occur, namely individuals can use their positive attitude toward the outgroup to infer the positive attitude of the whole ingroup. Moreover, the perception that one's friendships are not ostracized and are even accepted by ingroup members may lead to believing that the ingroup is favorable to the outgroup. In the case of extended contact, observing intergroup friendships may lead to the conclusion that the ingroup has positive norms toward the outgroup. The relationship between extended contact and positive ingroup norms has been demonstrated, for instance, by De Tezanos-Pinto et al. (2010); Gómez et al. (2011); Turner et al. (2008); for direct friendships, see Feddes, Noack, and Rutland (2009).

In our model (Figure 1), the perception of positive ingroup norms should enhance outgroup humanization by decreasing intergroup anxiety and improving empathy and trust. Realizing that one's group is favorable to the outgroup may, in fact, reduce the perception that the outgroup is a threat to the ingroup. Moreover, the ingroup's positive attitudes should promote the expectation of moral, fair responses from outgroup members (trust), as well as attempts to understand their feelings and perspectives (empathy) (for the negative correlation between ingroup and outgroup norms and intergroup anxiety, see the study by Turner et al., 2008).

The third mediator of the relationship between friendships and improved attitudes (Davies et al., 2013) are outgroup norms (Figure 1). To the extent that the outgroup partner is viewed as typical of the outgroup, his/her cooperative actions can be regarded as a demonstration that the outgroup has positive norms toward the ingroup. Likewise, in the case of extended contact the knowledge of friendly encounters between ingroupers and outgroupers may attenuate the idea of unfavorable outgroup attitudes. Like for IOS and ingroup norms, we expect that the relationship between outgroup norms and outgroup humanization is mediated by empathy, trust, and anxiety.

Thus, in our model cognitive factors precede affective factors which are treated as proximal predictors of outgroup humanization (see also Capozza et al., 2013).

Overview of the Study

To test our model we conducted a survey considering one of the most salient intergroup relationships in Italy, that between Northern and Southern Italians (see, e.g., Trifiletti & Capozza, 2011); these two regional groups share the same language, religion, and nationality, and only differ with respect to some cultural traditions. On the socio-economic level, the Northern group is more developed than the Southern group; therefore, public funds are allocated to the South by the Italian government, this policy usually generating discontent and negative feelings among Northerners. The survey was performed in a Northern town, examining Northern participants.

To assess humanness attributions, we used pretested uniquely human (e.g., rationality) and non-uniquely human (e.g., impulsiveness) traits (Capozza et al., 2013). The first are rated as unique attributes of the human species, the latter as attributes shared by humans and animals. The uniquely human and non-uniquely human traits we used do not differ on the evaluative dimension, both being judged as slightly positive. We preferred to employ a trait-based rather than an emotion-based (Leyens et al., 2007) measure of humanity perceptions, because we wished to capture more components of the overall humanity concept. Actually, in recent years other investigators have used traits rather than emotions to assess infra- and dehumanization (see, e.g., Bastian et al., 2012; Costello & Hodson, 2010; Gwinn, Judd, & Park, 2013). Direct and indirect cross-group friendships and mediators were revealed by using self-report measures.

To evaluate our model (Figure 1), regression analysis with latent variables was applied (LISREL 8; Jöreskog & Sörbom, 2004), and mediation was tested by using bootstrapping procedures. The model was evaluated estimating also the direct paths from friendships to emotions, from friendships to outgroup humanization, from IOS, perceived norms to outgroup humanization (see Mackinnon, 2008).

METHOD

Participants and Procedure

Participants were 254 undergraduates at a large Northern Italian university. Data from three participants were discarded due to extensive missing data (over 25% of items), leaving a final sample of 251 participants (M_{age} = 20.68, *SD* = 2.83). This sample consisted of 31 males and 219 females (one participant did not indicate the gender). Participants were all Northern, namely, like their parents, they were born in the North and lived in a Northern town. Participants were asked to complete a questionnaire during classes.

Measures

Predictor variables. The measures of cross-group friendships and extended contact were adapted from Turner et al. (2008). Cross-group friendships were measured with four items (alpha = .71). Participants were asked about their experience of friendship with Southern Italians within and outside university: "How many friends do you have at (outside) university who are Southern Italians?" (1 = *none*, 2 = *one*, 3 = *two to four*, 4 = *five to ten*, 5 = *over ten*) and "How often do you spend time with your Southern Italian friends when you are at (outside) university?" (1 = *never*, 2 = *occasionally*, 3 = *sometimes*, 4 = *often*, 5 = *very often*). A higher score indicates greater experience of cross-group friendships. Extended contact was measured with three items (alpha = .78): "How many of your Northern Italian friends have friends who are Southern?" "How many of your *very best* Northern Italian friends have friends who are Southern?" "How many members of your family (including parents, brothers and sisters, cousins, etc.) have friends who are Southern?" Participants answered on a 5-point scale anchored by *none* (1) and *over ten* (5). A higher score indicates greater experience of indirect cross-group friendships.

First-level mediators. Perceptions of ingroup and outgroup norms were measured using items adapted from Turner et al. (2008). The ingroup norm measure consisted of three items (alpha = .81): "In general, how friendly are Northern Italians to Southern Italians?" "How friendly do you think your Northern Italian friends are to Southern Italians?" "How much do your Northern Italian friends like Southern Italians?" Perceived outgroup norms were assessed with three items (alpha = .87): "In general, how friendly are Southern Italians to Northern Italians?" "In general, how happy would Southern Italians be to spend time with Northern Italians?" "How happy do you think Southern Italians would be to be friends with Northern Italians?" Responses were given on a 7-point scale anchored by *not at all* (1) and *a lot* (7). Higher scores reflect more positive ingroup norms toward the outgroup and more positive outgroup norms toward the ingroup. IOS was assessed with two items. The first was a pictorial item, derived from Aron, Aron, and Smollan's (1992) inclusion of other in the self scale (see also Tropp & Wright, 2001); this item consisted of seven pairs of circles (representing the self and the outgroup), which vary from no overlap (1) to almost total overlap (7). The second item asked: "My identity, in a sense, also includes the Southern identity" (1 = *definitely false*, 7 = *definitely true*). On both items, higher scores indicate a greater inclusion of the outgroup in the self (r = . 60, p < .001).

Second-level mediators. Intergroup anxiety, empathy, and trust were measured using items taken from Capozza, Falvo, Trifiletti, and Pagani (in press) and Capozza, Vezzali, Trifiletti, Falvo, and Favara (2010; see also Vezzali, Capozza, Mari, & Hichy, 2007). Participants were asked to rate the anxiety felt toward the outgroup (alpha = . 91) using eight items (e.g., anxious, worried, restless). For empathy, the items were: "When you think about outgroup members, to what extent you feel in tune with them," "feel you share their emotions," "understand their feelings," "share their joys and sorrows" (alpha = .91). The measure of outgroup trust consisted of three items (alpha = .83): "I feel I can trust Southern Italians," "I trust Southern Italians," "I distrust Southern Italians" (reverse coded). All responses were given on a 7-point scale, anchored by *not at all* (1) and *a lot* (7). Higher scores indicate higher levels of anxiety, empathy, and trust.

Criterion variable. To measure humanity attributions, we used eight traits (Capozza et al., 2013). Participants were asked to rate whether Northern and Southern Italians were characterized by each trait on a 7-point scale, anchored by *absolutely false* (1) and *absolutely true* (7). Four traits (alpha = .72 for the ingroup, alpha = .77 for the outgroup) were uniquely human (e.g., reasoning, morality), and four (alpha = .89 for the ingroup, alpha = .90 for the outgroup) were non-uniquely human (e.g., impulsiveness, instinct). In the regression model, we used as the outcome a composite score obtained from the uniquely human traits assigned to the outgroup.

Two orders of presentation of predictor, mediator, and criterion variables were used, following the indications by Turner et al. (2008). The two orders were counterbalanced across participants.

RESULTS

Introductory Analyses

Following Schafer and Graham's (2002) recommendations, missing data were imputed using the EM algorithm in PRELIS (LISREL 8; Jöreskog & Sörbom, 2004). Maximum likelihood procedures provide more accurate estimates of population parameters than the procedures of listwise deletion or mean substitution (Schafer & Graham, 2002).

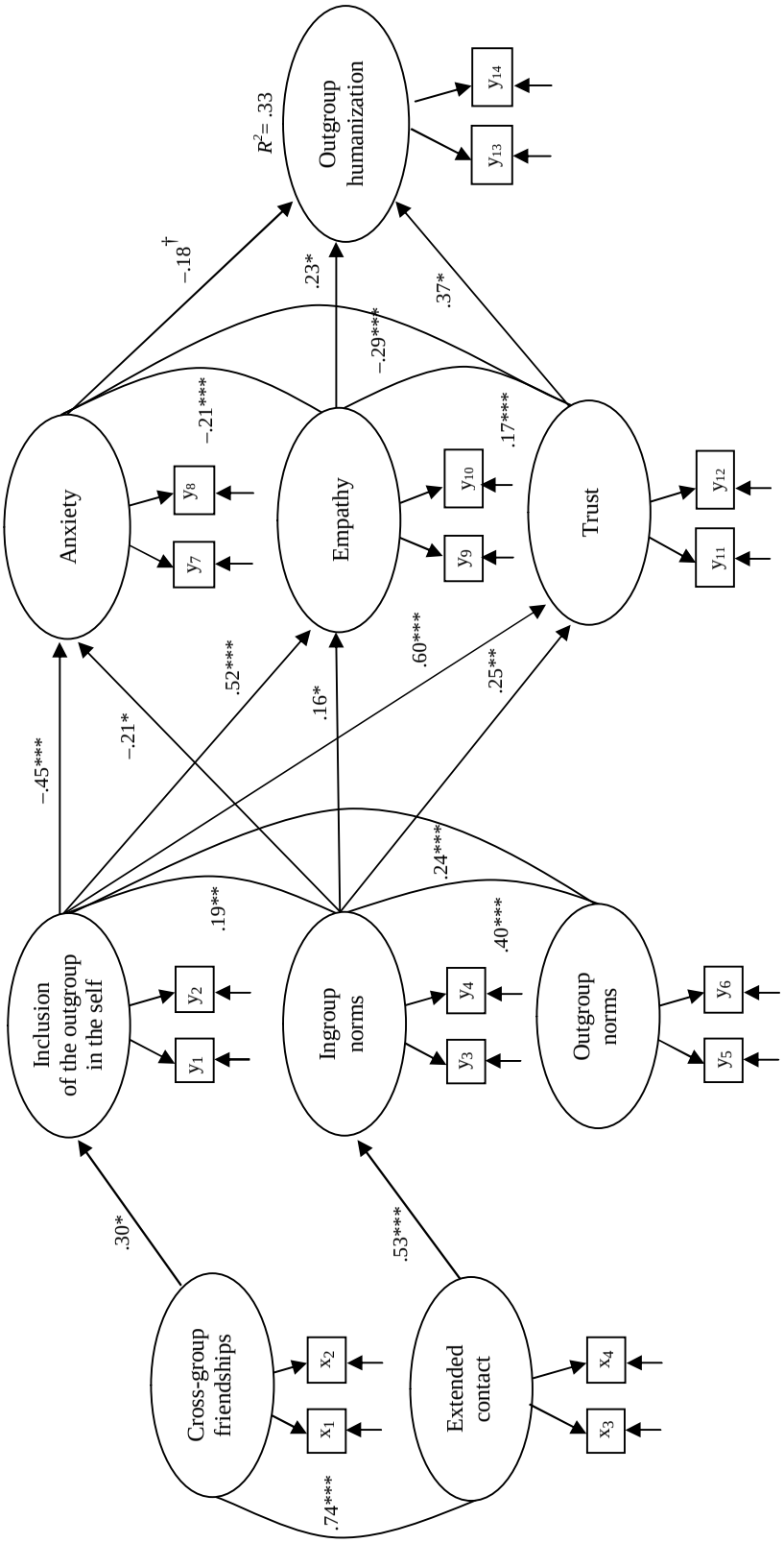
Subsequently, we computed a composite score for each construct, by averaging the respective items. From the means of variables, it appears that participants reported less direct (M = 2.79, SD = 0.89) than indirect friendships (M = 3.10, SD = 0.86), although the difference between the two means was small. The inclusion of the outgroup in the self was moderate (M = 3.45, SD = 1.40); moreover, while the outgroup was perceived as rather favorable to the ingroup (M = 4.50, SD = 1.04), the ingroup was perceived as less friendly than the outgroup (M = 3.91, SD = 1.06). Regarding emotions, participants reported a rather high level of trust (M = 4.52, SD = 1.22), a moderate level of empathy (M = 3.72, SD = 1.27), and a low level of anxiety (M = 2.55, SD = 1.00).

Data concerning humanity attributions were submitted to a 2 (traits: uniquely human vs. non-uniquely human) × 2 (target group: ingroup vs. outgroup) repeated measures ANOVA. The main effect of trait, $F(1, 250) = 12.93$, $p < .001$, $\eta_p^2 = .05$, was qualified by the significant interaction, $F(1, 250) = 261.96$, $p < .001$, $\eta_p^2 = .51$. Simple effects showed that the uniquely human traits were assigned more to the ingroup (M = 5.15, SD = 0.84) than to the outgroup (M = 4.11, SD = 1.03), $F(1, 250) = 198.38$, $p < .001$, $\eta_p^2 = .44$, while the non-uniquely human traits were assigned more to the outgroup (M = 5.37, SD = 1.08) than to the ingroup (M = 4.24, SD = 1.00), $F(1, 250) = 175.58$, $p < .001$, $\eta_p^2 = .41$. These findings replicate the classical infrahumanization effect, with the ingroup perceived in uniquely human terms more than the outgroup.

The Structural Equation Model

The hypothesized relations between variables were analyzed using regression with latent variables (LISREL 8). The conceptual distinction between measures was checked with confirmatory factor analysis (CFA). In the CFA model, the inclusion of the outgroup in the self was measured by the two respective indicators; for each of the remaining variables, two parcels were created, following the item-to-construct balance method proposed by Little, Cunningham, Shahar, and Widaman (2002; see also Little, 2013).[2] The nine-factor model showed a good fit: $\chi^2(99) = 136.17$, $p = .008$; RMSEA = .033; SRMR = .039; CFI = .99 (for RMSEA, SRMR, and CFI, we followed the rules of thumb suggested by Hu & Bentler, 1999; for chi-square, the χ^2/df ratio was smaller than 2). Loadings were all significant ($p < .001$) and higher than .64. Notably, correlations between latent variables, which ranged between –.71 (anxiety and trust) and .71 (IOS and trust), were all lower than | 1.00 | (95% confidence interval), showing that the variables included in the model were all distinct constructs (correlations between indicators are reported in the Appendix).

Findings obtained by testing the regression model are reported in Figure 2. As it appears from the figure, cross-group friendships predicted the inclusion of the outgroup in the self, which, in turn, predicted outgroup humanization through the mediation of reduced anxiety and increased empathy and trust. The first-level mediator for extended contact was instead ingroup norms which was related to the outcome through the mediation of the three emotions (the path linking anxiety with outgroup humanization was marginally significant). To test mediation, we applied the bootstrap method (Preacher & Hayes, 2008); 2000 resamples were used. Bootstrapping results are reported in Table 1. The 95% bias-corrected and accelerated confidence intervals showed that the double mediation effects reported in Figure 2 were all significant (the confidence interval was, in fact, entirely over zero).



Note. Only significant parameters are represented (completely standardized solution). Curved paths denote correlations between variables. The goodness-of-fit indices for the model are: χ^2 (99) = 136.17, p = .008; RMSEA = .033; SRMR = .039; CFI = .99.
† p < .07. *p < .05. **p < .01. ***p < .001.

FIGURE 2
Structural equation model of the effects of cross-group friendships and extended contact on outgroup humanization, N = 251.

TABLE 1
Bootstrap point estimates and confidence intervals for the indirect effects

Indirect effect	Point estimate	95% (BCa) confidence interval
Cross-group friendships → IOS → anxiety → outgroup UH traits	.028	[.005, .242]
Cross-group friendships → IOS → empathy → outgroup UH traits	.013	[.004, .073]
Cross-group friendships → IOS → trust → outgroup UH traits	.093	[.003, .857]
Extended contact → ingroup norms → anxiety → outgroup UH traits	.028	[.006, .204]
Extended contact → ingroup norms → empathy → outgroup UH traits	.029	[.007, .173]
Extended contact → ingroup norms → trust → outgroup UH traits	.074	[.028, .390]

Note. BCa = bias-corrected and accelerated; IOS = inclusion of the outgroup in the self; UH = uniquely human traits.

We tested two alternative models. In one model, the first-level mediators were the three emotions while the second-level mediators were IOS, ingroup norms, and outgroup norms. Findings showed that this model offers a poor representation of the relationships between friendships and outgroup humanization. In fact, direct friendships, IOS, ingroup and outgroup norms did not have any relationship (direct or indirect) with the outcome. This means that the relationship between direct friendship, IOS, and ingroup norms with outgroup humanization (Figure 2) only appears if emotions are used as the proximal predictors of humanization (in this alternative model, the link between extended contact and outgroup humanness was only mediated by trust).[3]

In the second alternative model, we tested the original proposal by Wright et al. (1997), in which anxiety, IOS, and the two normative factors mediate the relationship between extended contact and the outcome (controlling for cross-group friendships; see Turner et al., 2008). Also this model offers a poor representation of the associations between friendships (direct and indirect) and outgroup humanization; in fact, the only variable significantly related to humanization was reduced anxiety. Thus, this model does not explain the association between friendships and outgroup humanization, and does not replicate the extended contact/reduced anxiety relation which is generally found in literature (see Gómez et al., 2011; Turner et al., 2008).[4]

Of the tested models the relation between both direct and indirect friendships and outgroup humanization is only explained by our model, which also shows the key role played by the mediators conceptualized by Wright and colleagues (Davies et al., 2013; Wright et al., 1997), with the exception of outgroup norms.

DISCUSSION

The current study demonstrates that direct and indirect cross-group friendships are related to a greater attribution of uniquely human traits to the outgroup. This is the first time that

the relationship between friendships and outgroup humanization has been investigated and revealed. This study, thus, improves the existing literature in the field by showing that, besides direct (e.g., Brown et al., 2007) and imagined contact (see Vezzali, Capozza, et al., 2012), also cross-group and extended friendships may be related to improved humanization. The mediators intervening in this association are of a different nature: normative, emotional, related to self-identity (IOS).

Of the first-level mediators analyzed (Figure 1), only IOS plays a significant role for direct friendships, and only ingroup norms for extended contact (Figure 2). The finding concerning IOS replicates those obtained by Turner et al. (2008, Studies 1 and 2). The one concerning ingroup norms is instead unusual, if we consider the studies in which all the mediators conceptualized by Wright et al. (1997) are simultaneously evaluated (see Gómez et al., 2011; Turner et al., 2008). An explanation for the nonsignificant effect of extended contact on outgroup norms can be found in the characteristics of the intergroup context analyzed. Northerners represent a higher status group which perceives as stable its socio-economic superiority. For Northerners, Southern attitudes toward their group are not so important. This Northern perception may be accentuated in the current study, because the survey was performed in the North where the dominant norms are those of the ingroup. Outgroup norms could become more influential if the search was conducted in South Italy, namely in the context of the outgroup. It is worth noting that Gómez et al. (2011) have found that the relationship between extended contact and outgroup norms is weaker for higher-status than lower-status groups.

For IOS, its nonsignificant relation with extended contact may depend on the fact that, in the cognitive unit, composed by the ingroup member and his/her outgroup friend (Sedikides et al., 1993), the central role is played by the ingroup member — who suggests the ingroup norms — while the outgroup friend plays a peripheral role. It could be interesting to see what would happen to the extended contact/IOS relationship if data were collected in the Southern context.

In the studies in which all the mediators, proposed by Wright et al. (1997) for extended contact, are simultaneously tested (see Gómez et al., 2011; Turner et al., 2008), intergroup anxiety is analyzed at the same level as IOS, ingroup norms, and outgroup norms. In our model, in contrast, we have conceptualized anxiety as a second-level mediator, together with empathy and trust, assuming that emotions are the proximal antecedent of attitudes, perceptions and behaviors (see also Capozza et al., 2013). Findings obtained from our model not only replicate the usual association of direct and indirect friendships with reduced anxiety, they also offer potential explanations for this association. Direct cross-group friendships are related to lower perceived anxiety through increased IOS, while extended contact is related to lower anxiety through the perception of more favorable ingroup norms. It is worthwhile to note that the relation between direct and indirect friendships and anxiety is nonsignificant if anxiety is used as a first-level mediator (see the alternative models tested). Overall, our data demonstrate the key role played by emotions in the association between friendships and outgroup humanization. They also show, for the first time, that affective and cognitive factors work in a sequential order with affective factors following cognitive factors (see the first alternative model).

One limitation of this study is its correlational design which does not allow us to draw conclusions about the causal relationships between the variables at play. Future research is needed based on longitudinal designs (see, e.g., the impressive three-wave study by Swart, Hewstone, Christ, & Voci, 2011), or based on experimental designs. Regarding these latter designs,

the relation between cross-group friendships and outgroup humanization could be studied by using, for instance, the Fast Friends technique (Aron, Melinat, Aron, Vallone, & Bator, 1997), in which intergroup partners, taking turns in answering questions, can reach high levels of self-disclosure (for similar friendship generating techniques, see Page-Gould et al., 2008). For extended contact, experimental manipulations of indirect friendships can be drawn from the work of Wout, Murphy, and Steele (2010), and Wright and his colleagues (1997).

Another limitation of this research is that only one intergroup context has been analyzed. It is possible that the effect of the hypothesized mediators is different when the outgroups are ethnic, religious, racial or, instead, stigmatized groups, such as homosexuals, obese people, people with disabilities. For these latter groups, IOS could be a reliable mediator for extended contact, in which the inclusion of the outgroup member in the self is indirect, being a consequence of the simultaneous assimilation of the ingroup member. It could not be a reliable mediator for direct friendships, in which the member of the stigmatized group should be directly included in the self (for a study exploring this possibility, see Capozza et al., in press).

From a practical point of view, promoting intergroup friendships in schools and organizations can be related to stronger attributions of uniquely human traits to the outgroup with the consequence of a lower intergroup discrimination, and more frequent episodes of altruism and cooperation both in a specific setting and in society at large.

NOTES

1. The order of Authors is alphabetic, the Authors having equally contributed to this work.
2. For each construct, we estimated the item loadings by specifying a one-factor measurement model. Then, we organized loadings in decreasing order. The two items with the highest loadings (item 1 and item 2) were used to anchor the parcels, and the next two items were added to the parcels in an inverted order. If a construct had more than four items, this procedure was continued by placing higher loaded items with lower loaded parcels. When there were three items, item 3 was aggregated with item 1.
3. The goodness-of-fit indexes for this model are equal to those of the model of Figure 2 because, in both cases, all the paths — direct and indirect — between the latent constructs have been estimated. Therefore, the superiority of a model to the other can only be based on theoretical considerations and existing evidence.
4. This alternative model absorbs 23% of the variance of the outcome variable versus 33% for the model in Figure 2.

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APPENDIX

Standard deviations and zero-order correlations between manifest indicators of latent variables (N = 251)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Cross-group friendships 1	–																	
2. Cross-group friendships 2	.61***	–																
3. Extended contact 1	.53***	.38***	–															
4. Extended contact 2	.54***	.41***	.66***	–														
5. IOS 1	.16*	.18**	.19**	.15*	–													
6. IOS 2	.32***	.39***	.32***	.29***	.60***	–												
7. Ingroup norms 1	.16**	.20**	.22***	.25***	.16**	.22***	–											
8. Ingroup norms 2	.19**	.28***	.32***	.36***	.20***	.30***	.70***	–										
9. Outgroup norms 1	.25***	.27***	.18**	.27***	.21***	.35***	.41***	.45***	–									
10. Outgroup norms 2	.22***	.23***	.11	.19**	.22***	.29***	.39***	.34***	.78***	–								
11. Anxiety 1	–.15*	–.29***	–.16**	–.18**	–.34***	–.45***	–.30***	–.30***	–.36***	–.25***	–							
12. Anxiety 2	–.13*	–.28***	–.16**	–.16**	–.36***	-.46***	–.32***	–.31***	–.32***	–.22***	.94***	–						
13. Empathy 1	.17**	.26***	.23***	.25***	.42***	.50***	.26***	.34***	.33***	.23***	–.53***	–.53***	–					
14. Empathy 2	.24***	.35***	.27***	.26***	.44***	.52***	.27***	.34***	.34***	.23***	–.51***	–.53***	.88***	–				
15. Trust 1	.19**	.28***	.25***	.28***	.40***	.57***	.38***	.40***	.34***	.25***	–.57***	–.63***	.49***	.51***	–			
16. Trust 2	.21***	.32***	.29***	.31***	.42***	.56***	.38***	.37***	.35***	.22***	–.59***	–.62***	.56***	.59***	.77***	–		
17. Outgroup humanization 1	.02	.18**	.06	.03	.24***	.28***	.19**	.11	.18**	.12	–.40***	–.44***	.40***	.40***	.39***	.41***	–	
18. Outgroup humanization 2	.13*	.13*	.05	.04	.20**	.16*	.09	.01	.10	.06	–.28***	–.29***	.27***	.27***	.28***	.29***	.60***	–
SD	0.97	1.01	0.92	0.94	1.65	1.50	1.07	1.29	1.08	1.12	0.98	1.04	1.32	1.30	1.25	1.38	1.17	1.13

Note. IOS = inclusion of the outgroup in the self; outgroup humanization is a composite score concerning the uniquely human traits; 1 and 2 are the two manifest indicators of each latent construct. *p < .05. **p < .01. ***p < .001.