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# INTERGROUP CONTACT AS A STRATEGY TO IMPROVE HUMANNESS ATTRIBUTIONS: A REVIEW OF STUDIES

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Over the past 15 years, outgroup dehumanization has been a topic of great interest in the field of social psychology. Researchers have in particular investigated the different forms of dehumanization and its detrimental consequences; however, little attention has been paid to the problem of how dehumanizing perceptions can be reduced. In this article, we review the studies that investigate whether intergroup contact may be related to more favorable humanity attributions. Different forms of contact have been considered: direct and imagined contact, cross-group friendships, and extended contact. Evidence regarding direct and imagined contact allows us to conclude that contact attenuates infrahumanization and favors outgroup humanization. For direct and indirect cross-group friendships, in contrast, the association between contact and ameliorated humanity attributions is only supported by correlational evidence. We conclude with a discussion of the practical implications of the studies reviewed, and propose directions for future research.

In the early 2000s, Leyens and colleagues (2000, 2001) had a brilliant intuition: people typically tend to assign a lower human status to outgroups than ingroups. Actually, this unconscious bias characterizes many of our daily interactions, and is generally independent of the presence of realistic conflicts between groups (see Leyens, Demoulin, Vaes, Gaunt, & Paladino, 2007). The intuition of Leyens and colleagues, supported by numerous studies, has promoted new theories and lines of research (for a review, see Haslam & Loughnan, 2014). However, as noted by Haslam and Loughnan, although research has widely documented the existence of dehumanizing perceptions, little attention has been paid to the problem of how dehumanization can be reduced. The most investigated intervention has been intergroup contact which, after 60 years of research, has emerged as the most effective strategy for ameliorating intergroup relations (see Pettigrew &

Tropp, 2006, 2011). In this article, we review the studies that investigate the relationship between different forms of contact and outgroup humanization, and propose directions for future research.

## INFRAHUMANIZATION AND DEHUMANIZATION

In their studies, Leyens and colleagues (2007) consistently found an infrahumanization effect: people tend to assign a greater number of uniquely human (secondary) emotions (e.g., pride and regret) to their ingroup than the outgroup. Primary emotions, that humans share with animals (e.g., joy and rage), are, in contrast, not differently ascribed to the two groups. This subtle bias is also found when uniquely human (e.g., rationality, consciousness) and non-uniquely human traits (e.g., instinct, impulse) — instead of emotions — are used (see, e.g., Capozza, Falvo, Favara, & Trifiletti, 2013; Capozza, Trifiletti, Vezzali, & Favara, 2013; Costello & Hodson, 2010) or when the uniquely human meaning of ingroup and outgroup traits is evaluated (Vaes & Paladino, 2010). According to the dual model of dehumanization (Haslam, 2006; see also Halsam & Loughnan, 2014), however, outgroups are not only assigned a lower human status, they can also be dehumanized. When outgroups are denied the unique features of human species they may be likened to animals; the denial of the typical features of human nature — emotionality, vitality, and warmth — should in contrast lead to a mechanistic dehumanization. Research has found evidence for both types of dehumanization (for animalistic dehumanization, see Capozza, Andrighetto, Di Bernardo, & Falvo, 2012; Goff, Eberhardt, Williams, & Jackson, 2008; for mechanistic dehumanization, see Loughnan, Haslam, & Kashima, 2009). All the studies reviewed in the present work focus on human uniqueness and investigate whether intergroup contact can be related to a greater attribution of uniquely human traits to outgroups. Studies that analyze the association between positive contact and lower mechanistic dehumanization do not exist.

The need for strategies capable of mitigating outgroup infrahumanization and dehumanization emerges from the consequences of these biases. It has been found, for instance, that infrahumanization favors aggression, discrimination, and violence (see Greitemeyer & McLatchie, 2011; Pereira, Vala, & Leyens, 2009; Viki, Osgood, & Phillips, 2013; Waytz & Epley, 2012). Infrahumanization may also restrain helping behaviors toward the outgroup (Cuddy, Rock, & Norton, 2007) and hinder intergroup forgiveness (Wohl, Hornsey, & Bennett, 2012). In the field of gender relationships, women dehumanization is related to men's proclivity to sexual harassment and rape (Rudman & Mescher, 2012). In the U.S. society, the implicit association between Blacks and apes increases the endorsement of violence against Black suspects (Goff et al., 2008). Finally, in medical contexts infrahumanization of patients may be unconsciously used by health workers to cope with suffering and psychophysical strain (see Trifiletti, Di Bernardo, Falvo, & Capozza, 2014; Vaes & Muratore, 2013). Thus, infrahumanization and dehumanization emerge in different intergroup domains, and, although largely unconscious, they may affect overt behaviors.

## DIRECT CONTACT AND HUMANITY ATTRIBUTIONS

The first study investigating the relationship between contact and attenuated outgroup infrahumanization was performed by Brown, Eller, Leeds, and Stace (2007). Participants were stu-

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dents of a British state secondary school; the outgroup was represented by students of a private school in the same town. In this study, which had a longitudinal design, both the amount and the quality of direct contact were measured. Humanity attributions were assessed by using primary and secondary emotions. Infrahumanization effects were found for positive emotions, namely a greater number of positive secondary emotions was assigned to the ingroup than the outgroup. The ingroup/outgroup difference was, in contrast, nonsignificant for primary emotions. An infrahumanization index was created, that is, the difference between the number of positive secondary emotions assigned to the ingroup and the number of positive secondary emotions assigned to the outgroup. Findings showed that quantity (but not quality) of contact at Time 1 attenuated infrahumanization at Time 2, whereas the path from infrahumanization (Time 1) to contact (Time 2) was not significant. Thus, intergroup contact had the strength of reducing infrahumanization (all the studies reviewed are reported in Table 1).

We now turn to a different social context, that is, the relationship between the Catholic and the Protestant group in Northern Ireland. Although the Northern Irish peace process has met with success, these groups still live segregated residentially, in friendships, and within the educational system. Tam and colleagues (2008; see also Tam et al., 2007), examining university students belonging to the two groups, found reliable infrahumanization effects; in fact, more secondary emotions were assigned to the ingroup than the outgroup. Infrahumanization is, thus, a feature of sectarianism. Most importantly, path analysis showed that intergroup contact, measured as the product between quantity and quality of contact experiences, was negatively related to the differential attribution of secondary emotions.

But, why is contact effective in increasing outgroup humanization? In two surveys, performed considering different intergroup contexts, Capozza and colleagues (Capozza, Trifiletti, et al., 2013) tested the effects of cognitive and emotional mediators. In one study (Study 1), the intergroup relation that was investigated was between Italians and immigrants (participants were Italians). In the other study (Study 2), the authors focused on two Italian regional groups, namely Northern and Southern Italians (respondents were Northern Italians); between these groups there is a constant competition for economic reasons. Humanness perceptions were measured by using uniquely human (e.g., rationality, morality) and non-uniquely human (e.g., instinct, impulse) traits. In both studies, infrahumanization effects were revealed; furthermore, findings obtained from structural equation modeling showed that the association between contact (quality of contact) and outgroup humanization was mediated by the reduced salience of intercategory boundaries and increased salience of a common ingroup identity (Gaertner & Dovidio, 2000, 2012).[1] These group representations were, in turn, associated with more favorable humanity perceptions through the mediation of decreased anxiety and increased empathy toward the outgroup. Thus, crucial mediators of the contact/outgroup humanization link are the perception of common identities, a greater propensity to take the perspective of outgroup members, and lower feelings of intergroup anxiety.

A variable that is closely linked to intergroup anxiety is the perception that outgroup members can threaten ingroup's values and material goods (Stephan & Stephan, 1985). Still considering the relationship between Northern and Southern Italians (Study 1) and between Italians and immigrants (Study 2), Capozza and colleagues (Capozza, Trifiletti, Visintin, & Vezzali, 2014) investigated the mediation effect of collective realistic and collective symbolic threat (see the intergroup threat theory; Stephan, Ybarra, & Morrison, 2009). Collective realistic threat refers to concerns about the physical and economic well-being of one's group. Collective symbolic threat, in con-

trast, refers to concerns about the integrity of the ingroup's cultural values, beliefs, religion, and ideologies. An infrahumanization measure (i.e., the difference between the ingroup and the outgroup on uniquely human traits) was used as the outcome in structural equation models. Findings showed that reduced threat perceptions mediated the relationship between contact and lower outgroup infrahumanization, replicating the findings by Pettigrew, Wagner, and Christ (2010; see also Schlueter & Scheepers, 2010) in studies in which prejudice was the outcome. Realistic threat was the mediator for the relationship between Northern and Southern Italians, likely because these two groups are rather similar for values, beliefs, and traditions. Both types of threat were, in contrast, significant mediators when the Italians/immigrants relationship was at stake.

All the literature reviewed so far regards cross-sectional studies, with the exception of the longitudinal research by Brown et al. (2007). In an experimental study, Capozza and colleagues (Capozza, Di Bernardo, & Falvo, 2013) manipulated contact by using an approach training technique (for this technique, see Kawakami, Phills, Steele, & Dovidio, 2007; Phills, Kawakami, Tabi, Nadolny, & Inzlicht, 2011). The outgroup was represented by Moroccans; participants were Italian university students. In the Moroccan approach (contact) condition, participants were instructed to repeatedly bring a manikin (representing the self) close to typical outgroup faces shown on the center of a computer screen (for the manikin task, see Krieglmeyer & Deutsch, 2010; Woud, Maas, Becker, & Rinck, 2013). In one control condition, participants were asked to bring the manikin close to furniture exemplars; in a second control condition, they had to perform a neutral movement, namely to move the manikin sideways with respect to the outgroup faces. Findings confirmed the hypothesized causal effect from contact to outgroup humanization; in fact, the attribution of uniquely human traits was higher in the contact than control conditions.

Considering other types of contact, it is not surprising that cross-group friendships are related to stronger attributions of uniquely human traits. Therefore, we now review the studies that concern the association between direct and indirect cross-group friendships (extended contact) and humanity attributions. As to cross-group friendships, they actually represent direct contact. However, because cross-group friendships are generally considered a special, particularly powerful type of face-to-face contact, they deserve to be analyzed separately from direct contact. For extended contact, it has been conceptualized as the knowledge that an ingrouper has a close relationship with outgroup members (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997; for reviews, see Turner, Hewstone, Voci, Paolini, & Christ, 2007; Vezzali & Giovannini, 2013).

CROSS-GROUP FRIENDSHIP, EXTENDED CONTACT, AND HUMANNESS ATTRIBUTIONS

The first study linking extended contact to outgroup humanization was performed by Andrighetto, Mari, Volpato, and Behluli (2012). The research context was Kosovo, a region in former Yugoslavia that became independent from Serbia in 2008, after years of reciprocal violences between the Albanian and Serbian communities. In Kosovo, these two groups currently live segregated, and the attribution of a lower human status to the other group may serve the function of explaining the injuries suffered by one's group. Participants were Kosovar-Albanian high-school students, recruited for the study in 2009. Extended contact was measured as the product between quantity ("How many members of your family know Serbian people?") and quality of indirect contact ("In your opinion, is the contact that members of your family have with Serbians pleasant

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or unpleasant?"). Infrahumanization was measured as the difference between the ingroup and the outgroup with respect to secondary emotions. As predicted, indirect cross-group contact was related to reduced outgroup infrahumanization that, in turn, was related to reduced competitive victimhood, namely the belief that the ingroup had suffered more than the outgroup (Noor, Shnabel, Halabi, & Nadler, 2012).

But why are indirect acquaintances or indirect friendships associated with improved humanity perceptions? In a first attempt to solve this problem, Vezzali and colleagues (Vezzali, Hewstone, Giovannini, Capozza, & Trifiletti, 2014) tested a model in which empathy mediated the relationship between extended contact and outgroup humanization. Participants were Italian and immigrant children who attended the third, fourth, or fifth grade. Humanness perceptions were assessed considering the attribution of uniquely human emotions to the outgroup. Findings supported the expected mediation effect; however the extended contact → empathy → outgroup humanization chain was only significant for participants with few direct friendships with outgroup members. Thus, in this study, direct friendships moderated the relationship between extended contact and outgroup humanization.

Capozza, Falvo, et al. (2013) investigated further mediators. These authors proposed a model in which the following constructs were first-level mediators of the relationship between friendships (both direct and indirect) and outgroup humanization: the IOS (inclusion of the outgroup in the self) mechanism (Aron et al., 2004), ingroup norms, and outgroup norms (Wright et al., 1997; see also Davies, Wright, Aron, & Comeau, 2013). The inclusion of the outgroup in the self is an intimacy-related mechanism. When we develop feelings of closeness toward another person, the image of the self overlaps with that of the other person; if our friend is an outgroup member, the inclusion process is generalized to the outgroup as a whole. In the case of extended contact, the inclusion implies a transitive process: from the incorporation of the ingroup friend, to that of his/her outgroup partner, to the incorporation of the whole outgroup (for the relationship between direct and indirect cross-group friendships and IOS, see, e.g., Turner, Hewstone, Voci, & Vonofakou, 2008; Vezzali, Stathi, & Giovannini, 2012).

As to ingroup and outgroup norms, cross-group friendships — direct and indirect — may favor the perception that the ingroup is favorable to the outgroup and the outgroup supports favorable norms toward the ingroup (for the relationship between direct or indirect cross-group friendships and ingroup or outgroup norms, see, e.g., De Tezanos-Pinto, Bratt, & Brown, 2010; Feddes, Noack, & Rutland, 2009; Turner et al., 2008). In Capozza, Falvo, et al.'s (2013) model, the relationship between IOS, ingroup norms, outgroup norms, and improved humanity perceptions is mediated by empathy, trust, and reduced anxiety, which are conceptualized as the most proximal predictors of outgroup humanization.

This double mediation model was tested in a survey in which the relationship between Northern and Southern Italians was examined (participants were Northern university students). The attribution of uniquely human traits to the outgroup was used as the outcome in the structural equation models. Capozza, Falvo, et al. (2013) found that, for direct intergroup friendships, the key first-level mediator was the inclusion of the outgroup in the self, whereas, for indirect friendships, it was the understanding that the ingroup supports positive norms toward the outgroup. Ingroup norms and the IOS mechanism were, in turn, related to outgroup humanization through the mediation of improved empathy and trust and reduced anxiety toward the outgroup. Thus, direct cross-group friendships seem to be related to outgroup humanization through a process in which

a core step is the incorporation of the outgroup in the self; in the case of indirect friendships, instead, the key step in outgroup humanization is the inference that one's group is favorable to the outgroup.

The same model was tested with regard to the relationship between heterosexuals and homosexuals (Capozza, Falvo, Trifiletti, & Pagani, 2014). Participants were heterosexual university students. In the case of this outgroup, only indirect cross-group friendships were associated with ameliorated humanity attributions to the outgroup. The key intermediate variable in the relationship between indirect friendships and improved humanity attributions was the IOS process, which, in turn, was associated with outgroup humanization through the mediation of decreased anxiety.[2] Likely, it is not easy to directly include in the self individuals who are sexually deviant. This inclusion seems to be possible only if the sexual integrity of the self is protected by the simultaneous inclusion of a non-deviant person (the heterosexual friend who has a homosexual friend).

Thus, the IOS mechanism, ingroup norms favorable to the outgroup, outgroup norms favorable to the ingroup, and intergroup emotions seem to be crucial factors in the outgroup humanization process when cross-group friendships are at play. Furthermore, for some intergroup settings, only indirect forms of contact seem to be effective. We now turn to imagined contact (see Crisp & Turner, 2009, 2012), another form of indirect contact whose effect on outgroup humanization has been recently investigated.

IMAGINED CONTACT AND HUMANNESS ATTRIBUTIONS

Recent research has demonstrated that simply mentally simulating an interaction with an outgroup member can improve intergroup attitudes (for reviews, see Crisp & Turner, 2009, 2012; Vezzali, Crisp, Stathi, & Giovannini, 2013; for a meta-analysis, see Miles & Crisp, 2014). But can imagined contact favor outgroup humanization?

Capozza and colleagues (Capozza, Falvo, & Di Bernardo, 2014; Falvo, Capozza, Hichy, & Di Sipio, 2014) investigated the dehumanizing perceptions of stigmatized groups, namely, the homeless and individuals with intellectual disabilities. They found that imagined contact increased the attribution of uniquely human traits to the homeless (Capozza, Falvo, & Di Bernardo, 2014) and reduced the extent to which the disabled were perceived as characterized more by non-uniquely human than uniquely human emotions (Falvo et al., 2014). The result regarding the homeless is particularly interesting because the dehumanization of this group is rather strong: Harris and Fiske (2006), in fact, found that images of homeless persons do not recruit the social cognition regions of the brain, in particular the medial prefrontal cortex.

But, what are the processes elicited by imagined contact? In the unique study on this question, Vezzali, Capozza, Stathi, and Giovannini (2012) found that the association between imagined contact and outgroup humanization was mediated by greater trust toward the outgroup. Thus, once again outgroup trust turns out to be a significant mediator of the relationship between contact and improved humanity attributions (see Capozza, Falvo, et al., 2013; Capozza, Falvo, Trifiletti, et al., 2014). In Vezzali et al.'s study, participants were Italian fourth-graders, and immigrants were the outgroup (Table 1).

PRACTICAL IMPLICATIONS OF THE STUDIES REVIEWED

All the research reviewed shows that intergroup contact is associated with improved humanity attributions to outgroups. This finding is robust, having been obtained from studies performed with different research designs, different types of outgroups, and different measures of humanness perceptions. Thus, the humanity bias and its detrimental effects may be attenuated by favoring face-to-face encounters with outgroup members or — much easier — by using interventions grounded on mental simulations of positive intergroup encounters.

To reduce infrahumanization, interventions fostering intergroup friendships can also be implemented. It is, however, worth noting that, while for direct and imagined contact the direction of causality — from contact to outgroup humanization — has been proved (see, e.g., Brown et al., 2007; Capozza, Di Bernardo, et al., 2013; Vezzali, Capozza, et al., 2012), for cross-group friendship, only correlational evidence supports its association with humanness perceptions.

Findings regarding the studies in which mediators were tested suggest that other strategies can be used to reduce the humanity bias. Capozza, Trifiletti, et al. (2013) found that outgroup humanization was positively associated with the salience of a common membership. In another investigation (Capozza, Falvo, et al., 2013), outgroup humanization was related to the perception of positive ingroup norms toward the outgroup. In other studies (Capozza, Trifiletti, et al., 2014), a link was revealed between lower infrahumanization and lower perceptions of outgroup threat. Thus, interventions aimed at weakening the humanity bias could try to enhance the perception that the ingroup and the outgroup are included in common groups. In this regard, research has highlighted that this perception is favored by cooperation and the discovery of similarities between one's group and the other group (see, e.g., Gaertner et al., 2000). For ingroup norms, authorities should support favorable attitudes toward the outgroup in different social settings. With regard to threat perceptions, Stephan and colleagues (2009) have suggested that threat feelings may be toned down by making salient an external threat that involves both the ingroup and the menacing outgroup. It is worth noting that these recommendations have to be taken with caution because the relationship between the above factors and outgroup humanization is only supported by correlational evidence.

It is interesting to observe that factors like two-groups representations (Capozza, Trifiletti, et al., 2013), hostile ingroup norms (Capozza, Falvo, et al., 2013), and stronger perceptions of outgroup threat (Capozza, Trifiletti, et al., 2014) are associated with lower attributions of uniquely human traits to outgroups or stronger outgroup infrahumanization. Interestingly, in Mein Kampf, the book that spread the Nazi ideology, all these factors were present when Hitler talked about the Jews. In a content analysis of this book, Capozza and Volpato (2004) found that Jews were actively differentiated from the national and racial ingroup ("Jews are different from Germans," "They are the opposite of Aryans," and "Aryans are the opposite of Jews"). In addition, Jews were portrayed as a threat to Germans' material goods ("They control the finance and stock exchange," "They bury themselves in the art and universities"), and as a threat to Germans' ideologies (Jews are "International," "Bolshevik," "They share attitudes with Marxists"). Also the concept that Jews are a threat to one's groups' distinctiveness (optimal distinctiveness theory; Brewer, 2003) was repeatedly reported ("Jews bastardize the Whites," the "Germans," "They ape Aryans"). Finally, normative hostility was present: Jews are "Bastard" and "Wicked," "Deceiver" and "Exploiter," "Lacking in idealism" and "Intolerant" (see Figure 1 in Capozza & Volpato,

2004). All these associations justified Jews' animalistic dehumanization (they are "Parasites" and "Lice," and also "Vultures" and "Hyenas," "Polyps" and "Snakes"), which in turn justified the denial of human rights (see Bastian, Denson, & Haslam, 2013; Costello & Hodson, 2010, 2011) and physical annihilation (for the use of animal metaphors in describing groups, see Haslam, Loughnan, & Sun, 2011). Archive data thus support the relationships between constructs discovered in the reviewed studies.

## FUTURE RESEARCH DIRECTIONS

First of all, future research should support the hypothesized causal relationship between intimate forms of contact (direct and indirect cross-group friendships) and outgroup humanization by using experimental or longitudinal designs. Longitudinal designs should also be used to test the causal chain from contact to mediators to humanness attributions (for a rigorous test of mediation hypotheses, based on a longitudinal design, see Swart, Hewstone, Christ, & Voci, 2011).

Future research should also investigate other mediators, besides trust (Vezzali, Capozza, et al., 2012), to better understand the relationship between imagined contact and outgroup humanization. Likely, reduced anxiety and improved empathy are involved in this relationship as for direct contact (Capozza, Trifiletti, et al., 2013) and direct or indirect cross-group friendships (Capozza, Falvo, et al., 2013).

Another research question is whether intergroup contact is effective in reducing mechanistic forms of dehumanization (Haslam & Loughnan, 2014). We think it is. In fact, all the variables that are associated with direct contact and intergroup friendships — for instance, one-group representations, the IOS mechanism, improved empathy, and decreased anxiety — should be associated with the perception that the outgroup does not lack emotionality, vitality, and warmth. It would be interesting to start this line of research by considering groups included in the high-competence/low-warmth cell of the stereotype content model (Fiske, Cuddy, & Glick, 2007; see also Durante et al., 2013), for instance, entrepreneurs and the rich, which are conceived in a mechanistic manner (see Loughnan & Haslam, 2007).

Future research should also deepen the relationship between the emotions considered in the reviewed studies and outgroup humanization. One reason for this research is that the causal effect of emotions on outgroup humanization has never been demonstrated. Experimental and longitudinal studies are needed. With respect to empathy, an experimental procedure taken from Finlay and Stephan (2000) could be used. Several scenarios, supposedly written by members of a discriminated outgroup could be presented to participants. In the empathy condition, participants should be asked to read the scenarios imagining what emotions they would feel if they were in the writers' place.[3] In the control condition, observe-set instructions should be employed, namely participants should be asked to read the scenarios observing authors' behaviors and the structure of the language used. We predict that, if empathy improves humanness attributions, more secondary (human) emotions should be ascribed to the outgroup in the empathy than control condition. The mechanism involved in this attribution would be that of a projection of secondary emotions from the self to outgroup exemplars to the outgroup as a whole.

Future research should also investigate through what processes emotions (trust, empathy, and anxiety) are related to humanness attributions. In an intriguing experiment performed by Farmer,

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Mckay, and Tsakiris (2014), participants were asked to take part in a trust game in which the trustee either rewarded or betrayed participants' trust. Farmer et al. revealed that the faces of trustworthy partners were perceived as more similar to one's face than those of untrustworthy partners. Furthermore, reliable partners were viewed as more included in the self than unreliable ones (IOS scale; Aron, Aron, & Smollan, 1992). We, thus, propose that trust leads to outgroup humanization, and one explanation of this effect is that it favors the perception of similarities — even physical — between oneself and outgroup members. Interestingly, according to Farmer et al., the understanding of cooperative intentions works as a signal of genetic relatedness.

As to anxiety, it has been found (see Stephan, 2014) that it is related to negative outgroup stereotypes (Vezzali, Giovannini, & Capozza, 2010), a stronger perception of outgroup homogeneity (Swart et al., 2011), and weaker perceptions of similarities with outgroup members (Britt, Boniecki, Vescio, Biernat, & Brown, 1996). In future studies, these factors should be tested as mediators of the relationship between intergroup anxiety and humanness attributions.

CONCLUDING REMARKS

The analysis of mediators' effects leads us to observe that the potential processes connecting contact with lower infrahumanization are actually analogous to those connecting contact with lower ingroup bias and prejudice. However, although this correspondence exists, the humanity ingroup bias and the ingroup bias relying on attitudinal and stereotypic dimensions are distinct phenomena. In fact, dehumanizing perceptions have specific precursors, such as the belief that humans are different and superior to animals (Costello & Hodson, 2010). They have specific motivations: dehumanization of victims, for instance, serves to reduce self-censure, thereby allowing greater aggression toward the outgroup (Bandura, 1990). Humanness attributions and attitudes may be independent in affecting outgroup evaluations (see, e.g., Demoulin et al., 2009; Leyens et al., 2001). Notably, it may happen that dehumanizing perceptions, but not prejudice, predict discriminatory behaviors against the outgroup (see, Goff, Jackson, Di Leone, Culotta, & DiTomasso, 2014). As to the processes triggered by intergroup contact, future research will show whether specific mediators, such as a greater ability to read the mind of outgroup members, are involved in the relationship between contact and reduced infrahumanization (for measures of mentalization, see Kidd & Castano, 2013).

However, all the studies reviewed in the present article demonstrate that contact is associated with more favorable humanity attributions; therefore, they indicate a direction that can be followed to lessen the humanity bias. In this special issue, Hodson, Kteily, and Hoffarth (2014) suggest another possibility; relying on the interspecies model of prejudice (Hodson & Costello, 2012; see also Costello & Hodson, 2014), they propose that animalistic dehumanization can be reduced by reducing the human/animal hierarchy and divide. In our laboratory, we are now exploring whether humanity attributions to outgroups can be improved by manipulating secure attachment (Mikulincer & Shaver, 2007). The enhancement of this attachment orientation should improve humanity perceptions by reducing anxiety and increasing trust toward the outgroup (Mikulincer & Shaver, 2001). First results obtained seem promising. If human beings were helped to become more secure they would be more altruistic and less hostile, and would use infrahumanization less to justify their violence and discriminatory behaviors.

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TABLE 1

Studies showing the relationship between intergroup contact and humanness attributions to the outgroup

| Study | Ingroup of participants | Target outgroup | Measure of humanity perceptions |
|---|---|---|---|
| *Direct contact* | | | |
| Brown et al., 2007. L | Students of a British state secondary school | Students of a British private secondary school | Number of positive secondary emotions: ingroup – outgroup[a] |
| Capozza, Di Bernardo, et al., 2013. E | Italians (participants: Italian university students) | Moroccans | Attribution of uniquely human traits to the outgroup |
| Capozza, Trifiletti, et al., 2013, Study 1. C | Italians (participants: Italian inhabitants of a small town in central Italy) | Immigrants | Attribution of uniquely human traits to the outgroup |
| Capozza, Trifiletti, et al., 2013, Study 2. C | Northern Italians (participants: Northern university students) | Southern Italians | Attribution of uniquely human traits to the outgroup |
| Capozza, Trifiletti, et al., 2014, Study 1. C | Northern Italians (participants: Northern university students) | Southern Italians | Attribution of uniquely human traits: ingroup – outgroup |
| Capozza, Trifiletti, et al., 2014, Study 2. C | Italians (participants: Italian university students) | Immigrants | Attribution of uniquely human traits: ingroup – outgroup |
| Tam et al., 2008. C | Catholics and Protestants in Northern Ireland (participants: university students) | The opposite religious group | Number of secondary emotions: ingroup – outgroup |
| *Extended contact* | | | |
| Andrighetto et al., 2012. C | Kosovar Albanians in Kosovo (participants: Kosovar Albanian high-school students) | Serbian community in Kosovo | Attribution of secondary emotions: ingroup – outgroup |
| *Extended contact, and cross-group friendship as a moderator* | | | |
| Vezzali et al., 2013. C | Italians and immigrants (participants: children attending the third, fourth, or fifth grade) | Immigrants or Italians | Attribution of secondary emotions to the outgroup |
| *Cross-group friendship and extended contact* | | | |
| Capozza, Falvo, et al., 2013. C | Northern Italians (participants: Northern university students) | Southern Italians | Attribution of uniquely human traits to the outgroup |
| Capozza, Falvo, Trifiletti, et al., 2014. C | Heterosexuals (participants: heterosexual university students) | Homosexuals | Attribution of uniquely human traits to the outgroup |
| *Imagined contact* | | | |
| Capozza, Falvo, & Di Bernardo, 2014. E | Socially integrated people (participants: university students) | The homeless | Attribution of uniquely human traits to the outgroup |
| Falvo et al., 2014. LE | Non-disabled people (participants: university students and adults) | Individuals with intellectual disabilities | Number of primary emotions – number of secondary emotions (ascribed to the outgroup) |
| Vezzali, Capozza, et al., 2012. LE | Italians (participants: Italian fourth-graders) | Immigrants | Attribution of secondary emotions to the outgroup |

*Note:* C = correlational study; E = experimental study; L = longitudinal study; LE = longitudinal and experimental study; [a] = "ingroup ─ outgroup" means the difference between the ingroup and the outgroup score. "Attribution of emotions or traits" means that a 5-step or 7-step scale was used, measuring the extent to which the emotion or trait was perceived as associated with the target group.

NOTES

1. In the structural equation models, the outcome was the attribution of uniquely human traits to the outgroup.
2. Outgroup norms were the other first-level significant mediator.
3. These instructions evoke a type of empathy that has been called parallel empathy by Davis (1994) and imagine-self perspective by Batson and Ahmad (2009).

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