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Attachment orientations and humanity attributions to individuals with Intellectual and Developmental Disabilities

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Abstract

In this contribution, we explored whether secure attachment – operationalized as an individual difference variable – is positively associated with humanizing perceptions of individuals with IDD (intellectual and developmental disabilities). A cross-sectional study was performed. University students filled out a questionnaire including: a self-report scale of attachment orientations (secure, avoidant, and anxious); items assessing emotions toward individuals with IDD (anxiety, empathy, and trust); items measuring the attribution of uniquely human (e.g., reasoning, self-control) and non-uniquely human (e.g., instinct, impulsiveness) characteristics. Data were analyzed using ANOVA and the PROCESS macro to test mediation. Replicating previous research, findings highlighted that a lower human status was generally ascribed to

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people with disabilities. However, secure attachment was associated with both lower feelings of anxiety and higher attributions of uniquely human traits. No mediation effects of emotions were observed. Practical implications of findings were discussed. Interventions based on security priming should lead people to endorse humanizing evaluations of individuals with IDD, and to help them.

Keywords: Attachment orientations; Humanity attributions; Individuals with IDD; Humanization of individuals with IDD.

1. Introduction

In the present contribution, we refer to a study aimed to explore whether secure attachment orientation (Bowlby, 1969;1982; see also Mikulincer & Shaver, 2003; 2007a) is associated with humanizing perceptions of individuals with intellectual and developmental disabilities (IDD). Our study is not based on experimental manipulations of attachment (see the narrative reviews by Mikulincer & Shaver, 2007b; 2015), but considers attachment security as a chronic, dispositional variable. This study is novel because the relationship between attachment orientations and humanizing perceptions is investigated for the first time. Its practical implications consist of fostering the search for interventions to improve disabled people's well-being in different social settings.

1.1. Attitudes, perceptions, and behaviors toward individuals with IDD

Individuals with IDD are a stigmatized group, facing prejudice, negative attitudes, and negative stereotypes (Slevin & Sines, 1996; see also Crocker, Major, & Steele, 1998). These negative evaluations hinder acceptance and inclusion (e.g., Werner, Corrigan, Ditchman, & Sokol, 2012), and lead to avoidance (Pratt, 2010) and discriminatory treatments in medical and school contexts (for medical contexts, see Jahoda, Wilson, Stalker, & Cairney, 2010; Lewis & Stenfert-Kroese, 2010; for school settings, see Siperstein, Norins, Corbin, & Shriver, 2003; Siperstein, Parker, Norins, & Widaman, 2011). Individuals with IDD have been found to be teased in their neighborhood (Cooney, Jahoda, Gumley, & Knott, 2006).

What's more, individuals with IDD are denied a fully human status. In a study, carried out on a sample of adults (Falvo, Capozza, Hichy, & Di Sipio, 2014), individuals with intellectual disabilities were evaluated using secondary (e.g., hope and shame) and primary (e.g., pleasure and anger) emotions. The former, involving complex cognitive processes, are perceived as unique to the human species; the latter, in contrast, are perceived as common to animals and humans. Falvo and colleagues (2014) highlighted that people with disabilities are viewed as characterized more by primary than secondary emotions (for the use of emotions to assess humanity attributions, see the infrahumanization theory; Leyens, Rodriguez, Rodriguez, Gaunt, Paladino, Vaes *et al.*, 2001; see also Demoulin, Leyens, Paladino, Rodriguez, Rodriguez, & Dovidio, 2004; Leyens, Demoulin, Vaes,

Gaunt, & Paladino, 2007)[4]. The finding that individuals with IDD are perceived as not fully human was replicated by Capozza, Di Bernardo, Falvo, Vianello, and Calò (2016) who examined professional educators, working in day-care centers. These authors also observed that the attribution of non-uniquely human emotions was associated with automatic avoidance tendencies, while the attribution of uniquely human emotions was associated with automatic approach tendencies.

The association of humanizing/dehumanizing perceptions with approach/avoidance responses was observed when controlling for the effect of explicit and implicit attitudes toward people with disabilities. The attribution of a lower human status to people with IDD may therefore explain why they are typically ignored or excluded in society.

Researchers working in the field of humanity attributions have searched interventions to be used to limit dehumanization and its unfavorable outcomes (e.g., aggression toward the outgroup: Viki, Osgood, & Phillips, 2013; Goff, Jackson, Di Leone, Culotta, & DiTomasso, 2014; Kteily, Bruneau, Waytz, & Cotteril, 2015; lower inclinations to help outgroup members: Cuddy, Rock, & Norton, 2007; Andrighetto, Baldissarri, Lattanzio, Loughnan, & Volpato, 2014). Some studies have suggested that humanity perceptions can be improved by making a common ingroup salient (Gaunt, 2009; Capozza, Trifiletti, Vezzali, & Favara, 2013) or by attenuating the belief that humans are different and superior to animals (Hodson & Costello, 2012; Hodson, Kteily, & Hoffarth, 2014). In addition, several studies have shown that outgroup humanization may be achieved by shifting from a social categorization of outgroup members to their individualization (see Albarello & Rubini, 2012; Prati, Crisp, Meleady, & Rubini, 2016). However, the most widely investigated strategy has been intergroup contact (for a review, see Capozza, Falvo, Di Bernardo, Vezzali, & Visintin, 2014): outgroup humanization may be achieved through direct intergroup contact (e.g., Brown, Eller, Leeds, & Stace, 2007), imagined contact (e.g., Vezzali, Capozza, Stathi, & Giovannini, 2012; see also Falvo, Capozza, Di Bernardo, & Pagani, 2015; Capozza, Di Bernardo, & Falvo, 2017), and direct or indirect cross-group friendships (e.g., Capozza, Falvo, Favara, & Trifiletti, 2013).

[4]In the context of infrahumanization theory, the term "infrahumanization" is used to indicate that the outgroup is perceived as less human than the ingroup, namely, in operational terms, that a lower number of uniquely human emotions (or traits) is assigned to the outgroup than the ingroup. In the context of another basic theory of dehumanization (Haslam, 2006), other people or groups can not only be infrahumanized, they can also be dehumanized, namely, perceived as animals (animalistic dehumanization) or robots (mechanistic dehumanization).

Another strategy that can be implemented to improve humanity perceptions is enhancing individuals' sense of security (Mikulincer & Shaver, 2015). This intervention can make people less anxious and more empathetic toward outgroup members, hence, more capable of noticing their uniquely human attributes. In this study, we did not manipulate security, rather explored the relationship between secure attachment – a chronic personal disposition – and the inclination to humanize other people, including individuals with IDD.

1.2. Attachment security, outgroup evaluations, and outgroup humanizing perceptions

According to Bowlby (1969/1982), human beings are born with an innate attachment behavioral system which assures proximity to supportive others as a means for obtaining protection and safety. When attachment behaviors consistently achieve the goal of getting help and support, they provide a sense of security which promotes the exploration of the social and physical environment (Belsky, 1999).

Attachment researchers have outlined crucial individual differences in the functioning of the attachment system (see Bowlby, 1973; Ainsworth, Blehar, Waters, & Walls, 1978). In adulthood, these differences result from the internalization of particular attachment experiences over one's lifetime (Shaver & Mikulincer, 2002). Some individuals are qualified by a security orientation; they have formed positive mental representations of the self and other people, and typically use adaptive ways to affect regulation when dealing with stressful events. Avoidant individuals, conversely, are characterized by a sense of discomfort in close relationships, and tend to rely on themselves when in threatening situations; the self is perceived as positive while other people are viewed as unreliable. Finally, anxious attachment orientation is qualified by a constant need for approval and an excessive worry of being rejected; anxious individuals have doubts about their worthiness, while judging other people positively.

Research has shown that secure individuals appraise stressful events as less threatening than insecure (anxious and avoidant) individuals, and expect to be able to deal with such events effectively (e.g., Mikulincer & Florian, 1995). These adaptive reactions to stressors are a consequence of repeated interactions with caring and responsive attachment figures who helped in overcoming obstacles and managing stress.

Experiments, in which participants were exposed to security stimuli (security priming; see Mikulincer & Shaver, 2007b) provide information about the positive effects of attachment security. Concerning moods and emotions, it has been found that priming mental representations of caring attachment figures has calming effects in menacing situations (Mikulincer, Hirschberger, Nachmias, & Gillath, 2001; Mikulincer, Shaver, & Horesh, 2006). In addition, increasing attachment security enhances compassion (Mikulincer, Shaver, Gillath, & Nitzberg, 2005) and empathy toward suffering others, and leads to endorse self-transcendence values (Mikulincer, Gillath, Sapir-Lavid, Yaakobi, Arias, Tal-Aloni *et al.*, 2003). Thus, dispositional security, as opposed to the other orientations, and momentary exposure to security stimuli, as opposed to the exposure to neutral stimuli, are related to lower threat perceptions and more benevolent attitudes toward others.

Priming security leads to positive outcomes in intergroup contexts as well. In the first research program on this topic, Mikulincer and Shaver (2001) employed different priming techniques and different intergroup settings. They found that experimentally enhancing attachment security nullifies the differential evaluation of the ingroup and the outgroup and reduces the greater willingness to interact with an ingroup than an outgroup member. Mikulincer and Shaver observed, in addition, that secure attachment leads to a more favorable evaluation of the other group through the mediation of decreased anxiety and feelings of threat (intergroup threat theory; Stephan, Ybarra, & Rios Morrison, 2009). Interestingly, priming security also reduces aggressive behaviors toward the outgroup. Mikulincer and Shaver (2007b) discovered that participants (Jewish Israelis), whose sense of security had been enhanced, delivered an equal – and low – amount of hot sauce (an indicator of hostility in interpersonal settings) to an outgroup (Arab) and an ingroup (Jewish) confederate. Conversely, in the control condition, in which attachment figures were not primed, participants delivered a larger quantity of hot sauce to the outgroup confederate. Thus, security activation decreases intergroup bias and discrimination.

In a series of studies, Saleem and colleagues (Saleem, Prot, Cikara, Lam, Anderson, & Jelic, 2015) discovered that priming secure attachment lowers negative emotions and aggressive behaviors toward the outgroup. Finally, in the only research in which dehumanization was investigated, Zhang and colleagues (Zhang, Chan, Teng, & Zhang, 2015) found that enhancing interpersonal security (the feeling of being loved and cared in social

interactions) attenuated dehumanizing perceptions of members of a minority and, accordingly, the willingness to support harsh policies against them.

In the present study, we used attachment styles – secure, anxious, and avoidant – as dispositional variables, and investigated their relationships with humanizing/dehumanizing perceptions of individuals with IDD. We predicted that secure attachment would be related to humanization of individuals with IDD, and that this relationship would be mediated by emotional factors. Indeed, research has shown that secure individuals appraise stressful events – such as the encounter with mentally disadvantaged people – as less threatening than insecure individuals (e.g., Mikulincer & Florian, 1995). Furthermore, security priming has calming effects (Mikulincer *et al.*, 2001, 2006); in intergroup relationships, it mitigates the feelings of threat and anxiety evoked by the outgroup (Mikulincer & Shaver, 2001). Lower anxiety, associated with security, is expected to improve humanizing perceptions because, when individuals are less anxious, they act less upon stereotypes to describe outgroup members (for the effects of intergroup anxiety, see Paolini, Hewstone, Voci, Harwood, & Cairns, 2006). In addition, lower anxiety is expected to reduce avoidance and discrimination, and, thus, the use of dehumanization to justify these adverse behaviors.

Another potential emotional mediator of the relationship between secure attachment and outgroup humanizing perceptions is empathy. In previous research, performed in intergroup contexts, security has never been related to intergroup empathy. It has however been observed that exposing participants to security priming generally enhances empathy and compassion (Mikulincer *et al.*, 2005). We thus predicted that dispositional security would be associated with empathy which, allowing the discovery of uniquely human traits and emotions in individuals with IDD, may be associated with their humanization.

As a further emotional mediator, we chose trust. Also the relationship between secure attachment and intergroup trust has never been investigated (for research not involving intergroup relations, see Mikulincer, 1998). We predicted that secure attachment would be related to humanizing perceptions of individuals with IDD through the mediation of trust. Trusting individuals with IDD means, in fact, recognizing that they are endowed with some uniquely human features, such as the capacity of understanding other people's expectations, following their indications, and behaving morally (when disability is not too severe).

The relationship between secure attachment and intergroup emotions (a measure combining different emotions) was highlighted by Saleem and colleagues (2015). Capozza and colleagues (e.g., Capozza, Falvo *et al.*, 2013; Capozza, Trifiletti *et al.*, 2013) provided evidence for the association between intergroup emotions (anxiety, empathy and trust) and humanizing perceptions of outgroups.

In the present work, we have also considered the relationship between humanizing evaluations of individuals with IDD and anxious and avoidant orientations. In the context of intergroup relations, avoidant attachment has not been found to be associated with: attitudes and emotions toward the outgroup; friendly behaviors, such as the willingness to interact with outgroup members (Mikulincer & Shaver, 2001); aggressive behaviors, such as the assignment of hard tasks to solve (Saleem *et al.*, 2015) (for an exception, see Boccato, Capozza, Trifiletti, & Di Bernardo, 2015, Study 1). This lack of significant relations is probably due to the fact that avoidant individuals tend to distance themselves from sources of distress rather than adopt a hypervigilant attitude toward them. We thus did not hypothesize associations of avoidant attachment with emotions and humanizing or dehumanizing perceptions of individuals with IDD.

Anxious orientation has been observed to be associated with: negative emotions, the inclination to harm the outgroup, outgroup derogation, and low willingness to interact with its members (Mikulincer & Shaver, 2001, 2007b; Saleem *et al.*, 2015). These negative reactions are probably due to the fact that anxious individuals feel threatened in social interactions. In some studies, however, no association was found between anxious attachment and outgroup derogation (Boccato *et al.*, 2015, Study 1; Saleem *et al.*, 2015, Studies 1a and 2). Outgroup rejection may depend on the social consideration of the target group. When social norms are in favor of the outgroup, as presently happens for people with mental disabilities, anxious individuals may prefer not to express negative evaluations, even if they feel menaced by their diversity. We thus predicted that attachment anxiety would be related to anxiety feelings; however, we did not hypothesize associations between anxiety attachment and dehumanizing attributions to individuals with IDD.

Our hypotheses are thus the following:

– H1. Secure attachment should be related to humanizing perceptions of individuals with IDD through the mediation of lower feelings of anxiety and higher feelings of empathy and trust.

– H2. Anxious attachment should be related to anxiety feelings toward individuals with IDD. We did not hypothesize associations, direct or mediated, between this style and dehumanizing perceptions. For avoidance, we did not predict relationships with humanity attributions and emotions.

2. Overview of the study

To test the hypotheses, we conducted a cross-sectional study. We used a questionnaire, including measures of attachment orientations, intergroup emotions, humanity attributions.

To measure attachment orientations, we applied the Attachment Style Questionnaire (ASQ), constructed by Feeney, Noller and Hanrahan (1994), and adapted to the Italian context by Fossati and colleagues (Fossati, Feeney, Donati, Donini, Novella, Bagnato *et al.*, 2003). The ASQ assesses five dimensions of adult attachment: confidence in oneself and others (security); need for approval and preoccupation with relationships – two facets of dispositional anxiety; discomfort with closeness and relationships as secondary – two facets of dispositional avoidance. Although the 5-factor composition of the Attachment Style Questionnaire has been consistently supported (see Fossati *et al.*, 2003; Karantzas, Feeney, & Wilkinson, 2010), some data show that the relations between the five dimensions can be better explained by a higher-order 3-factor structure. In this hierarchical configuration, anxiety and avoidance are second-order constructs: anxiety is measured by need for approval and preoccupation with relationships; avoidance is measured by discomfort with closeness and relationships as secondary (Boccato *et al.*, 2015, Studies 1 and 3; see also Pedrazza & Boccato, 2010). We, thus, used the ASQ to measure three dimensions of dispositional attachment: security, anxiety, and avoidance.

To assess humanity attributions, we employed uniquely human (e.g., rationality, understanding) and non-uniquely human (e.g., instinct, impulsiveness) traits; the two types of traits, used in previous studies (Capozza, Trifiletti *et al.*, 2013), do not differ in valence: they are both evaluated as slightly positive. Participants rated two targets: individuals with intellectual disabilities and university students, the latter being an important ingroup for our sample (students attending university courses).To analyze humanity attributions, ANOVA was applied. Mediation hypotheses were tested using the PROCESS macro (Model 4; Hayes, 2013), which

implements bootstrap methods and confidence intervals to estimate the significance of indirect effects (see MacKinnon, 2008).

3. Method

3.1. Participants and procedure

Participants were 92 students (47 females), enrolled in several courses at a large university in North Italy (mean age 22.21 years; *SD* = 3.23). Participants, individually examined, were informed that the goal of the study was to discover how people relate to other people and groups. After consenting, they answered questions assessing attachment orientations, emotions toward individuals with IDD, and humanity perceptions. Finally, participants were fully debriefed and thanked for their participation.

3.2. Measures

The first measure in the questionnaire was the ASQ (Feeney *et al.*, 1994; Fossati *et al.*, 2003), which gauges the three adult attachment orientations. This scale includes 40 items. Eight items measure security, for instance: "I feel confident about relating to others"; 15 items measure anxiety, for instance: "It is important to me that others like me" (need for approval), "I worry a lot about my relationships" (preoccupation with relationships); 17 items measure avoidance, for instance: "I find it difficult to depend on others" (discomfort with closeness), "My relationships with others are generally superficial" (relationships as secondary). A 7-step scale was used, anchored by *completely disagree* and *completely agree*, with *neither agree nor disagree* as the midpoint. Cronbach's alphas were: .78, for security; .84, for anxiety; and .71, for avoidance. For each orientation, the mean of individual items was calculated to obtain a reliable composite score. Higher scores indicate greater endorsement of attachment orientations.

To assess anxiety toward the outgroup, participants were invited to imagine being alone with individuals with IDD (Stephan & Stephan, 1985). They had to indicate their feelings in this situation; 12 items were used denoting anxiety or calmness, such as: uncertain, calm (reverse coded), uneasy. The 7-step scale was anchored by *not at all* and *very much* ($\alpha = .90$). For empathy toward the outgroup, four items were used, for instance: "When you think about individuals with IDD, to what extent do you understand their feelings?", "Do you share their joys and sorrows?" ($\alpha =$

.86). For trust, four items were employed as well, for instance: "I trust individuals with IDD", "I think individuals with IDD are unreliable" (reverse coded) (α = .82). Items measuring empathy and trust were adapted from Capozza, Falvo and colleagues (2013; see also Capozza, Trifiletti *et al.*, 2013). On the 7-step scale, anchored by *not at all* and *very much* for all emotions, higher composite scores indicate higher levels of anxiety, empathy, and trust.

Humanity attributions were assessed using four uniquely human traits (e.g., reasoning, rationality) and four non-uniquely human traits (e.g., impulsiveness, instinct). In pretests, these traits had been evaluated either as unique attributes to the human species or as attributes humans share with animals. Furthermore, both sets of traits were rated as slightly positive on a positive/negative scale. Participants were asked to indicate whether each trait was a characteristic of individuals with IDD. A 7-step scale was used anchored by *absolutely false* (1) and *absolutely true* (7), with 4 expressing *neither true nor false*. Participants rated the two targets – individuals with IDD and university students – in this order. Alphas ranged from .78 to .86.

4. Results

4.1. Descriptive statistics and humanity attributions

Participants reported fairly high levels of secure attachment (M = 5.07; SD = .84) and lower levels of anxious (M = 3.98; SD = .91) and avoidant attachment (M = 3.18; SD = .68); the three means strongly correspond to those observed in previous studies conducted on university students (see Boccato *et al.*, 2015). With regard to emotions, participants experienced more intense feelings of trust (M = 5.12; SD = .97) than anxiety (M = 3.37; SD = .98) and empathy (M = 3.46; SD = 1.27) toward people with disabilities.

Humanity attributions were submitted to a target group (ingroup vs. outgroup) × traits (uniquely human vs. non-uniquely human) ANOVA with repeated measures on both factors. Only the interaction was significant ($F_{(1,91)}$ = 65.42; p < .001; η^2_p = .42). Simple effect tests showed that uniquely human traits were assigned more to university students (M = 5.08; SD = .93) than individuals with IDD (M = 4.16; SD = 1.13), while non-uniquely human traits were assigned more to individuals with IDD (M = 5.19; SD = 1.09) than university students (M = 4.40; SD = 1.02): $F_{(1,91)}$ = 42.58, p < .001, η^2_p = .32, for uniquely human traits; $F_{(1,91)}$ = 34.69, p <

.001, η^2_p = .28, for non-uniquely human traits. In addition, whereas students were perceived as characterized more by uniquely human than non-uniquely human traits, $F_{(1,91)}$ = 30.04, p < .001, η^2_p = .25, individuals with IDD were perceived as characterized more by traits that human share with animals than by uniquely human traits, $F_{(1,91)}$ = 37.91, p < .001, η^2_p = .29. Thus, a non-fully human status was ascribed to individuals with IDD. But, are attachment orientations related to the attribution of a lower human status?

4.2. Testing of mediation models

To test the mediation hypotheses (H1), the PROCESS macro (Hayes, 2013) was applied (Model 4). With this program, the significance of mediation effects is evaluated by implementing bootstrap methods and computing confidence intervals (CI) around the estimated indirect effects. In applying bootstrapping, we used 5,000 resamples and the 95% bias-corrected confidence interval.

Findings related to the model in which uniquely human traits were the outcome are reported in Figure 1. As expected, secure attachment was negatively associated with anxiety toward persons with IDD, and positively associated with humanizing perceptions of them. However, contrary to our hypotheses, secure attachment was not associated with empathy and trust (ts < 1.67; ps > .09). Furthermore, the three emotions did not mediate the relationship between security and outgroup humanization, as evidenced by the nonsignificance of indirect effects (the three confidence intervals around these effects included zero) [5]. As expected, avoidance was not related to the three emotions, ts < 1.82, ps > .07, and not even – directly, t < 1, or indirectly – to the attribution of uniquely human traits to individuals with IDD[6].

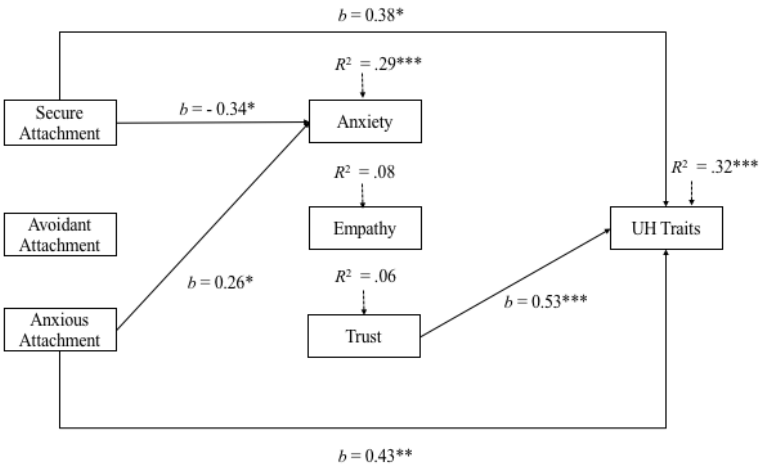
Anxious attachment, as predicted, was positively related to anxiety toward people with disabilities; however, anxiety did not mediate the relationship between this style and humanity attributions (the confidence interval for the indirect effect was [-.023, .139]). Unexpectedly, anxious orientation was directly linked to the attribution of a higher human status to disabled individuals (Fig. 1) (for empathy and trust the mediation effects

[5]The confidence intervals were: [-.148, .035], for anxiety; [-.047, .140], for empathy; and [-.088, .240], for trust.

[6]The confidence intervals for the indirect effects were: [-.013, .150], when the mediator was anxiety; [-.133, .044], when the mediator was empathy; and [-.432, .003], when the mediator was trust.

were nonsignificant; the CIs were: [-.042, .115], for empathy, and [-.045, .326], for trust).

Figure 1 – *The relationship between attachment orientations and the attribution of uniquely human (UH) traits to individuals with IDD: Intergroup emotions as mediators*



Note: Only significant (unstandardized) regression coefficients are reported.

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

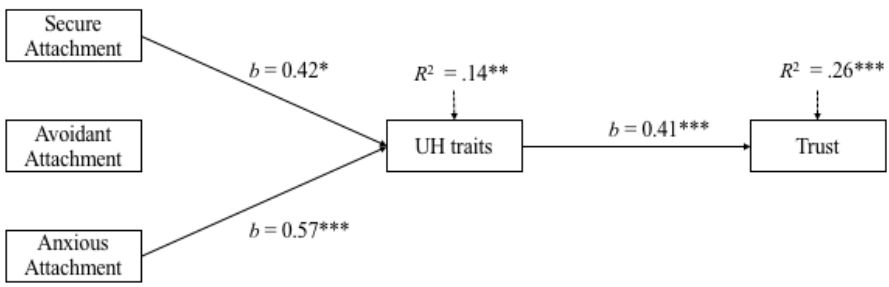
Correlations between the variables included in the model of Figure 1 are reported in the Appendix[7]. No significant associations were observed when non-uniquely human traits were used as the outcome. Their attribution was not related to the three emotions and not even – directly or indirectly – to the attachment orientations (*ts* < 1; all CIs of the indirect effects included zero).

Finally, we tested alternative models in which the attribution of uniquely human characteristics to individuals with IDD was the mediator and the three emotions were the outcome (three models). Significant mediation effects were observed only when trust was the outcome. Figure 2 illustrates that – like in the baseline model – both secure and anxious attachment were linked to the attribution of a higher human status to people with disabilities, which, in turn, was associated with stronger feelings of trust; CIs of the indirect effects were: [.033, .381], for security, and [.085, .471], for anxiety

[7]From the correlation matrix in the Appendix, it appears that the zero-order correlation between security and the attribution of uniquely human traits to people with disabilities is nonsignificant, while the direct effect of security is significant (Fig. 1). The nonsignificance of the zero-order correlation is due to suppression effects; security is in fact negatively correlated with anxious orientation which, in turn, is positively correlated with the attribution of uniquely human traits.

(the indirect effect was, of course, nonsignificant for avoidance [-.270, .073]).

Figure 2 – *The relationship between attachment orientations and trust toward individuals with IDD: The attribution of uniquely human (UH) traits as mediator*



Note: Only significant (unstandardized) regression coefficients are reported.

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

5. Discussion

In the present study, we observed that both secure and anxious attachment are positively associated with humanizing perceptions of individuals with IDD. Mediation effects of intergroup emotions were not observed. Thus, findings only partially support Hypothesis 1: the positive relationship between security and humanization of IDD individuals is not mediated by lower anxiety and greater empathy and trust toward these individuals. Likewise, findings only partially support Hypothesis 2, because attachment anxiety was positively related to anxiety feelings, as predicted, but also to humanizing perceptions of individuals with IDD. As expected, avoidance was not related to either emotions or humanity evaluations. Findings are complex; however, they evidence, for the first time, a reliable relationship between secure attachment and humanizing perceptions of individuals with IDD. Future research should investigate whether secure orientation is related to humanizing perceptions of other social categories and groups.

We may wonder why secure attachment is unrelated to empathy and trust toward individuals with IDD, at least in the baseline model (Fig. 1). For trust, an explanation is suggested by findings of the alternative model (Fig.

2) indicating that trust may be a consequence rather than a precursor of the attribution of uniquely human traits (e.g., reasoning capacity, morality, self-control). Probably, secure individuals, attending less to their vulnerabilities, are more able to shift their attention to other people and to identify their needs and qualities. The discovery of reasoning and self-control skills in people with disabilities (Fig. 2) may lead to the belief they are reliable, capable of meeting other people's demands. The relationship between security and empathy could be mediated, in contrast, by the perception that people with disabilities are warm and capable of emotional responsiveness (human nature traits; Haslam, 2006). Future research should include a measure of human nature traits to thoroughly analyze the relationship between attachment orientations and humanizing or dehumanizing perceptions.

The emotion of anxiety was not related to humanity attributions either in the baseline (Fig. 1) or in the alternative model. In previous studies, in contrast, lower anxiety mediated the association between experimentally activated security and more favorable outgroup evaluations (see Mikulincer & Shaver, 2001). Future studies should investigate the role played by anxiety, using – as outcome or mediator – other human characteristics, and not only focusing on uniquely human traits.

Intergroup relationships are regulated by both cognitive (e.g., outgroup stereotypes, humanity attributions) and emotional factors. Often, emotional factors precede cognitive ones, as observed when intergroup contact is investigated (see Pettigrew & Tropp, 2008; see also the meta-analysis by Vezzali, Hewstone, Capozza, Giovannini, & Wölfer, 2014). In our study, humanity attributions precede emotions (trust). This is probably because, when we observe individuals with IDD, we first look for the level of their humanity; the discovery of uniquely human or human nature traits leads to experience emotions like empathy and trust.

We observed an unexpected positive relationship between anxious attachment and the attribution of uniquely human traits to individuals with IDD. In previous studies, it was instead evidenced that attachment anxiety is positively related to outgroup derogation and low willingness to interact with outgroup members (Mikulincer & Shaver, 2001). In other studies, no correlation was found between attachment anxiety and the experience of negative emotions such as anger, disgust, and fear (Saleem *et al.*, 2015).We suppose that these inconsistent findings depend on the different outgroups across the studies (e.g., Arabs or Muslims, in the USA; students of a rival university; Palestinian Israelis in Israel). When perceived threat is high,

anxious attachment is probably associated with negative outgroup evaluations. However, social norms may be influential as well. When social norms are favorable to a group, as it currently happens for disabled persons, anxious individuals are likely to follow these norms, aiming to achieve other people's approval.

Avoidant attachment was not related to either emotions or humanity attributions. This finding is likely due to the fact that avoidant individuals tend to distance themselves from the sources of distress (Fraley, Garner, & Shaver, 2000), and from little-known environments and people (Green & Campbell, 2000; Wu & Yang, 2012; Boccato *et al.*, 2015).

The present study shows some limitations. First of all, its cross-sectional design does not allow a clear ordering of the causal variables. In future studies, the hypothesized mediation model should be tested using a three-wave longitudinal design. Further, we have operationalized humanity perceptions only using uniquely human and non-uniquely human traits. The assessment of human nature traits would have allowed us to discover further relationships between the variables at play. Finally, to test the hypothesis that attachment security is in general related to outgroup humanizing perceptions, future research should consider other groups, such as, immigrants, ethnical minorities, patients in healthcare settings.

Our findings have practical implications. They suggest that teachers in schools and supervisors in organizations should encourage the interaction between individuals with IDD and secure students or employees. Secure persons, in fact, endorse humanizing perceptions of individuals with IDD. These humanizing views should promote trust, approach responses (Capozza *et al.*, 2016), and helping behaviors, favoring the psychological growth of individuals with IDD.

Zhang and colleagues (2015) evidenced that priming interpersonal security attenuates outgroup dehumanization and the inclination to use harsh policies against its members. It has also been shown that everybody, regardless of attachment orientation, can benefit from the activation of mental representations of supportive figures or interactions. In addition, security priming can have long-term consequences (see the temporal effects of security priming; Mikulincer & Shaver, 2007b). Thus, if we induce people to feel more secure – in schools, communities, and organizations – we can create social contexts where individuals with IDD, and outgroup members in general, are perceived as more human, are helped, and are integrated socially.

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APPENDIX

Correlation matrix between the variables included in the mediation models

	M	*SD*	1	2	3	4	5	6	7	8
1. Secure attachment	5.07	.84	_							
2. Avoidant attachment	3.18	.68	-.44***	_						
3. Anxious attachment	3.98	.91	-.62***	.27**	_					
4. Anxiety	3.37	.98	-.49***	.31**	.45***	_				
5. Empathy	3.46	1.27	.17	-.21*	.03	-.46***	_			
6. Trust	5.12	.97	.08	-.20*	.07	-.37***	.45***	_		
7. UH traits	4.16	1.13	.08	-.13	.23*	-.08	.26*	.48***	_	
8. NUH traits	5.19	1.09	-.17	.02	.17	.11	.01	.00	-.04	_

Note: UH = Uniquely human traits assigned to individuals with IDD; NUH = non-uniquely human traits assigned to individuals with IDD.

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.