

# UNIVERSITÀ DEGLI STUDI DI PADOVA

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Sede Amministrativa: Università degli Studi di Padova

**DIPARTIMENTO DI PSICOLOGIA GENERALE**

**Scuola di Dottorato di Ricerca in Scienze Psicologiche**

**Indirizzo Psicologia Sociale e della Personalità**

**Ciclo XXV**

## **Humanity Attributions in Different Intergroup Contexts, and Related Phenomena**

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*Ai coltelli di F.*



# Table of Contents

<b>Introduction.....</b>	<b>1</b>
<b>CHAPTER 1 - If This Is (Not) a Man: Attributions of Humanity in Intergroup relations.....</b>	<b>5</b>
1.1 – The Study of Humanity in Social Psychology.....	5
1.2 – Infrahumanization.....	8
1.2.1 – Infrahumanization and Emotions.....	9
1.2.2 – Infrahumanization: Empirical Evidences.....	11
1.3 – Two Senses of Humanness, Two Forms of Dehumanization.....	13
1.4 – Beyond Secondary Emotions and Traits.....	17
1.4.1 – Mind Perception and Humanity.....	18
1.4.2 – (Sexual) Objectification.....	20
1.4.3 – Attribute Based vs. Metaphor Based Dehumanization.....	21
1.4.4 – Dehumanization and Social Neuroscience.....	22
<b>CHAPTER 2 – In the Aftermath of Humanity Denial: Consequences of Dehumanization.....</b>	<b>25</b>
2.1 – introduction.....	25
2.2 – Dehumanization and Aggression-related Consequences.....	25
2.3 – Humanity Attributions, Attitudes and Discrimination.....	28
2.4 – Infrahumanization and Pro-social Behaviors.....	29
2.5 – Infrahumanization and Intergroup Forgiveness.....	31
2.6 – Dehumanization and Morality.....	32
2.7 – The Negro-Ape Metaphor.....	33
<b>CHAPTER 3 – When Dehumanization Wounds: The role of humanity attributions and executive functions in the decision to shoot.....</b>	<b>35</b>
3.1 – Introduction.....	35
3.2 – Study 1: Dehumanization and Perceptions of Threat.....	36
3.2.1 – Method.....	37
3.2.1.1 – Participants.....	37
3.2.1.2 – Measures.....	37
3.2.1.3 – Procedure.....	39
3.2.2 – Results.....	39
3.2.3 – Discussion.....	42

3.3 – Study 2: Humanity attributions and violent acts against the outgroup. The moderator role of executive functions.....	43
3.3.1 – Executive Functions.....	44
3.4 – Study 2a.....	45
3.4.1 – Method.....	45
3.4.1.1 – Participants.....	45
3.4.1.2 – Procedure.....	45
3.4.1.3 – Measures.....	46
3.4.2 – Results.....	48
3.4.3 – Discussion.....	49
3.5 – Study 2b.....	50
3.5.1 – Method.....	50
3.5.1.1 – Participants.....	50
3.5.1.2 – Procedure.....	50
3.5.2 – Results.....	51
3.5.3 – Discussion.....	51
3.6 – General Discussion.....	51
<b>CHAPTER 4 – Dehumanization and Contact.....</b>	<b>53</b>
4.1 – Introduction.....	53
4.2 – Intergroup Contact and Humanity Attributions.....	54
4.3 – Approach/Avoidance Behaviors.....	56
4.4 – Study 1.....	57
4.4.1 – Method.....	57
4.4.1.1 – Participants.....	57
4.4.1.2 – Procedure.....	58
4.4.2 – Results.....	59
4.4.3 – Discussion.....	60
4.5 – Study 2.....	61
4.5.1 – Method.....	62
4.5.1.1 – Participants.....	62
4.5.1.2 – Measures.....	62
4.5.1.3 – Procedure.....	63
4.5.2 – Results.....	63
4.5.3 – Discussion.....	65
4.6 – General Discussion.....	66

<b>CHAPTER 5 – Dehumanization in Health Contexts</b>	<b>69</b>
5.1 – Introduction.....	69
5.2 – Study 1: Patients are not Fully Human. A Nurses’ Coping Response to Stress.....	70
5.2.1 – Job Stress and Coping Strategies.....	71
5.2.2 – Job Stress and Humanity.....	72
5.2.3 – Moderator Variables.....	73
5.2.3.1 – Affective Organizational Commitment.....	73
5.2.3.2 – Affective Commitment to Patients.....	74
5.2.4 – Method.....	75
5.2.4.1 – Participants and Procedure.....	75
5.2.4.2 – Measures.....	75
5.2.5 – Results.....	76
5.2.6 – Discussion.....	79
5.3 – Study 2: Dehumanization Takes you Away. Avoidance (vs. Approach) of Persons with Intellectual Disabilities in Relation to Humanity Denial.....	82
5.4 – Study 2a.....	83
5.4.1 – Method.....	83
5.4.1.1 – Participants and Procedure.....	83
5.4.1.2 – Measures.....	84
5.4.2 – Results.....	84
5.4.3 – Discussion.....	85
5.5 – Study 2b.....	85
5.5.1 – Method.....	86
5.5.1.1 – Participants.....	86
5.5.1.2 – Measures.....	86
5.5.1.3 – Procedure.....	86
5.5.2 – Results.....	87
5.5.3 – Discussion.....	88
5.5.4 – General Discussion.....	89
<b>Summary and Conclusions.....</b>	<b>91</b>
<b>References.....</b>	<b>99</b>





*“He who fights with monsters might take care lest he thereby becomes a monster.  
And when you gaze long into an abyss the abyss also gazes into you.”*

Friedrich Nietzsche, *Beyond Good and Evil*



## Introduction

“...Don't give yourselves to brutes [...] machine men with machine minds and machine hearts! You are not machines! You are not cattle! You are men!”

(The Great Dictator, 1940)

According to *Linnaeus*, father of modern scientific categorization, all living beings are classified into a particular category that defines the species to which they belong. In our case, we all belong to the *Homo Sapiens Sapiens* category (Linnaeus, 1758), or, simply, we are all human beings. Then, at least at a scientific level, the distinction of man from other animal or plant species is considered universal and stands beyond cultures, traditions, places and climates; fundamentally, from Eskimos in Greenland to business men in Manhattan every man is a man. But, this is not the whole story: certain people or certain groups are considered less human than other ones. The tendency to deny a full human status to others is a general phenomenon across all human history. The ancient Greeks considered the slaves as animals by identifying them uniquely with the *soma* (body) in opposition with the *logos* (mind), a feature reserved to Greek adult males (Vignolo, 2009); European philosophy described pre-columbian peoples as beasts, wild barbarians, unintelligent, more similar to apes than to human beings (Stannard, 1992); similarly, scientific racism (see, e.g., Gobineau, 1855, 1977) has created the "inferior race" in which Africans were linked to the primates both in appearance and immorality of their behavior; for centuries, Arabs were described by Western societies as individuals characterized by strong instincts and immorality (Said, 1978); aristocrats, middle-class persons, and intellectuals reduced poor and proletarians to ignorant beings lacking of religiosity and humanity (Thomas, 1983). These are only a few examples and the list could be potentially endless. Moreover, dehumanization can take many forms. Across each civilization and historical period particular metaphors were used to deny a full human status to others: animal, spirit, object, biological and mechanistic metaphors.

Dehumanization has been the target of many theoretical interpretations (see, e.g., Bandura, 1999; Bar-Tal, 1989; Opatow, 1990; Struch, & Schwartz, 1989), however, only in recent years, Social Psychology empirically investigated these phenomena (see, e.g., Goff, Eberhardt, Williams, & Jackson, 2008; Haslam, 2006; Leyens, Demoulin, Vaes, Gaunt, & Paladino, 2007). Considering different concepts and theorization of humanity,

such as secondary vs. primary emotions (Leyens et al., 2007), uniquely human vs. non-uniquely human traits (Haslam, Loughnan, Kashima, & Bain, 2008), mind attributions (Gray, Gray, & Wegner, 2007), objectification (Fredrickson, & Roberts, 1997), research provided a huge amount of evidences that humanity attributions represent a relevant dimension in intergroup relations. In particular, it has been demonstrated that individuals tend to ascribe a full human status to the ingroup rather than to the outgroup. As a consequence, outgroups are perceived as not fully human.

Along with processes and mechanisms leading to humanity denial, research has been recently interested in investigating negative consequences of dehumanization. Empirical evidences showed that perceiving other groups as not fully human produces detrimental outcomes, such as violence justification (Goff et al., 2008), inhibition of pro-social behaviors (see, e.g., Carella & Vaes, 2006), impaired cognitive capacities (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998), increase of prejudice (Hodson & Costello, 2007).

Despite the significant results achieved in the study of humanity attributions, some critical points still remain little investigated. The aim of the present research program is, indeed, to disentangle the role of humanity perceptions in three critical domains: violent behaviors, intergroup contact, and health contexts. In particular, the current work is organized in three separate parts in which we conducted two studies to investigate new potential consequences of humanity denial.

In the first two parts, we consider Moroccans as the outgroup target, since they represent a consistent stigmatized minority in Italy. In the first part, our aim is to study the role of humanity perceptions in violence domain. We argue that perceiving the other as not fully human should lead to facilitate perceptions of threat and violent behavioral tendencies. Moreover, we consider the moderator role of behavioral control in the relation between violence and humanity. We expect that dehumanization would be positively related with increased perceptions of the outgroup as dangerous and with violent reactions. In addition, regarding this latter point, we believe that behavioral control plays a critical role: dehumanization lead to aggressive behaviors only for participants with low capacity to control their behavioral responses.

In the second part, we investigate the causal link between humanity attributions and intergroup contact. Our purpose is to study whether humanity increase the tendency to seek contact with the outgroup or whether contact ameliorates humanity perceptions to the

ougroup. We hypothesize a mutual effect of the two constructs: both outgroup humanization and contact should have reciprocal effects.

In the last part, we examine different samples of health practitioners, namely nurses and socio-sanitary workers, in order to study the effects of dehumanization in healthcare contexts, since they represent a sensible environment for dehumanization (Haque & Waytz, 2012). In particular, in a study we investigate whether the denial of a full human status to patient represents a strategy used by nurses to decreased stress reactions. In addition, we test the effects of commitment to hospital and to patients as potential moderators. We expect that denial of humanity to patients is used as a coping strategy only by high committed nurses (both to hospital and to patients). In a second study, considering socio-sanitary workers, we investigate the effects of humanity perception on behavioral tendencies toward mentally impaired individuals. We hypothesize that humanization of persons with intellectual disabilities should promote approaching behaviors, rather than avoidance.

Our research represents an important contribution to the study of intergroup attributions of humanity and their consequences. In fact, to our knowledge, studies on these issues are few. Moreover, this research might have practical implication in everyday life. In fact, it may stimulate the development of specific interventions in order to counteract the negative effects of humanity denial and to promote harmonious intergroup relationships.



# Chapter 1

## If This Is (Not) a Man: Attributions of Humanity in Intergroup Relations

*"Humanity is a superhuman feat"*  
(Jean Giraudoux, 1933)

### 1.1 – The Study of Humanity in Social Psychology

The tendency to dehumanize others has been object of many interpretations in Social Psychology. In particular, denial of humanity has been included in theoretical models that investigated psychological strategies legitimizing violent acts toward others. Thus, several authors took into account the phenomenon of dehumanization giving it different interpretations (Bandura, 1999, 2002; Bar-Tal, 1989, 2000; Opatow, 1990; Schwartz & Struch, 1989).

Bar-Tal (1989) proposed that humanity denial represents a strategy to delegitimize outgroups. Dehumanization is defined as "the categorization of a group as inhuman either by using categories of subhuman creatures such as inferior race and animals, or by using categories of negatively evaluated superhuman creatures, such as demons, monsters, and satans" (Bar-Tal, 1989, p. 172). Thus, according to this author, delegitimized groups do not belong to human category. Similarly with stereotypes and prejudices, delegitimization originates from group categorization (see, e.g., Rosch, 1978; Tajfel & Turner, 1979). However, it has some unique features that differentiate it from similar constructs. First of all, delegitimization is characterized by extreme negative features that allow to exclude dehumanized outgroups from moral community (Opatow, 1990). Moreover, dehumanization imply a permanent exclusion from the norms and the values that regulate society; conversely groups that are negatively stereotyped (see, e.g., Scottish in United Kingdom) may continue to be accepted inside the boundaries of society. Finally, dehumanized outgroups usually are target aggressive and harmful behaviors.

Bar-Tal (1989) individuated four main functions of dehumanization. Mainly, this process justifies extremely negative and aggressive behaviors toward the outgroup: considering "others" such as demons, savages or gooks, provides a cognitive explanation to justify extremely aggressive actions perpetrated toward the outgroup. Moreover, dehumanization may occur either before or after committing a detrimental action. In the first case, denying humanity facilitates the use of violence; in the second case,

dehumanization is a cognitive justification for the detrimental conduct. A second function of delegitimization is to preserve intergroup differentiation. As reported above, this process sharpens intergroup differences to an extreme, since it completely excludes outgroups from commonly accepted groups. Moreover, a third function, dehumanization feeds the perception of ingroup superiority since it allows a convenient intergroup comparison due to the extreme negative features associated to the outgroups. Finally, dehumanization permits to maintain a certain degree of group uniformity (adherence to the beliefs and values) and cohesion (attraction to the prototypical group representation).

Bandura (1999) argued that denial of humanity represents a strategy in the moral disengagement process. Specifically, perpetration of violent and aggressive behaviors toward the outgroup is determined by the deactivation of the ethical and moral values that regulates attitudes and behaviors of an individual or a group. From the earlier stage of development and socialization, individuals learn to regulate their behavior according to social and moral sanctions or rewards that define the boundaries of what is morally right and what is morally wrong. This latter point underlines the dual aspect of moral agency: an “inhibitive” aspect, namely the capacity of restraining from committing detrimental behaviors, and a “proactive” aspect, namely the capacity of acting accordingly to social values and norms. However, this mechanism does not have an automatic activation. Thus, under certain conditions and within particular contexts, some psychological strategies can defuse the exercise of moral agency and lead to the perpetration of negative conducts. Among these, dehumanization represents a strategy that permits to derogate the victim of the negative act. Interpersonal experiences during formative years develop the awareness that people experience joy and suffering forming, in this way, the foundation for empathic responsiveness to the plight of others (Bandura, 1986). Thus, humanity triggers empathic reactions through perceived similarity and a feeling of moral responsibility. As a consequence, perceiving the other lacking of a full human status prevents the activation of empathetic emotional reactions making easier the use of violence and aggression.

Similarly with Bandura, Opatow (1990) refers to dehumanization in terms of “moral exclusion”, and defines it as the psychological process that “occurs when individuals or groups are perceived as outside the boundary in which moral values, rules, and considerations of fairness apply” (Opatow, 1990, p.1). Thus, individuals who are morally excluded are perceived as not worthy to be part of the society based on moral values such as the obligation to avoid causing harm to human beings. In this way, moral exclusion makes it easier or even appropriate and right, for ingroup, to perform aggressive and non



acceptable behaviors. According to the author, the antecedents of moral exclusion are represented by a situation of conflict and by feelings of unconnectedness; in fact, perceiving the other as “unconnected” to oneself defuses empathic reactions and it is more likely to be violent and aggressive to others (see, e.g., Bandura, Underwood, & Fromson, 1975; Deutsch, 1973).

Moreover, Opatow argued that specific “symptoms” are also responsible for moral exclusion. In particular, “exclusion specific symptoms” (vs. “ordinary symptoms”<sup>1</sup>) represent a “signal that interpersonal or intergroup relation is taking a destructive course” (Opatow, 1990, p. 11). Dehumanization is included in these “exclusion specific” processes as it is defined as “repudiating others’ humanity, dignity, ability to feel, and entitlement to compassion” (Opatow, 1990, p. 10).

According to Schwartz and Struch (1989), dehumanization depends on two distinct psychological processes. On the one hand, denial of humanity can occur when the outgroup is not perceived in terms of uniquely human traits (e.g., compassion, respect); on the other hand, dehumanization can result from the comparison between the basic values that regulate a specific society. Moreover, these values are organized hierarchically within societies: in fact, same values may be considered “primary” in some societies, whereas, in other communities, they may be perceived as “secondary”. For instance, western society considers “freedom” at the top of a values hierarchy and “obedience” at the bottom, whereas a collectivistic society considers “obedience” at the top and freedom at the bottom. As a consequence, the more the hierarchy of values is perceived different, more likely is that the outgroup is considered as morally distant, and, therefore, lacking of humanity. Moreover, the authors argued that two value domains are particularly important for humanity perceptions: “pro-social” values and hedonism. “Pro-social” values (e.g., equality, solidarity) are considered uniquely human values since they involve morality and sensitivity; instead, “hedonism” values (e.g., pleasure, an exciting life) express individual goals shared with infra-human species. Therefore, an outgroup can be dehumanized because its values are considered incongruent with ingroup values or because it lacks prosocial values.

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<sup>1</sup> “Ordinary symptoms” represent a series discrimination processes, toward the outgroup, that occur in everyday life but do not trigger moral exclusion (Opatow, 1990). Examples are psychological distance and deindividuation.

## **1.2 – Infracommunication**

The theoretical models described in the previous paragraph present at least two common points: first, they did not focus specifically on dehumanization and denial of humanity has been included in models that studied intergroup violence; second, dehumanization has been investigated in particular contexts, characterized by extreme conflict between groups (see, e.g., Israeli vs. Palestinians; Hutu vs. Tutsi).

Since the early 2000, Leyens and colleagues proposed the idea that attribution of humanity is not a limited phenomenon, present only in particular contexts, but it represents a dynamic dimension of social judgment that can be granted or denied (for a review see Leyens et al., 2007). Although their line of research was definitely stimulated by different interpretations of dehumanization (see Bandura, 1999; Bar-Tal, 1989; Opatow, 1990; Schwartz & Struch, 1989; Staub, 2006), they introduced the concept of “infracommunication,” which moves away the phenomena previously analyzed. Infracommunication indicates the tendency to perceive the ingroup as prototypical of human category; as a consequence, the outgroups are perceived as less human and more animal-like than the ingroup (Leyens et al., 2000, 2001, 2003, 2007). Moreover, infracommunication represents a “daily” phenomenon, masked in everyday life routine. In fact, this process takes place outside of the individual awareness (Boccatto, Cortes, Demoulin, & Leyens, 2007; Eyssel & Ribas, 2012; Paladino et al., 2002), and may also lead to “subtle” behavioral consequences (see Chapter 2).

The theory originates from the integration of two social constructs: ethnocentrism (see, e.g., Sumner, 1906) and essentialist beliefs (see, e.g., Haslam, Rothschild, & Ernst, 2002; Rothbart & Taylor, 1992). Ethnocentrism represents the universal beliefs that one’s own group is superior to other groups on a variety of dimensions, and, at the same time, that outgroups lack a number of important characteristics, in the same dimensions, in comparison with ingroup (Sumner, 1906; Leyens et al., 2007). Then, ethnocentrism incorporates two principal aspects, namely favoritism toward the ingroup (e.g., Diehl, 1990) and outgroup derogation (e.g., Fein & Spencer, 1997).

The concept of “psychological essentialism” was originally proposed by Medin (1989; Medin & Ortony, 1989) in his work on categorization processes. In the original formulation essentialism represents the tendency to endorse beliefs that things are what they are because of an intrinsic and underlying nature. Recently, this construct has been extended in social psychology and social stereotypes (in particular, see Haslam, Rothschild, & Ernst, 2002; Yzerbyt, Rocher, & Schadron, 1997; Rothbart & Taylor, 1992) to indicate the belief

that people are what they are by substance and not by contingencies. Then, endorsing that essences account for differences between groups is in contrast with the idea that groups are social constructions. The belief that essences distinguish social groups leads to perceive the existence of immutable and stable boundaries between them. Different essences serve both to explain the intergroup differences and to enhance cohesion between group members (Campbell, 1958). Moreover, essences are based on different dimensions (Rothbart & Taylor, 1992): genetics (e.g., White vs. afro-American people), language (e.g., Roman vs. Germanic roots), religion (e.g., Muslim vs. Christian), culture (e.g., individualistic vs. collectivistic).

Based on this perspective, Leyens and colleagues focused on a particular essence that should be common to all groups: “human essence” (Leyens et al., 2007). Thus, if ethnocentrism is a universal dimension and if different essences are attributed to explain intergroup differences, then individuals will ascribe a privileged “human essence” to groups they belong while, accordingly, an “infra-human essence” will be assigned to other groups. In other words, people will perceived the ingroup as prototypical of humanity, by ascribing to it different uniquely human features, namely characteristic that are not shared with other animals. Conversely, outgroups will be infracategorized, namely they will be perceived as more characterized by non fully human qualities, namely by traits that humans share with other living beings.

### **1.2.1 – Infracategorization and Emotions**

In order to define which attributes defined the concept of “human essence”, Leyens and colleagues (2000; see also, Miranda & Gouveia-Pereira, 2006) asked French and Spanish students to list all the characteristics that, according to them, were typically human. Results showed, evenly, that three qualities were perceived as typical of humanity: intelligence, language and sentiments (vs. emotions). Since research in Social Psychology widely investigated the relation between intelligence/language and prejudice, Leyens and collaborators decided to focus on the “emotional” side of humanity. Moreover, the decision to study this particular aspect also depends on the fact that, while language and intelligence are influenced by cultural values, sentiments and emotions are not a social construction (but see, Harrè, 1986).

Demoulin et al. (2004), in a cross-cultural study, investigated whether western people distinguish between uniquely human emotions – emotions that are experienced only by humans – and non-uniquely human emotions – emotions belonging both to humans and

other primates. Respondents were Spanish, French-speaking Belgians, Flemish-speaking Belgians and American students. Participants had to rate a list of emotional terms on several dimensions including the degree of human uniqueness (“In your judgment, is the ability to experience this characteristic exclusive to human beings or can animals also experience it?”). Results showed that participants considered some emotions belonging exclusively to the human category (uniquely human emotions); on the contrary, other emotions are associated both with humans and animals. Moreover, researchers found that, common to the four groups of participants, there are some features that define the distinction between uniquely and non-uniquely emotions. In particular, the characteristics given by participants are the same as emerged in literature (see, e.g., Ekman, 1992; Epstein, 1984; Izard, 1977; Sroufe, 1979) and defined “primary emotions” and “secondary emotions”. Primary emotions (e.g., anger, fear, pain, excitement, pleasure; see Table 1.1), concern both human beings and other highly evolved primates; besides, they involved low cognition processes, appear in the first stages of development (Ekman, 1992; Sroufe, 1979), have a short duration, are caused by external factors and are easily recognizable. Secondary emotions (e.g., shame, melancholy, pride, serenity; see Table 1.1), are exclusive only to human beings and involve higher mental processes and the development of morality; moreover, they have a long duration, are less intense and are primarily caused by internal factors. At last, secondary emotions could be the results of complex social interaction or could be represented by the combination of primary emotions (Johnson-Laird & Oatley, 1989; Plutchik, 1994).

The infrahumanization model stems from the dichotomy primary/secondary emotions: since people reserve for their own group a “fully human essence” and associate secondary emotions with the human category; it follows that individuals will perceive secondary emotion as typical of their ingroup. Regarding primary emotions, no prediction can be formulated, since they are associated both with the human and animal category (Leyens et al., 2007).

Table 1.1. Examples of primary and secondary emotions

<i>Primary Emotions</i>	<i>Secondary Emotions</i>
<i>Happiness</i>	<i>Admiration</i>
<i>Surprise</i>	<i>Love</i>
<i>Pleasure</i>	<i>Hope</i>
<i>Excitement</i>	<i>Passion</i>
<i>Calmness</i>	<i>Optimism</i>
<i>Rage</i>	<i>Humiliation</i>
<i>Anger</i>	<i>Remorse</i>
<i>Pain</i>	<i>Resentment</i>
<i>Irritation</i>	<i>Help</i>
<i>Fear</i>	<i>Shame</i>

*Note.* From “Dimensions of uniquely and non uniquely human emotions,” by S. Demoulin, Leyens, et al., 2004, *Cognition and Emotion*, 18, 71-96. Copyright 2004 by Taylor & Francis Journals.

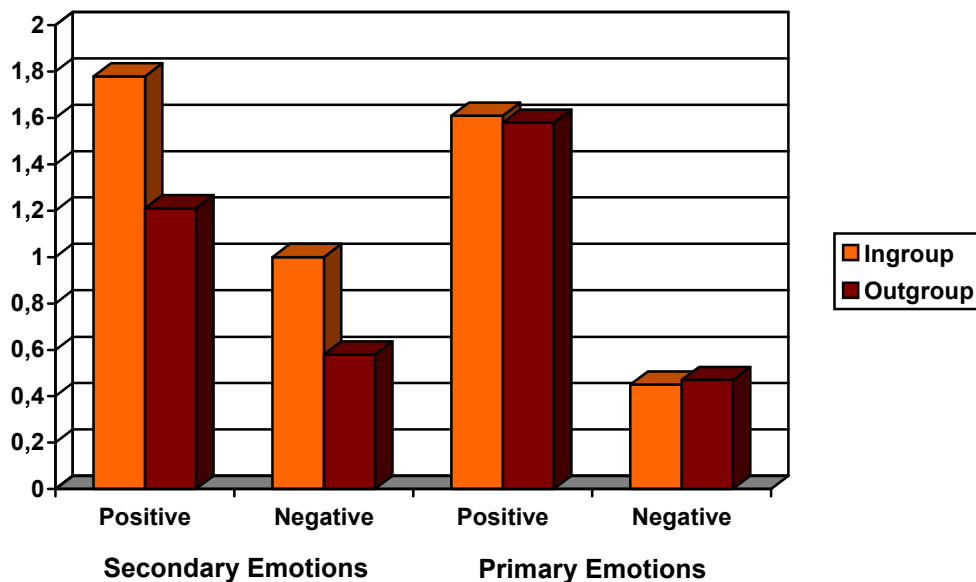
### **1.2.2 – Infracommunication: Empirical Evidences**

The main hypotheses of infracommunication have been tested using different techniques, different stimuli, and considering several intergroup relationships in order to establish its validity and generalizability (Leyens et al., 2007). However, in this paragraph, we concentrate on a few exemplary paradigms.

The first empirical evidences were provided by a series of studies conducted by Leyens and colleagues (Leyens, Rodriguez, Demoulin, Paladino, & Rodriguez, 1999; Leyens et al., 2001), using a questionnaire and considering the relationship between Canary Islanders and inhabitants of Spanish peninsula. Participants had to complete a questionnaire containing a list of traits; these traits were primary emotions (e.g., pleasure, irritation), secondary emotions (e.g., happiness, melancholy) or “filler adjectives” (linked with competence and niceness). The task was to indicate which emotions were considered typical of the target group. Half of the participants had to choose from the list of traits which were most typical of ingroup, the other half which were most typical of outgroup (e.g., Canarian had to choose emotions typical of inhabitants of Spanish peninsula). Results confirmed the infracommunication model: in fact, both Canary Islanders and inhabitants of Spanish peninsulas ascribed more uniquely human emotions to the ingroup than to the outgroup. Concerning primary emotions, no differences between groups emerged: participants equally attributed non-uniquely human emotions both to the ingroup and to the outgroup.

The same result was found considering primary and secondary emotions with positive and negative valence (Leyens et al., 2001; Study 2): participants associated to the ingroup more uniquely human emotions, regardless of the valence of these (see Figure 1.1). As in the previous study, no differences were observed regarding primary emotions. This latter result is particularly interesting because differentiates infrahumanization effect from ingroup bias: in fact, people ascribe a “fully human essence” to ingroup, even if it implies attributing negative characteristics to their own group (negative secondary emotions).

Figure 1.1. Mean number of positive and negative primary and secondary emotions attributed to ingroup and outgroup.



Note. From “Psychological essentialism and the differential attribution of uniquely human emotions to ingroups and outgroups,” by J-Ph. Leyens et al., 2001, *European Journal of Social Psychology*, 31, 395-411. Copyright 2001 by John Wiley & Sons, LTD.

The privileged association between ingroup and secondary emotions has also been studied considering automatic associations in order to investigate whether people are not aware of ascribing more uniquely human characteristics to ingroup and of considering outgroup as less human.

According to social cognition, if two concepts are strongly associated in memory then, if one is made salient, the activation of the second one will be more rapid compared to when two concepts are weakly or not associated in mind (Jones & Gerard, 1967). These associations are triggered automatically in the presence of a relevant stimulus, without the need for person’s intention, knowledge or attention (Bargh, 1989; Bargh & Williams, 2006).

Paladino and collaborators (2002) tested implicit infrahumanization using the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998) and considering several ingroups (e.g., Spanish, Flemish) and outgroups (e.g., North-Africans, Walloons). The IAT measures the implicit attitudes by measuring automatic associations between two target categories (ingroup vs. outgroup) and two attributes (primary emotions vs. secondary emotions). If individuals associate humanity more to their own group than to other groups then they should be faster to categorize secondary emotions when associated with the ingroup than when associated with the outgroup. In four studies, this hypothesis was fully confirmed: people reacted more rapidly when the ingroup was associated to secondary emotions and the outgroup to primary emotions than the reverse.

However, the IAT does not allow the identification of the specific factors responsible for the effect. In fact, it is not possible to test whether the effect depends on the greater association of the ingroup with humanity or on a stronger association between primary emotions and the outgroup. This alternative hypothesis was discarded by using a priming technique that allows to detect separately the strength of each type of association between the ingroup, the outgroup, primary and secondary emotions. In two studies, Boccato and colleagues (2007) found that respondents reacted faster when secondary emotions were preceded by the ingroup prime rather than when the same type of emotion was preceded by the outgroup prime.

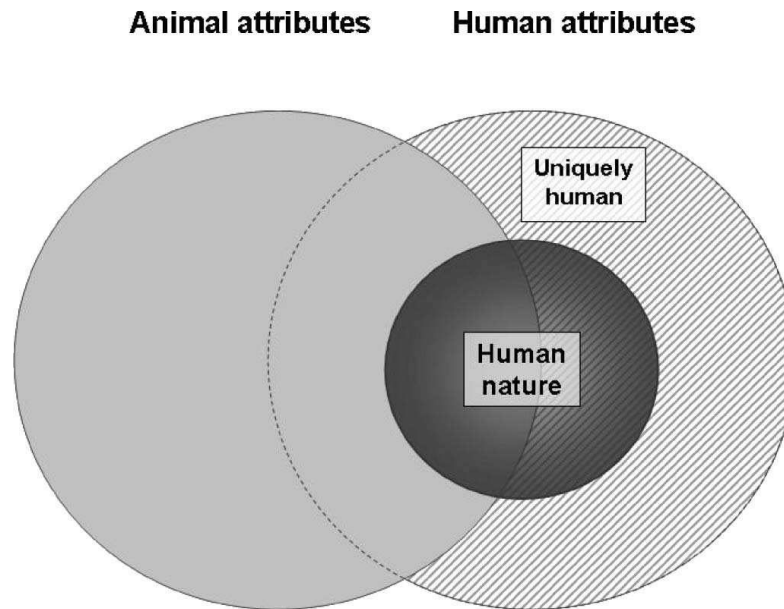
To conclude, these studies demonstrated that, both at an explicit (see, e.g., Leyens et al., 2001) and an implicit level (Paladino et al., 2002), the effect of infrahumanization depends only on the link between uniquely human emotions and ingroup. Conversely, non-uniquely human emotions, are not considered a strategy to differentiate between ingroups and outgroups, since they belong both to the human and the animal domain.

### **1.3 – Two Senses of Humanness, Two Forms of Dehumanization**

More recently Haslam and collaborators have proposed a new perspective in the study of humanity attributions (Haslam, 2006; Haslam et al., 2008). According to these authors, infrahumanization model catches only a limited aspect of humanity. Some features defining humanity could be typical of humans, namely they could be shared with other animals. Moreover, humanness does not necessarily involve comparisons with other species but it could also be understood in a non-comparative way. In fact, humanness is composed of traits that are essentially and prototypically human and not necessarily distinguish the human beings from other animals (see Figure 1.2). Features such as

curiosity, warmth, friendliness, although belong both to humans and animals, are fundamental traits characterizing the concept of humanity.

Figure 1.2. Schematic representation of uniquely human and human nature attributes.

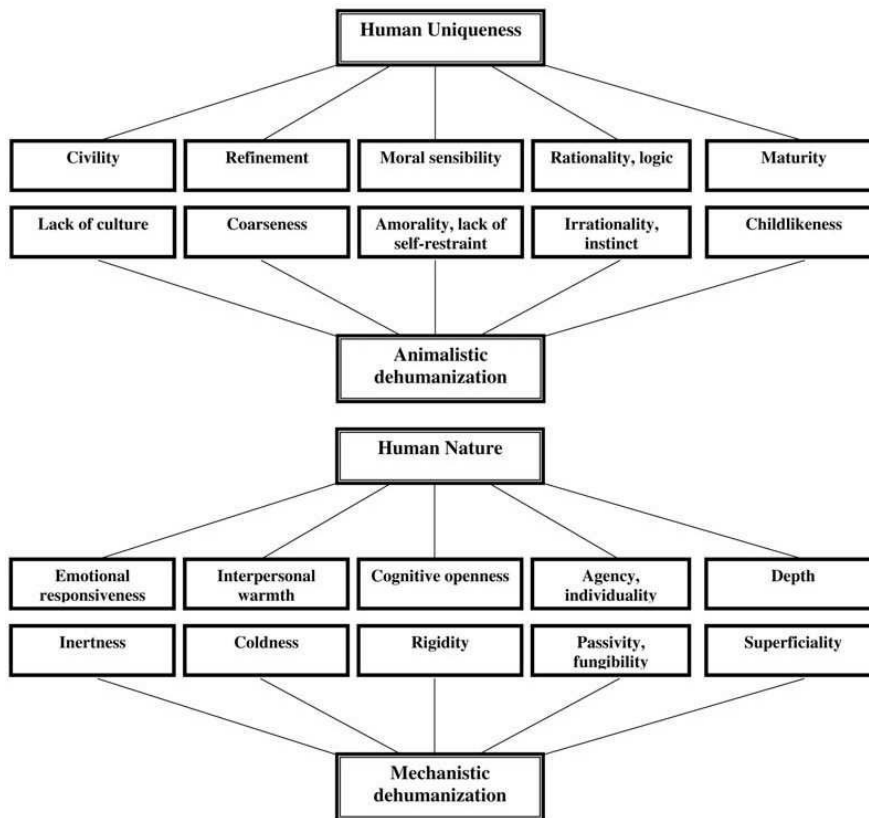


*Note.* From “Dehumanization: A new perspective” by N. Haslam, S. Loughnan, C. Reynolds, and S. Wilson, 2007, *Social and Personality Compass*, 1, 409-422. Copyright 2007 by Blackwell Publishing Ltd.

Based on these premises, Haslam and colleagues developed a model in which humanity is distinguished in two aspects, represented by two kinds of characteristics: those that are central and typical of humans (e.g., curiosity) – called human nature traits (HN) – and those that are exclusively of human beings (e.g., secondary emotions) – called uniquely human traits (UH). According to Gosling (2001), human uniqueness is characterized by cognitive openness (e.g., creativity, intelligence, culture) and by conscientiousness (e.g., planning, self-control, inhibition); furthermore, uniquely human traits are context and culture dependent because they result from learning and socialization. Secondary emotions (Demoulin et al., 2004, see paragraph 1.2.1) and prosocial values (Schwartz & Struch 1989, see paragraph 1.1) are part of human uniqueness. Human nature traits, instead, create the link between human beings and their own innate biological features and the natural world; moreover, human nature traits should be universal, then common among all groups and human societies regardless of the context and the culture.



Figure 1.3. Proposed links between conceptions of humanness and corresponding forms of dehumanization.



Note. From “Dehumanization: An integrative review” by N. Haslam, 2006, *Personality and Social Psychology Review*, 10, 252-264. Copyright 2006 by Lawrence Erlbaum Associates, Inc.

If humanness is distinct in two aspects, then two distinct forms of dehumanization should occur when the respective properties are denied (see Figure 1.3). The denial of uniquely human traits leads as lacking in refinement, civility, moral sensibility and logic. As a consequence, people are perceived coarse, uncultured, lacking in self-control, and unintelligent and their behaviour is described as immature, akin to children, driven by instinct and mediated by others’ behavior. This kind of dehumanization has been called “animalistic” because are denied the features that separate humans from other living beings (Figure 1.3). Infrahumanization represents a specific and subtle kind of animalistic dehumanization because it considers a particular aspect of human uniqueness, namely secondary emotions. On the other hand, the denial of traits related to human nature leads to perceive others as lacking in emotionality, warmth, cognitive openness, individual agency, and depth. Consequently, dehumanized individuals appear inert, cold, passive and their behavior is considered as a cause-and-effect reaction rather than triggered by a genuine personal initiative. Haslam (2006; Haslam, Loughnan, Reynolds, & Williams,

2007) defined this form of dehumanization “mechanistic”. This kind of dehumanization is mainly non-comparative, nevertheless Haslam admitted the possibility that humans can be compared to machines or automata (see Figure 1.3).

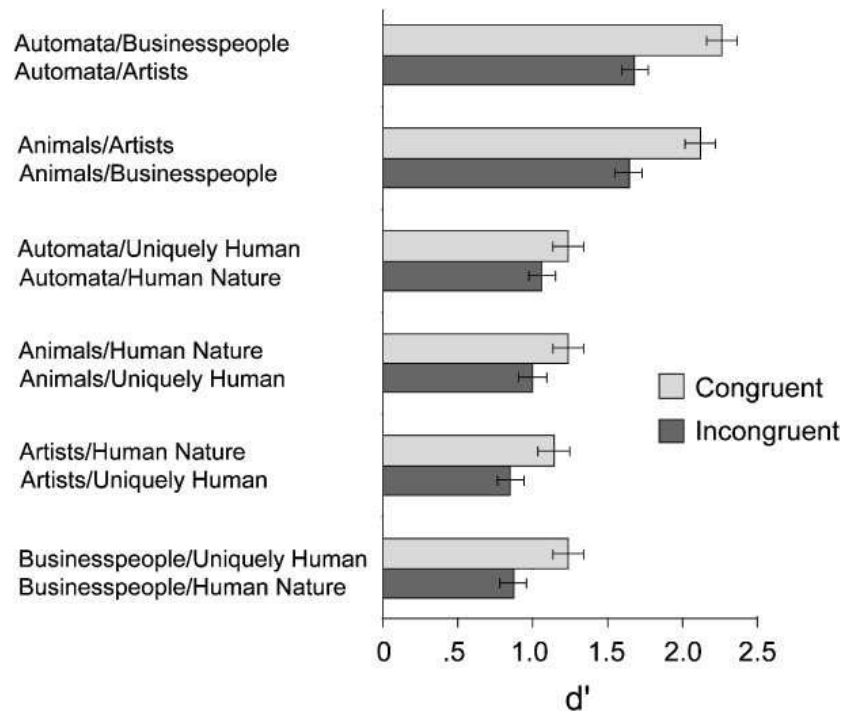
To test the validity of the model, Loughnan and Haslam (2007) conducted a research in which they assessed implicit associations between two groups (artists and businesspeople), the two senses of humanness, and the two kinds of dehumanization. Researchers hypothesized that artists may be perceived high in human nature dimension, thus characterize by traits such as creativity, instinct, drive, and lacking in uniquely human traits, such as rationality or organization; business people, instead, should be perceived in terms of uniquely human traits, (e.g., coldness, organization) while they should lack human nature characteristics; these different associations might lead to associate businesspeople with automata (mechanistic dehumanization) and artists with animals (animalistic dehumanization). Moreover, it has been hypothesized that the two forms of dehumanization would be differentially associated with humanness traits (human nature vs. uniquely human traits). To assess automatic association the Go/No-go association test was used (GNAT; Nosek & Banaji, 2001). The GNAT measures the implicit attitude by assessing the strength of association between the target categories (artists vs. businesspeople) and humanity traits (human nature traits vs. uniquely human traits) and forms of dehumanization (animalistic vs. mechanistic). The strength of the association is given by a sensitivity index –  $d'$  – based on signal detection theory (SDT; Green & Swets, 1966); the higher the  $d'$  the stronger the association between the concept and the category (for further detail see Chapter 3).

Results confirmed the hypotheses: a stronger association between artists and human nature traits and a stronger association between businesspeople and uniquely human traits was found. Moreover, artists were more associated with animalistic dehumanization than with mechanistic dehumanization; conversely, businesspeople were more associated with mechanistic dehumanization than with animalistic one (see Figure 1.4). Finally, uniquely human traits are more associated with mechanistic dehumanization and human nature traits are more associated with animalistic dehumanization (Figure 1.4).

In a similar way with inhumanization, researchers argued that the attribution or the denial of humanity to other groups is a subtle phenomenon and does not depend on prejudice toward groups. Thus, “these findings imply that the covert association of social groups with animals may be a common phenomenon that is independent of liking or disliking, occurs even for groups that are not stigmatized, and is based on stereotype

content rather than in-group/outgroup dynamics” (Saminaden, Loughnan, & Haslam, 2010, p. 93).

Figure 1.4. Mean of  $d'$  values for corresponding GNAT blocks, described by target category pairs (Art = Artists, Bus = Businesspeople, HN = Human Nature, UH = Uniquely Human).



Note. From “Animals and androids: Implicit associations between social categories and nonhumans” by S. Loughnan and N. Haslam, 2007, *Psychological Science*, 18, 116-121. Copyright 2007 by APS Journals.

### 1.4 – Beyond Secondary Emotions and Traits

Infrahumanization and dehumanization received an impressive support from empirical studies (Leyens et al., 2007; Volpato, 2011). Nevertheless, the two models focused on particular aspects of humanity, and recently the necessity emerged to investigate humanity perceptions in a broader perspective considering a more general concept of humanity, other forms of humanity denial, and different paradigms.

Viki and colleagues (Viki et al., 2006) provided a first evidence that infrahumanization could occur outside the secondary emotions domain. In their research, the attribution to ingroup and outgroup of words commonly associated with humans (e.g., wife, humanity, person) and animals (e.g., creature, pet, wild) was explored both by using implicit techniques and explicit methods. In three studies stronger implicit associations between ingroup and humanity concepts than between outgroup and humanity were found

(Study 1 and 2). These results were further supported by a more explicit paper and pencil measure (Study 3).

Boccatto and collaborators (Boccatto, Capozza, Falvo, & Durante, 2008; see also Goff et al., 2008) investigated whether people perceive their own group more prototypical of humanity than other groups. In order to detect direct associations in memory between groups and human and animal species, a sequential priming procedure was used. In particular, associations between ingroup and outgroup names with human and ape faces were measured. When primed with ingroup related stimuli participants identified human faces more rapidly than when the prime was represented by outgroup related stimuli. In contrast, in the identification of ape images, no differences between ingroup and outgroup primes were observed (Boccatto et al., 2008, Study 1). Similar results were found with a different sequential priming procedure (Boccatto et al., 2008; Study 2). When considering human/ape images as prime, participants recognized faster ingroup related stimuli, than outgroup related stimuli, when preceded by a prime representing human face; instead, ape images did not produce any effect on the identification of group related stimuli.

Thus, research has demonstrated that people consider their own group more prototypical of humanity, even when the global concept of humanity is considered.

#### **1.4.1 – Mind Perception and Humanity**

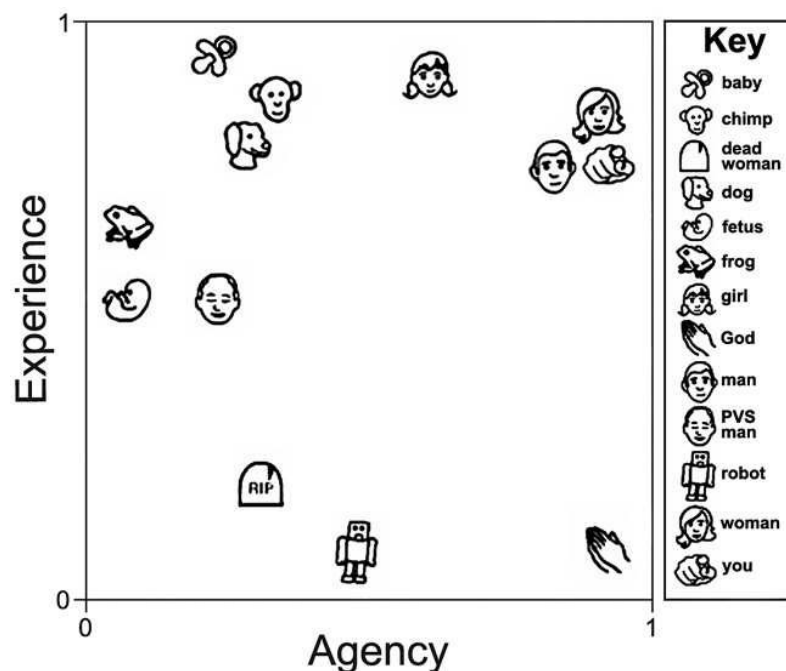
Mind perception means attributing mental capacities to other entities (Waytz, Gray, Epley, & Wegner, 2010). Based on the “theory of mind” (see Frith, Morton, & Leslie, 1991; Premack & Woodruff, 1978) a recent body of research has investigated mind attributions in Social and Cognitive Psychology (see, e.g., Gray & Wegner, 2012; Gray, Young, & Waytz, 2012; Waytz, Cacioppo, & Epley, 2010). According to Gray and collaborators (Gray et al., 2007), individuals perceive others’ mind in terms of two different dimensions: experience, and agency (Figure 1.5). The first refers to the capacity to sense and feel, while the second refers to the capacity to plan and act. In other words, people think about others’ mind in terms of ability to “feel”, to “do”, or both (Waytz et al., 2010)<sup>2</sup>. Mental states attributions are used by people to explain both human and non-human deeds, namely to understand reality, and to create a sense of social connection with other entities. Since from research has emerged that adult human beings are perceived high in experience and

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<sup>2</sup> A similar distinction can be found in Haslam et al.’s model (2008, see paragraph 1.3) and in the stereotype content model (SCM; Fiske, Cuddy, Glick, & Xu, 2002) where social evaluation is organized in two dimensions: warmth (corresponding to experience) and competence (corresponding to agency).

in agency (Gray et al., 2007); thus, the denial of a full human status occurs when one or both dimensions are denied to others. If people are perceived as not defined by experience, it follows that they will be perceived as not capable of feeling emotions; on the other hand, if the agency dimension is denied to individuals, thus they will be perceived as lacking of planning abilities, self-control, and morality.

Figure 1.5. Ratings of different groups on the two dimensions of mind perception.



Note. From "Dimensions of mind perception" by H. M. Gray, K. Gray, and D. M. Wegner, 2007, *Science*, 315, 619. Copyright 2007 by American Association for the Advancement of Science.

Available literature supports the idea that mind is organized in two dimension and that people assign different mental states to individuals, groups or entities (see, e.g., Gray et al., 2007; Haslam, Kashima, Loughnan, Shi, & Suitner 2007; Loughnan et al., 2010). In a study Gray and collaborators asked participants to compare pairs of targets characters on different mental capacities (e.g., capacity to feel pain); target characters included seven living human (e.g., 5-year-old girl, adult man, the respondent him- or herself), three non-human animals (dog, frog, and wild chimpanzee), a dead woman, God, and a sociable robot. Correlations between capacities across characters were submitted to factor analysis. From results the two dimensions emerged, namely experience and agency; moreover results showed that people differentially attribute these states to different targets (see Figure 1.5).

Evidences of asymmetry in mental states attributions were also found by Haslam and colleagues (Haslam et al., 2007) in a study where they contrasted three social groups (Australians, Chinese, and Italians) with non-humans entities (animals, mechanical and supernatural agents). Results showed that animals, compared to humans, lack in agency while they are high in experience; mechanical agents (namely robots), instead, are perceived as low in both agency and experience and, finally, superhuman entities were rated as superior in experience and agency.

These studies further confirmed that, similarly with other forms of humanity denial, individuals ascribe different minds to different targets.

#### **1.4.2 – (Sexual) Objectification**

Objectification represents a particular form of dehumanization. It implies to perceive and to treat a person as a thing, an object or goods. According to Nussbaum (1995) objectification involves seven aspects: a) instrumentality, the target is considered as a tool for somebody purposes; b) denial of autonomy, the target is perceived as lacking of autonomy and self-determination; c) inertness, the target is denied the capacity to plan and to act genuinely (agency); d) fungibility, the target is perceived as an interchangeable object with objects of the same or different types; e) violability, the target is not considered in his/her entirety but divided in parts, as something that could be broken up, smashed or broken into; f) ownership, the individual is treated as something that is owned by another and that can be bought or sold; g) denial of subjectivity, target's experience and feelings are considered as negligible. Nussbaum argued that instrumentality represents the most insidious dimension since it provokes a sort of attraction toward the objectifier. In fact, if the individual is used uniquely for a purpose then there will be a tendency to approach the objectified target, contrary to the other forms of dehumanization where the denial of a full human status provokes avoidant reactions toward the targets (Volpato, 2011).

Recently, Social Psychology focused on a particular form of objectification, namely sexual objectification. Sexual objectification indicates the process by which persons are considered only for their sexual functions. In this way, humans beings sexuality, in particular women's one (but see Loughnan et al., 2010), is underlined and separated from personality (Bartky, 1990). When objectified, individuals, in particular women, are treated as bodies available for others' use and pleasure. Evidences from the relation between objectification and dehumanization were provided by Heflick and Goldenberg (2009). In a study, participants had to rate Angelina Jolie and Sara Palin (a political candidate for the

2008 U.S. elections) on humanity traits. Half of respondents were asked to focus on physical appearance (appearance-focus condition) and the other half to focus on the “person” (control condition). Results showed that the two targets were attributed less uniquely human traits in the appearance-focus condition than in the control condition.

Similar results were found using different humanity measures, by Loughnan and collaborators (2010) in a research that investigated the role of depersonalization in objectification. Authors hypothesized that participants would have attributed less humanity to objectified targets. In a study (Loughnan et al., 2010; Study 1), respondents were presented with three photographs depicting either a woman’s full body (full-body), only her head (head-only), or only her body (body-only). For each image participants had to rate the target on two measures of mind attribution. Results showed lower levels of humanity, namely less mind attributions, in body-only image condition compared with the other condition. Moreover, differences were also found between the other two conditions: participants perceived the head-only target as more characterized by mental states than the full-body image.

In conclusion, research had demonstrated the presence of a link between objectification and humanity attributions. Objectified targets are perceived as less human (Heflick & Goldenberg, 2009) and more depersonalized (Loughnan et al., 2010).

### **1.4.3 – Attribute Based versus Metaphor Based Dehumanization**

From previous paragraphs emerged that the different theoretical approaches, in the study of humanity attributions has focused either on the denial of human attributes to others (Haslam et al., 2008; Leyens et al., 2007) or on the likening of others to nonhumans entities (Boccatto et al., 2008; Goff et al., 2008; Viki et al., 2006). To investigate the relation between these two forms of humanity denial, Loughnan and collaborators (Loughnan, Haslam, & Kashima, 2009) conducted a research considering fictitious social groups. Authors hypothesized that the metaphorical likening of a group to nonhumans would lead to infer attribute-based dehumanization. On the other hand, they hypothesized that trait-based dehumanization would lead to link the group to metaphor-based dehumanization. In a study (Study 1) participants learned about two fictitious groups (Hebians and Nopoes). Hebians were described, according to the experimental condition, as not characterized by uniquely human traits (low-UH condition) or not defined by human nature features (low-HN condition). The other target group was described by using metaphors. In animalization condition Nopoes were animalized directly by labelling them as animal-like and indirectly

by reference to their animal-like behaviors and appearance; in mechanization condition, Nopoes were described in a robot-like way both directly by using robot-like labelling and indirectly, namely through reference to robotic behaviors. After manipulation, humanity was assessed, considering both traits and metaphors, by using an implicit and an explicit technique.

Considering the explicit measures, hypotheses were confirmed. Participants in the animalized condition ascribed to Nopoes less uniquely human than human nature traits; conversely, participants, in the mechanized condition, rated the group as possessing less human nature than uniquely human traits. Same results were found considering the other target group: Hebians. In the low-HU condition, they were rated as more animal-like than robot-like; conversely, in the low-HN condition, the group was viewed as more robot-like than animal-like. Results from implicit measures, instead, partially confirmed the hypotheses. In the low-HN condition, participants did not associate Hebians more with robots than with animals; on the contrary, in the low-UH condition, the target group was more associated with animal metaphors than with robot metaphors. Regarding Nopoes, results showed an effect in the mechanization condition, namely a stronger association between group and uniquely human traits, rather than with human nature traits. No significant effect was found in the animalization condition. Results were replicated in a second study (Study 2).

This research provides evidence that people can shift from one form of dehumanization to the other. In particular, individuals exposed to an attribute-based (metaphor-based) dehumanization are able to infer the corresponding type of metaphor-based (attribute-based) dehumanization. Interestingly, this result was much stronger when explicit than implicit measures were used. According to authors, this latter result was due to the fact that implicit beliefs require stronger efforts to be formed.

#### **1.4.4 – Dehumanization and Social Neuroscience**

Advances in methods and instruments within neuroscience provided an important contribution to social psychology. Harris and Fiske (2006) investigated dehumanization focusing, in particular, on brain structures involved in the perceptions of social stimuli. Specifically, Medial Prefrontal Cortex (MPFC; for a review, see Amodio & Frith, 2006) is the brain region most reliably involved in social cognition. From the available literature emerged that MPFC is highly activated when people are implicated in social judgments, concerning self or others. For instance, Harris, McClure, Van den Bos, Cohen, and Fiske

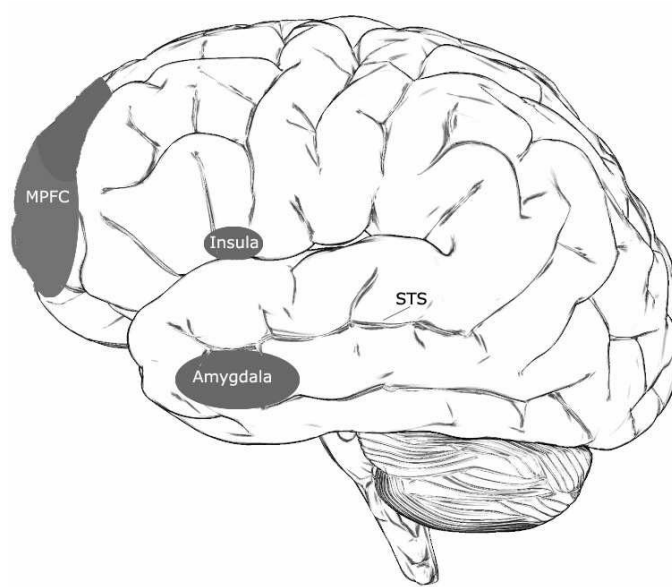


(2007; see also Mitchell, Banaji, & Macrae, 2005; Mitchell, Heatherton, & Macrae, 2004) showed that MPFC is differentially activated when people have to form an impression of a person rather than an object. Moreover, other studies (see, e.g., Castelli, Happé, Frith, & Frith, 2000; Fletcher et al., 1995) have shown an increased MPFC activity when individuals are engaged in theory of mind tasks, or when they are asked to make inferences about a person rather than an object (see Harris, Todorov, & Fiske, 2005).

According to the Stereotype Content Model (SCM; Fiske et al., 2002) stereotypes are structured in two dimensions: competence and warmth. Social groups are evaluated as intending either help or harm (warmth) and as either capable or not of enacting those intentions (competence). The intersection of the two dimensions originates four different clusters also producing four different emotions (indicated in parenthesis): high competence/high warmth (pride); high competence/low warmth (envy); low competence/high warmth (pity); low competence/low warmth (disgust). According to the model, the most derogated groups are those with low levels of both competence and warmth, such as gypsies, homeless, drug addicted. Thus, authors hypothesized that low/low groups should lead to a different activation of MPFC compared to other groups, since they are not perceived as human.

By using functional magnetic resonance imaging (fMRI) participants' neural activity was recorded while they were presented with a series of pictures of social targets, belonging to each of the four clusters. Significant MPFC activity emerged when participants were exposed to social targets eliciting pity, envy or pride. Conversely, a not significant activation of this region was found when images belonged to groups rated low in both competence and warmth; these stimuli, instead, led to a significant activation of left insula and right amygdala, two brain regions activated in response to disgusting (insula) or frightening (amygdala) objects (see Figure 1.6).

Figure 1.6. Neural regions implicated in dehumanized perception.



*Note.* From “Perceiving humanity: Dehumanized perception demonstrates social neuroscience approach,” by L. T. Harris, and S. Fiske, in press, in A. Todorov, S. Fiske, & D. Prentice (Eds.), *Social Neuroscience: Toward Understanding the Underpinnings of the Social Mind*. Copyright by Oxford University press.

# Chapter 2

## In the Aftermath of Humanity Denial: Consequences of Dehumanization

*"Mankind is unacceptable"*

*(Emile Cioran, 1983)*

### 2.1 – Introduction

During one of the bloodiest episodes in recent history, the Rwandan genocide, the intensive Hutu propaganda depicted Tutsi as "*inyenzi*" (cockroach in Kinyarwanda language) that deserved to be exterminated. Without underestimating the role of political, colonial, and economical factors, this association contributed to causing almost one million of victims in an incredibly short period of time (from April to July 1994). In addition, the killings were committed with incredible cruelty and were often associated with episodes of violence against women and other forms of physical and psychological violence and torture (Staub, 2006). Thus, dehumanizing the other to disgusting creatures eliminated moral barriers allowing the use of extreme violence.

Rwandan genocide, along with other similar episodes, such as Jewish holocaust (Lindqvist, 1998) or American Indian extermination (Drinnon, 1990), represents an extreme case of dehumanization outcome. Unfortunately, the consequences of humanity denial are not limited to intergroup contexts characterized by blatant conflicts. As underlined in Chapter 1, along with explicit forms of dehumanization that delegitimize individuals into extreme negative categories (Bar-Tal, 1989), more subtle expressions of humanity bias are present in society, such as infracumanization (Leyens et al., 2007) or objectification (Nussbaum, 1995). These deceitful forms of humanity denial have proved to shape negative consequences for the outgroups, consequences that are not extremely detrimental but they have a substantially negative impact for the targets. In the current chapter we review the psychosocial contributions in understanding the consequences of humanity denial to other groups and individuals.

### 2.2 – Dehumanization and Aggression-related Consequences

Earlier psychosocial theoretical approaches that investigated humanity denial process emphasized its role in facilitating aggression and violence by defusing moral sanctions (for further details, see Chapter 1 and 3). With regard to this point, several

empirical researches tested the relation between humanity attributions and aggression against the outgroup.

Bandura and colleagues (Bandura et al., 1975) investigated the effects of dehumanization, and personal responsibility on the Milgram paradigm (1974). Participants had to supervise for a three-member team of decision makers that had to perform a collective solutions assignment. In this task, respondents had to administer an electrical shock in order to punish poor proposals. Moreover, they could choose the intensity of the shock that ranged from mild to extremely painful. Before starting the supervision, humanity of the team member was manipulated. In the dehumanization condition, targets were described as animals; in the humanity condition, decision makers were depicted as perceptive and understanding; in the control condition, no evaluative references were given. Moreover, responsibility was manipulated: personal vs. collective.

Results showed participants gave more roughly punishment when they perceived team members as non-humans, namely disengaged from moral protection. On the contrary, the lowest level of aggression was observed in humanization condition. Making salient the humanity of targets enhanced the moral action by strengthening the effect of empathy toward others' suffering.

Similar results were obtained by Struch and Schwartz (1989). In a study carried out in Israel, authors found that the denial of uniquely human traits to the outgroup (represented by ultraorthodox Jews) was positively related with increased aggression (e.g., support for overt aggressive actions, social distance).

More recently, Moller and Deci (2009) investigated the relation between mechanistic dehumanization (Haslam et al., 2008), interpersonal control (see, e.g., Deci & Ryan, 2008), and aggression, measured as a trait-level variable, namely the individual tendency to act aggressively (Buss & Perry, 1992). Interestingly, authors found that the perception of been controlled by other people led to increase the association between the self and machines that, in turn, influenced aggression. Coherently to Haslam's model, the perception that it is not possible to control one's actions is linked to lack of agency, a human nature trait, that is responsible of the mechanistic form of humanity denial.

Further evidence that dehumanization affects aggressive reactions was provided by Greitemeyer and McLatchie (2011). In particular, the aim of the study was to test the effects of playing violent video games on humanity and aggression, assessed as the negative evaluation of a person who intended to apply for a job (Bushman & Anderson, 1998). Participants initially were asked to write an essay about their attitudes toward the

British National Party, along with another participant (fictitious), and then played a video game that varied across condition, violent vs. non violent. Finally, after receiving the evaluation of the essay, allegedly made by the other participant, participants completed the humanity measures (traits and emotions) and were asked to rate the suitability of the fictitious participant for the job. Evaluations of the essays were all negative. From results emerged a mediation effect of dehumanization, namely playing a violent video game increased humanity denial to the other participant that, in turn, increased aggressive behavior against him.

Castano and Giner-Sorolla (2006) provided some evidences of an indirect association between humanity attributions and violence. The purpose of the research was to investigate whether the perception of collective responsibility would have affected humanity attributions (primary vs. secondary emotions). Across three studies and considering different intergroup relations, ingroup responsibility for past misdeeds against the outgroup was manipulated. Results showed that, when ingroup responsibility was made salient, participants infrahumanized the outgroups more than in the condition where ingroup responsibility was not present. Thus, reminding individuals of the killing of outgroup members by their group led to enhance outgroup infrahumanization. In contrast, the denial of a full human status to the outgroup did not decrease collective guilt for past wrongdoings.

Finally, further evidence that humanity affects violence has been provided by Motyl and colleagues (Motyl, Hart, & Pyszczynski, 2010). In particular, the relationship between Right-wing authoritarianism, infrahumanization, and support for violence from a Terror Management Theory perspective has been tested (Greenberg, Pyszczynski, & Solomon, 1986). Terror Management Theory argues that people are motivated to elevate themselves above other animals as a strategy of denying their creatureliness and mortality. Thus, the fear of death should lead individuals to avoid non human behaviors because they would act as a reminder of the mortality nature of humans.

In this study, authors hypothesized that infrahumanized violence should decrease support for aggression against a threatening outgroup (supporting war against Iran) only for high authoritarian participants (generally more supportive of detrimental actions toward other groups) and only when mortality is salient. To test their prediction mortality salience (present vs. non present) and violence (infrahumanized violence vs. humanized violence) were manipulated. In infrahumanized violence condition, participants read a brief text that underlined the similarity between violence perpetrated by humans with violence observed

in animal kingdom; conversely, in humanized violence condition, the difference between the two forms of violence was highlighted. The hypothesis was confirmed. In fact, in the mortality salience condition and inhumanized violence condition high authoritarian respondents showed reduced support for war. Thus, animal-like violence and the reminder of death triggered the existential defense that led to avoid aggression and then lessened sustain for war.

### **2.3. – Humanity Attributions, Attitudes and Discrimination**

Similarly to other forms of prejudice and outgroup derogation, humanity denial leads to unfavorable attitudes and discrimination. Evidence of these processes was found by using both correlational and experimental designs. For example, Hodson and Costello (2007) found a mediation effect of dehumanization between disgust sensitivity, social dominance orientation and negative attitudes toward immigrants.

Results of the previous study were extended in a further research (Costello & Hodson, 2010). In two studies, considering the relation between Canadians and immigrants, Costello and Hodson investigated the role of human-animal similarity on dehumanization and prejudice toward immigrants. In Study 1, it was hypothesized that the enhancement of animal–human similarity would have predicted lower levels of immigrant prejudice through increased outgroup humanization, since similarity (vs. dissimilarity) generate positive outcomes (Gaertner & Bickman, 1971; Krebs, 1975) . Findings corroborated this prediction. In fact, the perception that humans are relatively similar to non-human animals increased the attributions of uniquely human traits that to immigrants, in turn, decreased prejudice toward immigrants. In Study 2, the role of human-animal similarity was further investigated. In one condition, it was emphasized that humans are similar to animals; in a second condition, it was stressed that animals are similar to humans. Findings revealed that perceiving animals similar to humans (but not the opposite) increased outgroup humanization that, in turn, increased empathy, promoted ingroup/outgroup re-categorization, and inhibited prejudice.

Čehajić and collaborators (Čehajić, Brown, & Gonzalez, 2009) replicated the effects of dehumanization on empathy considering conflictual intergroup contexts (indigenous vs. non indigenous, in Chile, and Serbs vs. Bosnians, in Bosnia Herzegovina). In two studies authors found that humanity attributions, along with perceptions of collective responsibility for past atrocities, contributed to enhance empathy toward the victims.

The role of humanity perceptions in influencing public opinion about critical issues was explored in two studies. Pereira, Vala, and Leyens (2009) experimentally investigated the effect of humanity attributions to Turks on symbolic threat and opposition to the admission of Turkey to the European Union (measure of discrimination). In particular, outgroup humanity was manipulated. Participants read a bogus newspaper article describing how Turks express emotions. In the humanization condition, it was emphasized that the outgroup expresses more readily secondary than primary emotions; in the infrahumanization condition, it was told that Turks express more readily primary emotions; in control condition, no information were provided regard outgroup and emotions. As predicted, humanization of the outgroup decreased the opposition to Turkey admission to UE. Moreover, this relation was mediated by reduced perception of intergroup threat.

Zebel and collaborators (Zebel, Zimmermann, Viki, & Doosje, 2008) investigated the role of dehumanization in influencing of collective guilt and support for reparation policies (Bosnians Muslims were the outgroup). In two studies authors hypothesized that humanity attributions would have been related to group-based guilt that, in turn, would have positively enhanced support for reparation policies. Humanity perceptions were assessed by considering, separately, ingroup and outgroup humanity, and ingroup and outgroup animality. In both studies, the valence of past ingroup's behaviors (the role of Dutch soldiers in the former Yugoslavian war) was manipulated: negative vs. positive vs. neutral. In Study 1, humanity was assessed after the manipulation in order to measure dehumanization as a response to ingroup's past misdeeds. In Study 2, humanity attributions were administered before the manipulation, in order to test the effect of individual differences in respondents' tendencies to deny humanity to outgroup. Results were generally coherent with the hypothesis. In Study 1, attributions of humanity to outgroup, positively, and attributions of animality to the outgroup, negatively, influenced support policies. In Study 2, findings were partially replicated. Both outgroup and ingroup humanity/animality attributions influenced the dependent variable. In particular, ingroup and outgroup perceptions of humanity increased support for social policies through the mediation of increased collective guilt.

#### **2.4. – Infrahumanization and Pro-social Behaviors**

Research on infrahumanization provided several studies that investigated whether the tendency to reserve a fully human essence to one's group can lead to negative effects on pro-social behaviors. According to Vaes and colleagues (Vaes, Paladino, Castelli,

Giovanazzi, & Leyens, 2003), observing outgroup members that express secondary emotions should lead to negative behaviors toward them. In fact, it can be perceived as an attempt to raise the outgroup to the privileged status of ingroup, threatening its fully human essence. Authors investigated this possibility considering helping behaviors (Carella & Vaes, 2006; Vaes et al., 2003). In one study, an adapted version of lost e-mail paradigm was used (Castelli, Zogmaister, & Arcuri, 2001; see also Milgram, 1977). A large number of e-mails were randomly sent to scientists involved in research from different Belgian universities. The sender requested help because he did not receive the grant he was hoping for. Depending on the group condition, the sender presented himself as a researcher coming from the university (ingroup member) or as a researcher coming from the private sector (outgroup member). Moreover, according to emotion condition, half participants received the e-mail containing a secondary emotion (indignation), the other half received the e-mail with a primary emotion (rage). The number of responses and the usage of second-person singular person were considered as dependent measures. In fact, the use of informal than formal pronouns was an index of empathy and solidarity (Brown, 1970). Results showed no difference concerning the number of responses. Concerning the use of pronouns, the highest "solidarity score" was found when sender presented himself as an ingroup member using a secondary emotion; conversely, when an outgroup member expressed the secondary emotion, he was treated more formally. No differences in "solidarity score" were found as a function of group membership and primary emotions.

Previous findings were further investigated and extended by Carella and Vaes (2006) considering the lost SMS technique. According to this paradigm, a number of SMS were randomly sent to a sample of Italians. The sender introduced himself as a supposedly Italian friend (ingroup member) or as a fictitious German friend (outgroup member) that was looking for help. According to the condition, helping request was expressed by using a secondary emotion (resentment) or a primary emotion (rage). Similarly to the previous study, SMS responses were more friendly and empathic when the sender was an ingroup member and used secondary emotion compared to when he was an outgroup member and used the same secondary emotion. No difference was found for the primary emotion.

Cuddy and collaborators (Cuddy, Rock, & Norton, 2007) investigated inferences about humanity of ingroup and outgroup victims after a natural disaster, and their effects on intergroup helping. Data were collected just after Hurricane Katrina. Participants read a story about a mother whose child died during the hurricane. The characters of the story could be, according to the condition, ingroup or outgroup members. After the story,



respondents inferred the feelings, expressed as primary or secondary emotions, experienced by the mother. Finally, two items asked the intention to volunteer to Hurricane Katrina relief efforts, and past volunteering. From results emerged a positive relation between outgroup secondary emotions inference and intention to help victims of Hurricane Katrina.

## **2.5 – Infracommunication and Intergroup Forgiveness**

Intergroup forgiveness represents the ceasing to blame or hold resentment against a group that harmed the ingroup. Research has demonstrated that it is a powerful strategy for reconciliation (Staub, 2001). The role of humanity attributions in this process is tricky. On the one hand, outgroup humanization could act as catalyst that promotes forgiveness for past misdeeds; on the other hand, harmed groups could be mistrustful of expressions of secondary emotions from outgroups (Vaes et al., 2003, see also Paragraph 2.4) with the consequence that forgiveness could be inhibited. Tam and colleagues (2008; see also Tam et al., 2007) corroborated the first issues. Considering the relationship between Catholics and Protestants in Northern Ireland, authors found that infracommunication, along with empathy and anger, mediated the relation between intergroup contact and forgiveness. Perceiving the outgroup in terms of uniquely human emotions enhanced the tendency to forgive past harmful acts. These findings were replicated by Whol and colleagues (Whol, Hornsey, & Bennett, 2012). Moreover, authors found that the relation between attributions of secondary emotions and forgiveness was mediated by empathy.

In order to test the second line of thought, namely whether the expression of secondary emotions by the outgroup could lead to decreased forgiveness, further studies were conducted. For example, in a study (Whol et al., 2012), participants read a newspaper article reporting an official apology, offered by an Afghan minister (outgroup member), for the accidental killing of a Canadian soldier (ingroup member). According to the experimental condition, apology was expressed by using primary emotions (anger and sadness) or secondary emotions (shame and concern). As criterions, empathy and forgiveness were assessed. Results showed that the manipulation influenced both the dependent variables: participants reported less empathy and less forgiving in the secondary emotions condition. Moreover, a mediation model was successfully tested: uniquely human features decreased the tendency to forgive outgroup's wrongdoing through the effect of reduced empathy.

## **2.6 – Dehumanization and Morality**

Morality is a core characteristic of humanity. In fact, it represents the most important dimension for positive group evaluation (Leach, Ellemers, & Barreto, 2007). In particular, being human involves having a moral status, namely: patiency (having the capacity to be recipient of morally relevant behaviors), agency (the desire to actively engage in moral behavior), and responsibility (the capacity to be responsible for immoral behavior). Thus, the denial of a fully human status to individuals should lead to damage evaluation of their morality. To test this possibility, Bastian and colleagues (Bastian, Laham, Wilson, Haslam, & Koval, 2011) conducted two studies considering the two sense of humanness proposed by Haslam (2006). In a study, authors intended to investigate the relation between humanity and formation of moral judgments. Target outgroups were selected considering the stereotype content model (Fiske et al., 2002). Participants first rated these groups on uniquely human and human nature traits, and then were asked to imagine a member of each social category had performed a series of behaviors, both moral (e.g., lending a hand to a person with a flat tire), and immoral (e.g., making a promise and not keeping it). Finally, respondents provided moral judgments, namely blame (linked to responsibility), praise (related to agency), and patiency, for each imagined behavior and were required to think about how much individuals generally would endorse “punishment” as reaction to the wrongful behavior of members of each group. They were also asked how much people would support “rehabilitation” to make clear the reasons why the behavior was inappropriate. Results confirmed the relation between humanity and morality attributions. In particular, the uniquely human traits affected positively blame and negatively patiency; human nature traits enhanced praise and patiency. Moreover, endorsing punishment was enhanced by perception of the outgroup as defined by uniquely human characteristics while rehabilitation was positively associated to human nature. Findings were replicated experimentally in a second study.

If morality represents an important positive dimension for the concept of humanity then the awareness that animals share some features with human being should increase moral concern toward non-human entities. To test this possibility, Bastian and collaborators (Bastian, Costello, Loughnan, & Hodson, 2012) conducted three studies. Moreover, authors suggested that, according to previous research (Costello & Hodson, 2009), salience should lead to expand moral concerns to the outgroup. In the first study, participants first wrote an essay on similarities between humans and animals, and then completed a humanity measure of mind attributions (see Paragraph 1.4.1) to a specific

animal, a cow. Results showed that, when participants underlined the animal-human similarity in the essays (e.g., “animals are motivated to avoid pain and to seek pleasure, just like humans”), humanity attributions to the target were higher than for participants that highlighted the human-animal similarity (e.g., “humans are motivated to avoid pain and to seek pleasure, just like animals”). Results were replicated in the second study with an experimental design. In a further study, findings were extended to human outgroups. Similarly with previous studies, participants completed an essay. According to the condition, participants were asked to focus on animal-human similarity or to focus on human-animal similarity. Also a control condition was provided. Then, moral concern for animals and marginalized human outgroups (e.g., Asians, Blacks) was assessed. From findings emerged that animal-human similarity, compared with the other conditions, enhanced moral concern for the outgroups. In addition, this relation was mediated by concern for animals.

## **2.7 – The Negro-Ape Metaphor**

Historical representations explicitly associated African-Americans to primates. This phenomenon has largely disappeared in the United States, at least at an explicit level. Nevertheless, Goff and collaborators demonstrated that, at an implicit, unaware, level, Blacks are still linked with apes. In a study, it was tested whether this association would have led to negative consequences, namely justification of violence against African-Americans (Goff et al., 2008, Study 5). White participants were subliminally primed with ape-related words or with big cat-related words. Afterwards, participants watched footage of a group of police officers violently beating a suspect. Depending on the condition, the suspect was an African-American or a White individual. After the footage, participants rated how much the beating was justified. Data analysis showed that participants, who watched the video in the Black suspect condition, perceived the violence more justified when the ape category was made salient rather than the big-cat category. Conversely, in the White suspect condition, the prime did not affect respondent’s judgments of legitimacy. Moreover, this effect was not moderated by an individual implicit prejudice against Black people.

Rattan and Eberhardt (2012) demonstrated that the Negro-Ape metaphor could influence individual perceptions to visual stimuli. Inattention blindness represents the failure to notice an unexpected stimulus that is in plain sight. An example of this phenomenon was provided by Simon and Chabris (1999). They showed participants a

video of 2 teams with 3 players each, passing balls to one another and asked them to count the number of passes made among the players in white shirts. At same point in the video, someone wearing a gorilla costume entered the scene and remained visible for a few seconds, directly through the participant's visual field, clearly visible to anyone not counting the passes. Results showed that 42% of viewers saw the gorilla; thus, more than half of participants did not detect the big-ape because their attentional resources were allocated to another task. Rattan and Eberhardt found that when the association between African-Americans and primates was activated, attentional bias was significantly reduced. Thus, the Negro-Ape metaphor led respondents' visual system towards associated visual information that would otherwise be overlooked.

# Chapter 3

## When Dehumanization Wounds: The Role of Humanity Attributions and Executive Functions in the Decision to Shoot

*"We must understand the evil inside us  
rather than condemn only the violence outside us"*  
(Bruno Franchi, 2011)

### 3.1 – Introduction

Acting violently against a human being is, in any case, a reprehensible action. Over several years, a large number of episodes of meaningless violence toward disadvantaged minorities have shaken public opinion. For example, in February 1999, Amadou Diallo, a young West African immigrant, received 41 gunshots from two police officers that erroneously believed that he was armed; in 2006, two plain-clothes police officers fired 50 times toward the 23-years-old unarmed African American Sean Bell; in Parma, Emmanuel Bonsu, a Ghanaian student, was repeatedly beaten by seven municipal police officers on suspicion of possessing drugs. The young student was just walking in a park in front of his school waiting for the start of lessons. Episodes like these stimulated research in Social Psychology in attempting to understand the mechanisms underlying these actions. Empirical evidences have shown that negative acts toward unarmed individuals are triggered by the stereotypical association between the group and the perception of danger (Payne, 2001; 2005). Nevertheless, the role of humanity denial in this perception has been little investigated. Moreover, dehumanization could have also driven the extreme reactions toward the outgroup members. In fact, it has been widely demonstrated that humanity denial has negative consequences for groups and individuals (see Chapter 2). Among these unfavourable effects, the most dangerous are probably represented by violent/aggressive actions (see, e.g., Bandura et al., 1975).

The aim of the current chapter is to investigate the role of humanity attributions in violence domain. Two studies were carried out to unfold the relation between dehumanization and the perception of threat, a dimension linked to aggressive reactions (Correll, Park, Judd, & Wittenbrink, 2002; Payne, 2005), and the relation between humanity denial and violent behaviors considering also the effects of behavioral control

(Govorun & Payne, 2006). In both studies, Moroccan outgroup will be considered because it represents a consistent minority in Italy.

### **3.2 - Study 1: Dehumanization and Perceptions of Threat**

One of the first attempt to unfold violent phenomena against the outgroup was provided by Payne (2001). In particular he proposed a weapon identification task to study whether race could influence the misperception of an object as a gun (for further details see Paragraph 3.2.1.1). In his pioneering research, Payne (2001) found that participants were faster to discriminate weapons from tools when they were preceded by a face of an outgroup member, rather than when arms were preceded by a face of an ingroup member. Moreover, results showed a greater error rate when participants had to identified a tool before the presentation of outgroup related stimuli. This particular bias has been called Weapon Bias. This effect has been found considering different outgroups (e.g., African Americans: Payne, Shimizu, & Jacoby, 2003; Middle-Easterns: Fleming, Bandy, & Kimble, 2010). Moreover, literature found that this bias is driven by: cultural stereotypes (Correll et al., 2002); explicit (Payne, 2001) and implicit (Payne, 2005) negative attitudes; gender of the target (Jones & Fazio, 2010; Plant, Goplen, & Kunstman, 2011); phenotypic racial stereotypicality (Barsamian Kahn & Davies, 2010); exposure to mass media (Latrofa, Vaes, & Arcuri, 2012); mortality salience (Bradley & Kennison, 2012). The aim of the present study is to investigate the role of humanity denial in the perception of the outgroup as dangerous. In fact, the relation between humanity attributions and perception of danger is little investigated (but see Delgado, Rodríguez-Pérez, Vaes, Leyens, & Betancor, 2009). However, dehumanization may lead to enhance the dangerousness of the outgroup because this particular stereotype is associated with lacking of morality, a uniquely human characteristic, lacking of control and rationality (Haslam et al., 2008). As a consequence, perceiving the others as less human should increase the perception that they could act immorally. Therefore, we hypothesized that the denial of humanity should be positively related to perception of danger, assessed by employing the weapon bias paradigm. Since this is, to our knowledge, the first study investigating the effects of humanity attributions on danger, we considered different measures of humanity. We also provided an explicit measure of threat to control the results.

### **3.2.1 – Method**

#### **3.2.1.1 - Participants**

Sixty-eight Italian participants (48 female, 19 male, 1 missing data;  $M_{age} = 23.88$ ;  $SD = 3.08$ ) attending a large Italian university took voluntarily part in the study.

#### **3.2.1.2 - Measures**

*Humanity Go/No-go association test (GNAT)*. The GNAT is an implicit technique that allows researchers to measure the automatic mental associations between a category (e.g., Moroccans) and a concept (e.g., humanity). In this task (see Capozza, Andrighetto, Di Bernardo, & Falvo, 2012), participants had to discriminate signals from distracters. Stimuli were represented by five Italian names (e.g., Marco, Matteo) vs. five Moroccan names (e.g., Yakub, Mohammed) and five humanity concepts (e.g., bachelor, citizen) vs. five animal concepts (e.g., cub, fauna). The test was composed of four blocks so each combination of categories was analyzed: Moroccan names/human-related words; Moroccan names/animal-related words; Italian names/human-related words; Italian names/animal-related words. Each block included 40 trials presented in a randomized order and each stimulus was presented twice. Moreover, participants completed several practice trials in which they learnt to discriminate Moroccan names from Italian names and human-related words from animal-related words. To identify the blocks, two target labels were shown in the upper left and upper right quadrants of the screen to remind respondents of the target group and the target attribute to be identified (e.g., Moroccan names/animal-related words). In each block, the contrasting group and the contrasting attribute represented the distracters. Respondents had to press the spacebar (go), as quickly as possible, for stimuli belonging to the categories indicated by labels; conversely, for stimuli representing the distracter categories, participants had not to press any key (no-go). Target stimuli remained visible on the screen for 800 ms. An accuracy feedback appeared during the 400 ms interstimulus interval: a correct response, namely a hit (pressing the space bar for a target item) or a correct rejection (not pressing it for a distracter item), was followed by a green “O”; an error, namely a false alarm (pressing the space bar for a distracter item) or a miss (not pressing it for a target item), was followed by a red “X”.

*Humanity attributions*. To measure humanity perceptions toward the ingroup (Italians) and the outgroup (Moroccans), four uniquely human (UH, reasoning, rationality, morality,

intellective abilities) and four non-uniquely human traits (N-UH, instinct, drive, impulsiveness, impetus) were used (Capozza, Trifiletti, Vezzali, & Favara, 2012). In a pre-test, participants evaluated a number of traits on the following 9-point scales: *uniquely animal versus uniquely human* (*shared by humans and animals* was the mid-point); *positive versus negative* (*neither positive nor negative* was the mid-point). Eight traits were selected: four rated as uniquely human and four as non-uniquely human, namely shared by humans and animals. Both uniquely and non-uniquely human traits were evaluated as slightly positive.

Participants rated first the outgroup and then the ingroup on the eight items, presented in a fixed random order. Alphas ranged from .77 to .84.

*Crime rates.* Respondents indicated the percentage of six different crimes (e.g., robbery, car theft) committed by Moroccans in Italy. We provided different percentages that varied across items. Responses were coded from 1, the lowest percentage value, to 6, the highest. Alpha was .91.

Figure 3.1. Stimuli sequence in the weapon task.



*Weapon task.* To assess perceptions of threat, we used a supraliminal priming task, a modified version of the “Weapon Bias” Task (Payne, 2001). In the center of a computer screen we presented a series of prime faces (Moroccan faces vs. Italian faces) followed by objects (weapons vs. tools). Both faces and objects were presented one at a time. Participants were instructed to classify, as quickly and accurately as possible, each target as either a gun or a tool by pressing the appropriate key. Each trial started with a fixation point (+), then, a prime face appeared for 200 ms followed by the 200 ms target object. Finally, a warped mask covered the object and remained on the screen until a response



was given (see Figure 3.1). In a 64 trials block participants had to press “m” key to classify weapons and “z” key to classify tools; in another 64 trials block the response keys were inverted. Before the two critical blocks, participants received 80 practice trials to become acquainted with the faces (40 trials) and with the objects (40 trials).

### 3.2.1.3 - Procedure

To ensure not to raise suspicion regarding the aim of the study, experimental procedure was split in two parts. In the first part, participants completed independent measures, namely the GNAT (Nosek & Banaji, 2001) and a questionnaire assessing humanity and crime attributions ratings. In the second part, carried out from one to four days later, participants executed the modified weapon task (Payne, 2001) and then provided some personal information. Finally, participants were thanked and debriefed.

### 3.2.2 - Results

*Humanity GNAT.* For each of the four blocks, a sensitivity index ( $d'$ ) was computed, following the algorithm proposed by Green and Swets (1966; see also Banaji & Greenwald, 1995). This index indicates the capacity to discriminate targets from distracters; thus higher  $d'$  scores express greater sensitivity and, consequently, a stronger mental association between the two critical categories.  $D$ -prime values equal or below 0 were discharged from analysis since they represent the incapacity to discriminate targets from distracters or to perform the task correctly (Nosek & Banaji, 2001).

$D$ -prime values were submitted to a 2 (Target Group: Italians vs. Moroccans)  $\times$  2 (Target Attribute: human-related vs. animal-related) repeated measures ANOVA. Results did not reveal any significant main effect,  $F_s < 1$ . The Target Group  $\times$  Target Attribute interaction was significant,  $F(1, 67) = 72.46, p < .001, \eta^2_p = .52$ . From simple effect analysis emerged that participants associated the Italian group ( $M = 2.77, SD = .79$ ), more than the Moroccan group ( $M = 2.13, SD = .75$ ), to humanity,  $F(1, 67) = 38.84, p < .001, \eta^2_p = .37$ ; moreover, the ingroup was more associated with humanity than with animality,  $F(1, 67) = 36.29, p < .001, \eta^2_p = .35$ . In contrast, the outgroup ( $M = 2.91, SD = .92$ ) was more associated than the ingroup ( $M = 2.23, SD = .78$ ) with animality,  $F(1, 67) = 36.29, p < .001, \eta^2_p = .35$ . Finally, the outgroup was more associated to animality than to humanity,  $F(1, 67) = 39.82, p < .001, \eta^2_p = .37$ .

*Traits.* In order to create the trait-based humanity measure, we averaged the four UH traits and the four N-UH traits separately for each group; scores were then submitted to a

2 (Target Group: Italians vs. Moroccans) × 2 (Traits: UH vs. N-UH) repeated measures ANOVA. Analysis revealed a main effect for trait,  $F(1,67) = 17.32, p < .001, \eta^2_p = .20$ , but not for group: participants ascribed more N-UH traits than UH traits. By the way, this effect was qualified by the Target Group × Traits interaction, marginally significant,  $F(1,67) = 3.33, p = .07, \eta^2_p = .05$ . Simple effects analysis showed that respondents attributed to the ingroup more N-UH traits ( $M = 4.84, SD = .81$ ) than UH traits ( $M = 4.53, SD = .91$ ),  $F(1,67) = 4.44, p < .05, \eta^2_p = .06$ ; similarly, the outgroup was more defined by N-UH ( $M = 4.94, SD = .93$ ) traits than UH traits ( $M = 4.25, SD = .94$ ),  $F(1,67) = 16.20, p < .001, \eta^2_p = .20$ . Moreover, UH traits were ascribed more to Italians than to Moroccans,  $F(1,67) = 4.19, p < .05, \eta^2_p = .06$ ; no significant effect was found N-UH traits,  $F < 1$ .

Table 3.1. Mean reactions times (in millisecond) in identifying weapons and tools.

Target	Prime			
	Moroccan Target		Italian Target	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Weapon	356 a	83	370 b	88
Tool	372 b	85	372 b	88

*Note.* A different subscript in the same row or column indicates that the two means are significantly different,  $p < .001$ .

*Weapon task.* To investigate the weapon bias effect, we examined response latencies (RT) when respondents discriminated weapons and tools within each priming condition. In data reduction, we excluded error responses and latencies higher than 3 standard deviations from the overall mean, and then remaining latencies were log-transformed (Ratcliff, 1993). Finally, we computed the four means, one for each group/prime combination and we applied a 2 (Target Group: Italians vs. Moroccans) × 2 (Object: weapon vs. tool) repeated measures ANOVA. From results emerged a main effect for Group Target,  $F(1,67) = 8.00, p < .01, \eta^2_p = .11$ , and for Object,  $F(1,67) = 17.80, p < .001, \eta^2_p = .21$ . However, these effects were qualified by the two-way interaction Target Group × Object,  $F(1,67) = 12.15, p < .001, \eta^2_p = .15$ . Simple effects analyses revealed that participants were faster in individuating weapons when preceded by a Moroccan prime than when preceded by an Italian prime,  $F(1,67) = 15.46, p < .001, \eta^2_p = .19$ ; moreover, for Moroccans primes, respondents were faster in categorizing weapons than objects,  $F(1,67)$

= 33.03,  $p < .001$ ,  $\eta^2_p = .33$ . No other significant effect emerged in the other comparisons,  $F < 1$ . Means and standard deviations of reaction times are provided in Table 3.1.

*Regression Analysis.* In order to investigate our main hypothesis, first we computed a weapon bias index by subtracting the RT when identifying weapons in the Moroccan prime condition from RT when identifying weapons in the Italian prime condition<sup>3</sup>. Higher scores indicate a greater association between weapons and Moroccan targets than between weapons and Italian targets. Moreover, we averaged the six crime ratings in order to create a composite score expressing the perceptions that Moroccans are responsible for crimes in Italy.

We ran a hierarchical regression in which we first used humanity attributions (trait-based measure and Go/No-go) to Moroccans (Step 1) and then entered the crime rate scale (Step 2). At Step 1, predictors accounted for a significant amount of variance,  $R^2 = .11^*$ ,  $p < .05$ . As indicated in Table 3.2, the association between Moroccans and animality, measured with the GNAT, and the attribution of N-UH traits were significant predictors of the weapon bias index. These effects remained significant after controlling for the crime rate measure. Thus, the introduction of a further predictor at Step 2 did not add a significant portion of explained variance in the association between weapons and the outgroup,  $\Delta R^2 = .02$ , *ns*.

Table 3.2. Results of hierarchical regression analysis; dependent variable: Weapon Bias Index.

Predictors	Step 1		Step 2	
	$\beta$	$t(63)$	$\beta$	$t(62)$
UH Moroccans	.10	.816	.14	1.10
N-UH Moroccans	.33**	2.28	.29*	2.34
$d'$ Moroccans/Humanity	.12	.87	.11	.911
$d'$ Moroccans/Animality	.28*	2.29	.27*	2.25
Crime Rates	-	-	.14	1.07

*Note.*  $R^2 = .11^*$  - Step 1;  $\Delta R^2 = .02$  - Step 2. \*  $p < .05$ ; \*\*  $p < .01$ . Weapon Bias index is computed as the difference between RT Italian faces/weapons and RT Moroccan faces/weapons.

<sup>3</sup> We considered the log-transformed RTs

### **3.2.3 - Discussion**

Study 1 provided some new insights on the effect of humanity denial on perceptions of the outgroup as dangerous. First, the Weapon Bias effect was replicated in a different context and with a different intergroup relation. Results showed the facilitation effect of outgroup-related primes in recognition of dangerous stimuli. It is worth noting that, in Italy, the use and the presence of fire arms in everyday life is not as widespread as in other nations, in particular in the United States, where the majority of studies in this domain has been carried out. Thus, our results showed that the association of Moroccans with danger is consistent since it has been found considering stimuli, namely weapons, not familiar in Italian context.

Moreover, we found that this bias is related to humanity attributions to the outgroup. In particular, the association between Moroccans and arms was significantly related to different humanity measures, namely the attribution of N-UH traits and the association between the outgroup and animality, in the GNAT. This result was confirmed when considering crime rates as a covariate. On the other hand, we found no effect of UH traits and the association between the outgroup and humanity concepts. Thus, we argue that the perception of the outgroup as dangerous is not related directly to humanity but it is affected by lacking of it, namely by the attributions to the outgroup of features that humans share with other animals and by the outgroup/animality association. Moreover, research has demonstrated that self-control, capacity for inhibition, responsibility for positive and negative behaviors, represent morally relevant traits that people use to evaluate others' morality (Alicke, 2000; Fincham & Jaspars, 1980; Knobe, 2003; Pizzarro, Uhlman, & Salovey, 2003; Shaver, 1985; Weiner, 1995), a characteristic strongly associated with humanity (Opatow, 1993). In particular, the capacity to be responsible for negative actions is related to humanity perception (Bastian et al., 2011). Thus, perceiving Moroccans as instinctive and impulsive, namely not fully human, could trigger the perception that their behavior is not driven by rationality or sense of responsibility. In this way, individuals may interpreting outgroup intentions and actions as detrimental for the ingroup. This process may contribute to increase the perception of danger.

### **3.3 - Study 2: Humanity Attributions and Violent Acts Against the Outgroup.**

#### **The Moderator Role of Executive Functions**

In Study 2 our aim is to further investigate the relation between dehumanization and aggression by considering the effects of humanity attributions on violent behaviors. Dehumanization and violence/aggression are linked processes (see, e.g., Greitemeyer & McLatchie, 2012; Motyl et al., 2010): the denial of a fully human status to others leads to defuse moral self-sanctions from detrimental actions (Bandura, 1999; see also Chapter 2). Humanity denial, in fact, represents a process that allows individuals to harm others without experiencing negative psychological implications. When individuals evaluate their behavior as violating moral standards endorsed by society, they usually engage in self-condemnation and apply self-sanctions, which maintain behavior in accord with moral standards. In fact, perceiving the other as a human being triggers empathic reactions that make it difficult to harm without enabling psychological states of discomfort (Volpato, 2011). Dehumanization prevents the application of self-sanctions under certain circumstances, and thus allows us to enable harmful behaviors, which would be avoided under different circumstances. However, many theoretical approaches investigating dehumanization focused on humanity denial in conflictual intergroup contexts (Bandura, 1999; Bar-Tal, 1989; Opatow, 1990; Struch & Schwartz, 1989). We argue that humanity denial is related with increased violence against the outgroup even in environments where conflict is not blatant. In fact, empirical evidences have demonstrated that humanity is positively related to aggression in civil society. For example, Moller and Deci (2009) found that dehumanization was positively related to interpersonal violence; Greitmeyer and McLatchie (2012) found that humanity perception increased the opposition to favor a candidate for a job. Even if evidences that humanity denial is related to aggression are consistent, to our knowledge the relation between dehumanization and violence measured at an implicit level, considering a split-second shooter task, is not present in literature. Thus, in the current study we investigated the effect of humanity denial on automatic violent responses against the outgroup.

Moreover, we considered the moderation effect of executive functions. In fact, since we live in societies that condemn detrimental acts that could harm other individuals, people should exercise control over their behavior when they have to decide how to react to situations that may lead to undesirable consequences.

### **3.3.1 – Executive Functions**

Executive functions represent “a set of general-purpose control processes that regulate one’s thoughts and behaviors” (Miyake & Friedman, 2012, p. 8). These functions are a critical component of self-control and self-regulation abilities, namely “willpower”, that have important implications in individuals’ actions and behaviors. Moreover, executive functions enable us to create plans and goals; remember these goals across time; choose and initiate actions to help us achieve these goals; and monitor and adjust our behavior, as necessary, until we complete or fail in achieving them (Aron, 2008).

According to Miyake and Friedman (2012) there are three executive functions: updating, inhibition and shifting. Updating refers to the ability to examine a specific situation and rapidly add or delete contents in working memory; shifting represents the ability to switch flexibly between different tasks or mental sets; inhibition is the ability to suppress dominant or prepotent responses. In the current study we focused on this latter aspect of executive functions, first, because research had demonstrated that inhibition tasks (e.g., Stroop test, antisaccade task) best catch the abilities that are common in the three executive functions dimensions (Miyake & Friedman, 2012) and, second, because inhibition probably represents the process triggered by individuals to suppress the effect of negative attitude on outgroup-oriented behaviors. In our case, since it is easier to harm dehumanized targets, participants have to inhibit the effects of humanity denial on violent reactions, namely when they had to shoot Moroccan targets.

Individual differences in executive functions are related to performances on tasks that require self-regulation or goal-directed behavior: individuals with effective executive functions generally perform better than individuals with low executive control (Hinson, Jameson, & Whitney, 2003). According to Unsworth and Engle (2007) differences in executive capacities derive from the inability to maintain and retrieve relevant task information in the presence of highly interfering competitors. More importantly, these limited abilities are linked to the capacity to control and suppress aggressive thoughts and responses (Gianicola, 2002). Research, in fact, has demonstrated that executive functions are a reliable predictor of aggressive behavior (see, Fishbein, 2000).

Recently, psychology has been interested in studying the role of executive functions in decisions to shoot. However, findings available in literature do not allow to draw clear conclusions on the role of behavioral control in split-second decisions tasks. On the one hand, Kleider and Parrot (2008) found that working memory capacity influenced participants’ decisions to shoot an outgroup member. In particular, individuals with low

working memory capacity demonstrated more aggressive shooting behavior relative to their high working memory capacity counterparts. On the other hand, Govorun and Payne (2006) found that executive functions did not influence weapon recognition. The authors investigated the effects of ego-depletion on the automatic and controlled components of stereotype-based responses at the weapon recognition task (Payne, 2001). In a study, self-control was manipulated by using a Stroop test (Stroop, 1935). In the No Depletion condition participants responded to a 30 trials task while, in the Depletion condition, respondents completed a 300 trials task. Results showed that Depletion manipulation did not affect stereotype-congruent trials: participants did not misperceive tools when primed with outgroup related stimuli. However, authors found that the manipulation affected the controlled component of responses but not the automatic one, in particular for respondents who showed strong automatic stereotype activation.

We conducted two studies to investigate the effects of dehumanization on violent behavioral tendencies considering the role of executive functions. In Study 2a, we hypothesized that dehumanization should lead to more violent behavioral tendencies only for individuals with less efficient control on behavior, namely less effective executive functions. In Study 2b, to further investigate the effect of behavioral control in the relation between humanity denial and violent behaviors we manipulated the executive functions by creating two experimental conditions, high vs. low executive functions depletion. We hypothesized that dehumanization should lead to more violence against the outgroup for participants whose executive functions are temporarily depleted.

### **3.4 - Study 2a**

#### **3.4.1 – Method**

##### **3.4.1.1 - Participants**

Participants were 26 university students (12 female;  $M_{age} = 23.52$  years,  $SD = 3.31$ ) that voluntarily took part in the study.

##### **3.4.1.2 - Procedure**

The study was structured in three computer tasks. To avoid that cognitive loading of the Stroop test affected the performance of the other tasks, we divided the study in two parts, completed in separate days. Thus, participants completed a Stroop test (Stroop,

1935) the first day, while, in the second part, carried out from one to four days later, participants executed, respectively, a humanity Single Category Association Task (SC-IAT; Karpinski & Steinman, 2006), and a simulated Shooting Task.

### 3.4.1.3 - Measures

*SC-IAT.* To assess perceptions of humanity toward the immigrants we used the SC-IAT (Karpinski & Steinman, 2006). The SC-IAT is structurally similar to the IAT (Greenwald et al., 1998) with the difference that only one target category is presented during the task. We employed the stimuli used in the GNAT, namely five human-related words, five animal-related words, and five Moroccan names. In a critical block, participants responded to 72 practice trials in which they were instructed to categorize animal concepts and Moroccan names with the same response key (green)<sup>4</sup>, and humanity concepts with another key (blue). Moroccan names, animal concepts and humanity concepts were presented in a 7:7:10 ratio, so that 58% of the correct responses were on the blue key, and 42% of the correct responses were on the green key. In another critical block of 72 trials, participants had to categorize Moroccan names and humanity concepts with the same response key (blue), and words representing animality with another response key (green). Moroccan names, humanity concepts and animal concepts were presented in a 7:10:7 ratio. The order of presentation of the two blocks was counterbalanced across participants. Before each critical block, participants completed a practice block consisting in 24 trials (see Table 3.3). Category label reminders were positioned on the upper left and upper right parts of the screen and remained visible during the entire task. Stimuli appeared on the screen until participants responded or for 1,500 ms. If participants failed to respond within 1,500 ms, a reminder “Please respond more quickly” appeared on the centre of the screen. A feedback about accuracy was provided: correct responses were followed by a green “O”, while errors were followed by a red “X”. Presentation of stimuli and data collection was controlled by Inquisit software package (Version 2.0, 2006).

*Stroop Task.* In the Stroop task participants were instructed to indicate the color of a stimulus word by pressing the appropriate color coded key. Stimuli were represented by four color names and by a string of letter “Xs”. Each target appeared in one of the following colors: red, blue, green and yellow. Incompatible trials were those in which the color name appeared in a color other than its semantic meaning (e.g., red in blue type); in the compatible trials the color was coherent with the color word (e.g., red in red type); Control

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<sup>4</sup> “W” key was coloured in blue and the “P” key was coloured in green.



trials were those in which the “Xs” string appeared one of the four type. A practice block of 16 trials preceded the critical block of 120 trials, namely 40 trials for each kind of stimuli. Stroop interference was computed by subtracting mean RT for compatible trials from the mean RT for incompatible trials. Higher scores indicated a greater Stroop interference, namely weaker executive control. Presentation of stimuli and data collection was controlled by E-Prime software package (Version 2.0.8.73, 2009).

*Shooting Task.* To assess violent behavioral tendencies we used a priming shooting task, a modified version of the “Weapon task”(Payne, 2001; see also Correll et al., 2002) used in the previous study. Participants were instructed to react to potential dangerous situations. Instructions explained that if a face was followed by a weapon it meant that the individual was dangerous and ready to shoot. Participants, then, had to shoot the target, by pressing the appropriate key, in order to defend themselves. Conversely, if the face was followed by a tool, participant had not to shoot the target: they had to press another key. Each trial started with a fixation point (+), then, a prime face appeared for 200 ms followed by the 200 ms target object. Finally, a warped mask covered the object and remained on the screen until a response was given. To make the simulation more realistic we associated a gunshot sound to the “shoot” key and a neutral sound (a click) to the “no shoot” key. In a 64 trials block participants had to press “m” key to shoot and “z” key to “not shoot”; in another 64 trials block the response keys were inverted. Before the two critical blocks began, participants received 40 practice trials to become acquainted with the faces. Presentation of stimuli and data collection was controlled by E-Prime software package (Version 2.0.8.73, 2009).

Table 3.3. Sequence of trial blocks in the humanity SC-IAT

Block	Function	Left-key response (Blue)	Right-key response (Green)	Trials
1	Practice	Humanity Concepts + Moroccans Names	Animal Concepts	24
2	Test	Humanity Concepts + Moroccans Names	Animal Concepts	72
3	Practice	Humanity Concepts	Animal Concepts + Moroccans Names	24
4	Test	Humanity Concepts	Animal Concepts + Moroccans Names	72

### 3.4.2 – Results

*Humanity SC-IAT.* To measure humanity bias toward Moroccans we compute a D-score by using the algorithm proposed by Greenwald, Nosek and Banaji (2003; see also, Karpinski & Steinman, 2006). Higher values of the D-score indicated stronger associations of the outgroup with animality. The mean of  $D$  ( $M = -.06$ ,  $SD = .41$ ) was not reliably different from zero,  $t < 1$ .

*Shooter Task.* After dismissing error responses and latencies above three standard deviations from the mean we log-transformed remaining latencies and we computed the four means, one for each combination. A 2 (Target Group: Italians vs. Moroccans)  $\times$  2 (Action: shoot vs. no shoot) repeated measure ANOVA, with both factors varying as within participants, was performed. Analyses showed a main effect for action,  $F(1,25) = 8.99$ ,  $p < .01$ ,  $\eta^2_p = .26$ , but not for group. Participants were faster in shooting armed targets rather than not shooting unarmed ones. By the way, this effect was qualified by the interaction Target Group  $\times$  Action,  $F(1,25) = 4.60$ ,  $p < .05$ ,  $\eta^2_p = .16$ . Participants were faster in shooting Moroccan targets than in avoiding to shoot them,  $F(1,25) = 18.45$ ,  $p < .001$ ,  $\eta^2_p = .42$ . Moreover, faster shooting latencies were observed when the target was represented by an outgroup member than when the target was an ingroup member,  $F(1,25) = 6.22$ ,  $p < .05$ ,  $\eta^2_p = .20$ . Means and standard deviations of reaction times are provided in Table 3.4.

Table 3.4. Mean reactions times (in millisecond) in shooting armed targets and not shooting unarmed ones.

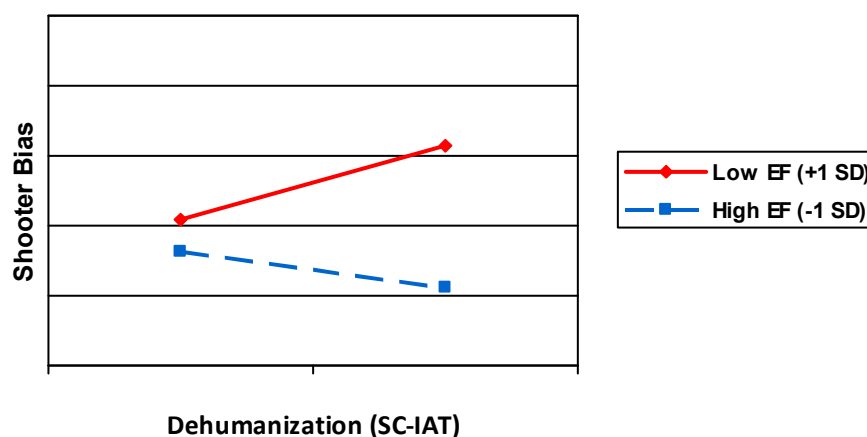
Object	Target			
	Moroccan Target		Italian Target	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Weapon	449 a	83	460 b	110
Tool	472 b	85	469 b	117

*Note.* A different subscript in the same row or column indicates that the two means are significantly different,  $p < .05$ .

*Moderation analyses.* To test the moderator effect of executive functions in the relation between dehumanization and violent behavior we performed a hierarchical regression. At Step 1, we entered as predictors Stroop interference and dehumanization D-score; at Step 2, we added the interaction between the two independent variables. As criterion variable we considered the “Shooter Bias” index, namely the difference between

the RT used to shoot Italian targets and the RT used to shoot Moroccan targets (Payne, 2001; Correll et al., 2002). The first model explained a significant portion of variance in shooting actions,  $R^2 = .29$ ,  $p < .05$ , but no main effects were found. In the second step, the interaction between humanity D-score and Stroop interference added a significant portion of variance explained,  $\Delta R^2 = .13$ ,  $p < .05$ . Simple slope analysis (see Figure 3.2) confirmed our hypothesis: dehumanization of Moroccans predicts greater shooter bias only for participants with high Stroop interference, namely less efficient cognitive control ( $B = .10$ ,  $p < .05$ ); conversely, the same result was not found in respondents with effective executive functions, namely low Stroop interference ( $B = 0.5$ ,  $ns$ ).

Figure 3.2. Shooter Bias as a function of dehumanization at high (+ 1SD) versus low levels (- 1SD) of executive functions.



### 3.4.3 – Discussion

The present research provided new evidences in the study of antecedents of aggressive shooting behavior. We found a relation between dehumanization and violence toward the outgroup. In particular, results showed that this relation is moderated by executive functions. Literature supports the theoretical basis of our results. In fact, many studies demonstrated that executive functions impacts decision making (Payne, Jacoby, & Lambert, 2005). Individuals with low executive functions are presumably more impulsive and tend to have less control of negative attitudes. As a consequence, this lack of control may lead to detrimental consequences, such as aggressive shooting behaviors. In other words, participants with less effective executive functions had more difficulty to inhibit the effects of dehumanization when they had to shoot Moroccan targets.

### **3.5 – Study 2b**

In the previous study we considered behavioral control as an individual difference variable. Nevertheless, since contextual factors, such as stress (Richeson & Shelton, 2003), cognitive loading (Webb & Sheeran, 2003), anxiety (Birtel & Crisp, 2012), could impair the capacity to manage effectively our own's actions, in Study 2b we aim to replicate findings of the previous study by manipulating the depletion of executive functions. We, therefore, hypothesize that, in a condition where executive functions are impaired, dehumanization should be linked with aggressive behavior. Moreover, we hypothesize that, in a no depletion condition, humanity denial should not be related with violence against the outgroup.

#### **3.5.1 – Method**

##### **3.5.1.1 – Participants**

Forty Italian university students (16 male, 23 female, 1 missing data;  $M_{age} = 24.92$ ;  $SD = 4.85$ ) took part in the experiment on voluntary basis. Half of participants were assigned to the high executive function depletion condition, the other half to the low executive function depletion condition.

##### **3.5.1.2 – Procedure**

In order not to raise any suspicion regarding the aim of the study, we divided the experimental procedure in two parts, carried out in different days. In the first part, participants completed the humanity SC-IAT employed in Study 2a, while, in the second part (from one to four days later), participants completed first the manipulation, then the shooter task. Finally, after providing some personal information, respondents were thanked and debriefed. To manipulate participants' executive functions we adopted two modified versions of the Stroop Task used in the previous study. Research has shown that completing the Stroop task does have depleting effects (Webb & Sheeran, 2003). In the high depletion condition, participants completed a test consisting in 80 incompatible trials and 40 neutral trials (the string of "Xs"); in the low depletion condition incompatible trials were replaced by 80 compatible ones.

### **3.5.2 – Results**

*SC-IAT.* We compute the humanity D-score (Greenwald et al., 2003). Higher values of the D-score indicate stronger associations of the outgroup with animality. The mean of  $D$  ( $M = .75$ ,  $SD = .59$ ) was reliably different from zero,  $t(39) = 8.02$ ,  $p < .001$ , indicating a stronger association between Moroccans and animality concepts.

*Shooter task.* Reaction times of correct responses that were more than three standard deviations above the mean were treated as outliers and excluded from analyses. Remaining latencies were log-transformed and averaged in order to create the four composite scores that were analyzed by a 2 (Group: Italians vs. Moroccans)  $\times$  2 (Action: shoot vs. no shoot)  $\times$  2 (Condition: Depletion vs. No Depletion) mixed ANOVA. Results showed a main effect of Group,  $F(1,38) = 4.14$ ,  $p < .05$ ,  $\eta^2_p = .10$ , and a main effect of Action,  $F(1,38) = 4.98$ ,  $p < .05$ ,  $\eta^2_p = .12$ , indicating that participants responded faster when the target were outgroup members and when they had to shoot armed individuals. No significant effects of manipulation emerged.

*Regression analysis.* Since we were interested in testing the effect of dehumanization, and manipulation on shooter bias (see paragraph 3.4.2) a hierarchical regression analysis was conducted. The first step included the main effects, the second step the interaction. The Condition was dummy coded (0 = No Depletion, 1 = Depletion). Result showed no significant amount of variance explained for the dependent variable. Manipulation did not affect performances on the shooter task.

### **3.5.3 – Discussion**

Findings of Study 2b did not replicate those of Study 2a. Manipulation did not influence participants' responses to the shooter task. A possible explanation is that Stroop test failed because it was not too demanding for individuals' cognitive resources. In fact, similar results were obtained by Govorun and Payne (2006). Also in their case, Stroop did not influenced responses in the weapon identification task. For this reason, it is necessary, in future studies, to use a more effective task for depleting executive functions.

### **3.6 – General Discussion**

In the current chapter we provided new evidence that link dehumanization to violence. First, we found that humanity denial is related to the perception of the outgroup as a danger and, second, results showed that dehumanization facilitates violent reactions against the outgroup. Moreover, we observed that this process is moderated by executive

functions: when executive control is high, it is possible to inhibit the tendency to be violent toward a dehumanized outgroup; conversely, when executive control is low, it is more likely that individuals do not control humanity bias in split-second decision making task. However, we did not replicate these findings in the last study, when executive functions have been manipulated. Despite these new and potentially important results, there are limitations in our findings. The correlational nature of Study 1 and Study 2a do not allow us to draw a final conclusion on the relation between humanity and violence. Future studies should consider experimental designs in which outgroup humanity and perceptions of danger are manipulated. Moreover, it is important to replicate our findings considering different intergroup relations. In fact, Moroccans in Italy represent a stigmatized group and it is possible that may have partially affected our results. To replicate the study considering groups created ad-hoc, such as minimal groups, should help to further unfold the humanity/violence relation controlling for cultural and contextual factors. Finally, since the manipulation did not affect shooting decisions, future research should replicate Study 2b by using a different task to deplete executive functions, for example by asking participants to retain a series digits in their memory until the completion of the experiment (Coull, Yzerbyt, Castano, Paladino, & Leemans, 2001).

Finally, our research has important practical implications, in particular for the police forces. On the one hand, as to the perception of the outgroup as not fully human, individuals should be made aware of this bias. They should be helped, and motivated to engage in self-regulatory processes, in which they consider outgroup members more in uniquely human than non-uniquely human terms. In fact, it has been found that self-regulatory processes can inhibit implicit bias even in the long term (see Monteith, Arthur, & Flynn, 2010). On the other hand, our results suggest the importance of training individuals to face potential dangerous situations so as to overcome factors that could impair the efficiency of behavioral control system.

# Chapter 4

## Dehumanization and Contact

*"My humanity is bound up in yours, for we can only be human together"*  
(Desmond Tutu, 1989)

### 4.1 – Introduction

The purpose of the studies in the current chapter is to investigate the causal link between humanity attributions and tendency to seek contact by manipulating, respectively, outgroup humanity (Study 1) and contact behaviors (Study 2). As tendency to seek contact with the outgroup we considered approach/avoidance behaviors by adapting the "manikin task" (De Houwer, Crombez, Baeyens, & Hermans, 2001; see also, Krieglmeyer, & Deutsch, 2010) a technique used to assess behavioral tendencies toward a specific target. Although contact hypothesis (Allport, 1954) is more complex than motor responses to specific stimuli (see Paragraph 4.2), we argue that approach/avoidance behaviors could anyway represent a basic and initial process to start and to stimulate the tendency to seek contact with an outgroup member. To overcome this potential limitation of our findings we shaped manikin task in a way to make it more near to a simulation of an actual contact situation. However, psychosocial research demonstrated that other forms of contact (see, e.g., imagined contact, Crisp & Turner, 2009), other than direct contact, produce positive effects in improving intergroup relations. Moreover, Kawakami and collaborators (Kawakami, Phills, Steele, & Dovidio, 2007) found that an extensive approach training toward the outgroup resulted in an increased openness for communication with an outgroup interaction partner. Thus, we argue that the two process, contact and approach/avoidance behaviors, share same basic processes.

In Study 1, we manipulated outgroup humanity in order to verify whether it would have enhanced contact toward the outgroup; in Study 2, we manipulated contact, in order to test its effects in ameliorating humanity attributions to the outgroup. The Moroccan outgroup have been considered because it represents a consistent minority in Italy. We hypothesize a reciprocal positive effects of the two constructs, namely we argue that

humanity should have positive effects on contact and contact, in turn, should be positive related to the attribution of uniquely human features to the outgroup<sup>5</sup>.

#### **4.2 – Intergroup Contact and Humanity Attributions**

Intergroup contact represents one of the most well-known and effective tools to reduce prejudice. According to contact hypothesis (Allport, 1954), positive and cooperative interactions between members of different groups can improve intergroup relations. In over 50 years of intensive testing, contact received an impressive empirical vindication so that the majority of its statements have been well supported by correlational designs (for a review, see Pettigrew & Tropp, 2006), longitudinal studies (see, e.g., Binder et al., 2009; Vezzali, Giovannini, & Capozza, 2010), and laboratory experiments (see, e.g., Ensari & Miller, 2002; Van Oudenhoven, Groenewoud, & Hewstone, 1996).

Recently, research has been interested in testing positive effects of intergroup contact on humanity attributions. Even if the literature is scarce, empirical evidence found that contact is effective in enhancing the outgroup humanization.

Tam and colleagues (2008) examined the relationship between Catholics and Protestants in Northern Ireland to study the effects of contact on post-conflict reconciliation (see also Chapter 2). In particular, they hypothesized that perceptions of humanity (assessed by the attributions of secondary emotions), along with anger and empathy, mediate the relation between contact and outgroup forgiveness for past wrongdoings. Results confirmed the predictions: intergroup contact significantly reduced outgroup inhumanization. Similar results were obtained by Andrighetto and collaborators (Andrighetto, Mari, Behluli, & Volpato, 2012) by using a different form of contact, namely extended contact, in a different post-conflictual intergroup context, namely Serbians and Albanians in Kosovo. Extended contact (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997) represents an indirect form of contact, namely the knowledge that an ingroup member has a positive relationship with an outgroup member. Its effectiveness in reducing prejudice has been widely proved (see, e.g., Paolini, Hewstone, & Cairns, 2007). In this study, it was hypothesized that extended contact would have reduced inhumanization, which, in turn would have decreased ingroup victimhood. Results confirmed the predictions: knowing an ingroup member that holds positive interactions with an outgroup member reduced inhumanization. Also the effect of reduced inhumanization in decreasing victimhood had been confirmed.

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<sup>5</sup> I would like to thank my supervisor for suggesting me the current design and the experimental manipulations.



The positive effects of contact have also been proved considering non-conflictual intergroup relationships. Capozza et al. (2012) in two studies, considering the relation between Italians and immigrants (Study 1) and between Northerners and Southerners in Italy (Study 2), confirmed the contact effects in enhancing outgroup humanization. Moreover, in the research authors found that this relation was mediated by anxiety empathy, and group representations.

Finally, Visintin (2013) extended and confirmed previous findings by considering the effect of different forms of contact, such as contact through mass media (Schiappa, Gregg, & Hewes, 2005), positive and negative contact (Pettigrew, 2008), and extended contact (Wright et al., 1997), on attributions of uniquely human traits.

Some evidences of the causal relation between humanity and contact are also available in literature. In a longitudinal study, examining state school students attitudes toward private school students, Brown and collaborators (Brown, Eller, Leeds, & Stace, 2007) found that the amount of contact with an outgroup member was negatively related to inhumanization (Leyens et al., 2007) of the outgroup as a whole. In fact, authors demonstrated that contact over a period of 14 days increased the attributions of secondary emotions to private school students. Moreover, they provided first evidences of the causal relation between contact and humanity. In fact, while contact at T1 reduced inhumanization at T2, the reverse path, namely inhumanization at T1 to contact at T2, was non significant suggesting that positive interactions with outgroup members have beneficial effects on attributions of humanity.

More recently, Vezzali and collaborators (Vezzali, Capozza, Giovanni, & Stathi, 2012) employed imagined contact (Crisp & Turner, 2009) to reduce immigrants inhumanization (Leyens et al., 2007) in fourth-graders children. Authors administered a three-week intervention in which children had to simulate a mental interaction with an outgroup member. One week after the last session of imagined contact, participants completed an inhumanization measure, namely attributions of primary and secondary emotions, and a measure of trust. A control condition, in which children did not perform any contact session, was also provided. Results showed an indirect effect of contact in humanity perceptions. In fact, imagined contact condition did not alter the attribution of uniquely human emotions to the outgroup. However, a mediation effect of trust emerged. Thus, mental imagery did not influence directly the attribution of secondary emotions but indirectly, through the mediation of trust.

To sum up, despite several empirical evidences, the causal relation between contact and humanity attributions still remains unclear. The aim of the current chapter is to fill this gap by providing experimental evidence of the causal link between humanity attributions and contact tendencies.

### **4.3 – Approach/Avoidance Behaviors**

A great deal of psychological theories considers approach and avoidance as basic responses to the environment (Lang, Bradley, & Cuthbert, 1990; Lewin, 1935; Zajonc, 1980). According to an evolutionary perspective these behaviors are vital for organism survival: dangerous/negative stimuli must be avoided whereas pleasant/positive stimuli should be approached (LeDoux, 1996). Thus, stimuli valence triggers the motivational system to approach or avoid a specific target (Bargh, 1997).

Research in social psychology has extended this field of study to intergroup relations (see, e.g., Kawakami et al., 2007; Paladino & Castelli, 2008; Wyer, 2010). For example, Paladino e Castelli (2008) found that participants were faster in approaching ingroup-related stimuli than in approaching outgroup related-stimuli; in addition, they found faster avoidance behaviors when the target was the outgroup. Moreover, experimental evidence showed that an extensive training to approach a specific group improves positive attitudes toward the group (Kawakami et al., 2007). Concerning the opposite path, namely whether attitude manipulation has effects on behavioral tendencies toward social stimuli, at our knowledge, no evidence in literature is available (but see Phills, Kawakami, Divecha, Steele, & Dovidio, unpublished manuscript).

The relation between humanity and behavioural tendencies has been tested by Vaes and collaborators (2003, Study 4). In a study, authors employed an impression-formation task to manipulate humanity. In one condition participants were asked to form an impression of “Marco” (ingroup member), and “Almad” (outgroup member). Respondents read, on a computer screen, a series of emotions that the target recently experienced. According to experimental condition, emotions were all primary or all secondary (Leyens et al., 2007). To measure behavioral tendencies the task developed by Castelli and Paladino (2002) was used. Participants approached target stimuli, presented on the center of the screen, by extending the arm to press a button next to the computer monitor. Conversely, avoidance behavior was represented by the flexion of the arm to press the key farther from the monitor. Results showed that participants were faster in approaching ingroup related stimuli, rather than outgroup related stimuli, and slower in avoiding the ingroup than the

outgroup. Moreover, participants were faster in avoiding than approaching, the outgroup when it expressed secondary emotions. According to the authors, perceiving an outgroup member expressing uniquely human emotions created a sense of threat to the ingroup as it represented an attempt to enhance the outgroup to the ingroup level.

#### **4.4 – Study 1**

The aim of Study 1 is to investigate the effects of humanity attributions on contact tendencies toward the outgroup by using an approach/avoidance technique. In particular, we manipulated outgroup perceptions of humanity by creating two experimental conditions: outgroup humanization vs. outgroup dehumanization.

Differently from Vaes and collaborators (2003) we argued that outgroup humanization should facilitate contact behaviors such as approach tendencies. We think that a shared humanity creates a link between ingroup and outgroup that should promote contact; moreover, it has been demonstrated the effectiveness of humanity in promoting prosocial behaviors such as outgroup forgiveness (Tam et al., 2008), support for reparation policies (Zebel et al., 2008) and helping intentions (Cuddy et al., 2007). Then, our study, first, did not consider merely approach/avoidance behavior but we attempted to integrate the contact experience with behavioral tendencies, and, second, we consider a global concept of humanity, not only emotions. Moreover, since Vezzali and colleagues (2012) did not find a direct influence of contact on humanization, the humanity to contact link should not be excluded.

Thus, in Study 1 we hypothesize that, in the outgroup humanization condition, participants should approach outgroup targets faster than in outgroup dehumanization condition (Hypothesis 1); moreover, we hypothesize that, only in outgroup humanization condition, Moroccan/approach latencies should be faster than Moroccan/avoidance response latencies. (Hypothesis 2).

##### **4.4.1 – Method**

###### **4.4.1.2 – Participants**

Sixty Italian university students (41 female, 18 male, 1 missing data;  $M_{age} = 22.6$ ;  $SD = 2.14$ ) took part in the experiment. Respondents were randomly assigned to one of the two conditions: 31 in the dehumanization condition and 29 to the humanization condition.

#### 4.4.1.2 – Procedure

Participants were tested individually. To manipulate outgroup humanity we adopted a subliminal priming measure (see, Bargh, Raymond, Pryor, & Strack, 1995; Goff et al., 2008). Participants were told that the first part of the experiment consisted in a “facial interference task” that measures whether the presentation of outgroup faces distract participants’ attention. Participants were instructed to indicate, by pressing the appropriate key, the position of a target stimulus that could appear above or below a fixation point. Fixation point was represented by a Moroccan face or by an oval (neutral stimulus); it remained visible on the screen until participant response. Target stimuli consisted of a 20 ms pre-mask (a series of “X”) followed by the prime (40 ms) and finally a 250 ms post-mask (identical to the pre-mask). Stimuli were presented parafoveally, namely they were positioned 2°, above or below, from the fixation point (see Bargh & Chartrand, 2000). The task consisted in pressing the “8” button, on the numeric keypad, if the stimulus appeared above the fixation point or the “2” button if it appeared below the fixation point. Prime stimuli varied according to the experimental condition: six primary emotions (three positive, e.g., pleasure; three negative, e.g., rage), four non-uniquely human traits (e.g., drive, impulsiveness), and five animal related words (e.g., cub, animals) for dehumanization condition; six secondary emotions (three positive, e.g., pride; three negative e.g., remorse), four non-uniquely human traits (e.g., reasoning, morality), and five human related words (e.g., citizen, humans) for humanization condition. Task was organized in two blocks: a practice block consisting in eight trials and an experimental block consisting in 120 trials<sup>6</sup>.

After completing the manipulation, participants performed the manikin task (De Houwer et al., 2001; Krieglmeyer & Deutsch, 2010). Respondents had to move a little figure (a manikin) on a screen towards or away from a stimulus (placed on the center of the screen) by pressing two directional keys, one to move upwards (↑, key “8”) and one to move downwards (↓, key “2”), on the numeric keyboard. Thus, depending on the position of the figure, moving upwards or downwards meant approach or avoidance, respectively. As this task requires two categories, in our case, we considered, in addition to Moroccan names (e.g., Mohammed, Yakub), a neutral category represented by names of geometric figures (e.g., triangle, hexagon). Each trial started with a fixation point (+) on the center of the screen. After 500 ms the manikin appeared and participant had to press the key “5” in order to pop up the stimulus. To complete the trial participants pressed three times the

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<sup>6</sup> Manipulation material included six images of Moroccan faces and two ovals. Each image was paired once with each of the fifteen primes, for a total of 120 trials.

arrow key to move the manikin. Each key press moved the manikin 15 mm. By alternating the length of the manikin's legs each time it appeared in a new position, and the impression of walking was evoked. Five hundred ms after the third key press all stimuli were deleted from the screen. The inter-trial interval was 1000 ms. The task consisted in two critical blocks of 80 trials each. In a block, participants had to move the manikin away from Moroccan names and approach neutral stimuli; in a second critical block, participants approached Moroccan names and avoided geometrical figures. Before each critical block, participants executed eight practice trials. Block order was counterbalanced across participants. To simulate a contact situation using an approach/avoidance paradigm, instructions told participants to identify themselves with the manikin, and, in approaching Moroccans, to imagine a positive interaction with the target. The use of mental imagery has been proved to be an effective strategy to simulate intergroup contact (Crisp & Turner, 2012). Asking individuals to imagine a positive interaction with an outgroup member ameliorate attitudes and behaviors toward the target (see, e.g., Pagotto, Visintin, De Iorio, & Voci, 2012).

Finally, respondents provided some personal information then they were thanked and debriefed.

#### **4.4.2 – Results**

Latencies from trials with errors, and higher than 1500 ms were discharged from the analysis (Krieglmeyer & Deutsch, 2010). In order to test out hypotheses we compute four different scores for each target/action combination, and we submitted the composite scores to a 2 (Target: Moroccans vs. geometrical figures) × 2 (Action: approach vs. avoidance) × 2 (Condition: dehumanization vs. humanization) repeated measure ANOVA with Target and Action as within-participants variables and Condition as a between-participants variable. The relevant latencies are reported in Table 4.1. ANOVA revealed a significant main effect for Target,  $F(1, 59) = 22.53, p < .001, \eta^2_p = .28$ , and a significant main effect for Action,  $F(1, 59) = 33.00, p < .001, \eta^2_p = .36$ . Participants were faster in reacting to Moroccan names and they were faster in behaviors of approaching. Moreover, we found that the two way interaction Action × Condition was significant,  $F(1, 59) = 6.50, p < .05, \eta^2_p = .10$ , along with the interaction Group × Action,  $F(1, 59) = 10.55, p < .01, \eta^2_p = .15$ . By the way, the two way interactions were qualified by the three-way interaction, Target × Action × Condition,  $F(1, 59) = 4.01, p < .05, \eta^2_p = .06$ . Since we were interested in investigating the effect of the manipulation on contact tendencies, we performed a 2

(Action: approach vs. avoidance) × 2 (Condition: dehumanization vs. humanization) ANOVA for the Moroccan target. Results showed a significant interaction,  $F(1, 59) = 9.09$ ,  $p < .01$ ,  $\eta^2_p = .13$ . Contrary to our predictions, participants in the humanization condition did not show faster latencies in approaching Moroccan names, compared to the dehumanization condition,  $t(59) = 0.46$ , *ns*. Similar results emerged for avoidance latencies,  $t(59) = -1.68$ , *ns*. Regarding neutral stimuli, no significant effect emerged from the analysis,  $t < -0.46$ , *ns*.

Simple effects analysis showed that, in the humanization condition, participants were faster in seeking contact rather than avoiding it,  $F(1, 30) = 38.75$ ,  $p < .001$ ,  $\eta^2_p = .56$ . In contrast, in the dehumanization condition, approach latencies did not significantly differ from avoidance latencies,  $F(1, 30) = 3.80$ , *ns* (Table 4.1).

Table 4.1. Mean reactions times (in millisecond) in approaching or avoiding Moroccan targets.

Condition	Behavior			
	Approach		Avoidance	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Humanization	692 a	120	800 b	140
Dehumanization	708 a	162	742 ab	126

*Note.* A different subscript in the same row or column indicates that the two means are significantly different,  $p < .001$ .

#### 4.4.3 – Discussion

Hypothesis 1 was not confirmed. In fact, there was no difference between condition for approach or avoidance tendencies. However, there was difference within each condition. In humanization, approach was rapid and avoidance slow. In dehumanization, approach was not more rapid or slow than avoidance. Thus, data supported Hypothesis 2.

A positive outcome of humanization emerged: perceiving Moroccans in human terms influenced the motivation to seek contact rather than avoid it. This latter result confirmed the positive consequences of ascribing humanity to other groups. As we stressed above, a perceived shared humanity could have enhanced ingroup/outgroup similarity that facilitated approach behaviors.

To sum up, humanity could not be a sufficient factor that triggers the motivation to seek an interaction with the outgroup but it probably represents a catalyst that, along with other variables, facilitates this process.

#### **4.5 – Study 2**

In Study 2 we investigated the opposite path, namely whether contact tendencies improve humanity attributions. Research had provided evidences that it is possible modify attitudes toward ordinary objects by training individuals to approach them (Cacioppo, Priester, & Berntson, 1993). Through the same process, it is possible to change attitudes toward outgroups (Kawakami, et al., 2007). Another mechanism concerning approach/avoidance behaviors is related to the self. In fact, there is evidence that the repetition of approach behaviors increases the association between the self and the target group (Phills, Kawakami, Tabi, Nadolny, & Inzlicht, 2011) resulting in reduced prejudice. Since humanity represents a subtle form of discrimination (Leyens et al., 2007), and since individuals are generally less aware of this bias (Eyssel & Ribas, 2012; Leyens et al., 2007), a training focused on approaching outgroup-related stimuli could indirectly ameliorating humanity perceptions of the outgroup. In our case, we aimed to integrate the potential positive benefits of approach/avoidance behaviors with contact by creating an ad-hoc manipulation. Thus, in this study we manipulated contact tendencies toward Moroccans by creating two experimental conditions: outgroup contact vs. control. We hypothesized that in the contact condition participants should attribute more uniquely human traits to the outgroup compared to the control condition (Hypothesis 1). A second aim of the study was to replicate experimentally the effect of contact on outgroup attitudes, by using semantic differential as a measure of attitude.

Moreover, since research had shown increasingly attention to affective factors as processes underlying contact effects (Pettigrew & Tropp, 2006, 2008), in this study we also concentrated on intergroup anxiety (Stephan & Stephan, 1985) and intergroup empathy (Batson et al., 1997). Intergroup anxiety represents a feeling of discomfort and awkwardness in anticipation of an interaction with outgroup members (Stephan & Stephan, 1985); empathy represents the capacity to provide proper emotional responses to the emotions experienced by outgroup members (Batson et al., 1997). The meta-analyses by Pettigrew and Tropp indicated that these two emotions are among the most important mediators of contact effects. Moreover, Capozza and collaborators (2012) found that empathy and anxiety are significant mediators in the relation between contact and humanity attributions.

Finally, we proposed trust as a further influential construct since it has been widely considered in contact research. Trust allows individuals to avoid the perception that the outgroup holds negative intentions toward the ingroup (Mitchell, 2000), producing an

improvement in intergroup attitudes, promoting the exchange of knowledge between groups, and developing cooperative and altruistic behaviors (Kramer & Carnevale, 2001). Empirical evidence indicates that positive contact enhance trust toward the outgroup (see, e.g., Hewstone, Cairns, Voci, Harmberger, & Niens, 2006).

Thus, in Study 2, we investigated the effects of manipulated contact tendencies on anxiety, empathy, trust, and attitude. We hypothesized that contact should increase empathy, trust, and outgroup evaluations, while it should decrease anxiety (Hypothesis 2). Finally, we tested, at an exploratory level, the meditational effect of emotions, trust in the relation between contact and humanity attributions to the outgroup.

#### **4.5.1 – Method**

##### **4.5.1.1 – Participants**

To run the experiment we recruited 40 Italian university students (25 female, 15 male;  $M_{age} = 25.4$ ;  $SD = 5.09$ ) that voluntarily accepted to complete the three tasks. Half of participants were assigned to the contact condition, while, the second half to the control condition.

##### **4.5.1.2 – Measures**

*Contact manipulation.* To manipulate contact we adopted a modified version of the manikin task used in Study 1. Stimuli varied across conditions: in the contact condition, participants executed 72 approach to the outgroup trials (stimuli were Moroccan faces, see Study 1) and 24 avoidance of geometrical figures trials, (two ovals painted in grey); in the control condition, respondents completed 72 approach to neutral stimuli trials, represented by images of pieces of furniture, and 24 avoidance of geometrical figures trials. As in the previous study, instructions asked participants to identify themselves with the manikin, and, in approaching Moroccans, to imagine a positive interaction with the target.

*Humanity attributions.* Outgroup humanity was assessed by using four uniquely human traits (UH, e.g., rationality, reason) and four non-uniquely human traits (N-UH, e.g., impetus, instinct). Participants had to indicate whether each trait was typical of Moroccans (see Chapter 3). The response scale ranged from 1 (*definitely false*) to 7 (*definitely true*), with 4 (*neither true, nor false*) as the midpoint. Alpha were .84 for UH traits and .73 for N-UH traits.



*Anxiety.* We used the intergroup anxiety scale developed by Stephan and Stephan (1985). Participants had to indicate what their feelings when thinking about interacting with Moroccans were. Twelve anxiety-related terms (e.g., nervous, comfortable) were used. Scale anchored from 1 (*not at all*) to 7 (*extremely*). Higher scores indicate greater intergroup anxiety. Alpha was .87.

*Empathy.* Four items assessed empathy toward Moroccans (Capozza et al., 2012). Respondents rated, on a seven-point scale (1 = *not at all*; 7 = *extremely*), to what extent, when thinking about Moroccans, they “feel in tune with them”, “feel they share their emotions”, “understand their feelings”, and “share their joys and sorrows”. Higher scores reflect greater empathy. Alpha was .84.

*Trust.* Participants rated intergroup trust on four items. Sample items are: “I trust Moroccans”, “I think Moroccans are unreliable” (reverse coded). Responses ranged from 1 (*not at all*) to 7 (*extremely*). Higher scores expressed higher trust. Alpha was .82.

*Attitude.* We provided a semantic differential (Osgood, Suci, & Tannenbaum, 1957) to assess the evaluation of Moroccans. Respondents rated the outgroup on a set of items anchored by opposite adjectives pairs (e.g., *good-bad*, *pleasant-unpleasant*). Answers were given on a 7-point scale ranging from 1 (the negative pole) to 7 (the positive pole). Alpha was .79.

#### **4.5.1.3 – Procedure**

Participants completed the experiment individually. They first performed the computerized task, and then completed the questionnaire containing the dependent variables: the humanity measure, anxiety, empathy, trust, and attitude.

Finally, prior to be debriefed and thanked, participants provided some personal information.

#### **4.5.2 – Results**

For UH traits, N-UH traits, anxiety, empathy, trust, and attitude, a composite score was computed by averaging the respective items. To test whether manipulation affected the attributions of humanity to the outgroup, we conducted a 2 (Traits: UH vs. N-UH) × 2 (Condition: contact vs. control) repeated measures ANOVA, with Condition as between-participants variable. Main effects of Condition,  $F(1, 38) = 10.12, p < .01, \eta^2_p = .21$ , and Traits,  $F(1, 38) = 10.55, p < .01, \eta^2_p = .22$ , were qualified by the two-way interaction Traits × Condition,  $F(1, 38) = 4.65, p < .05, \eta^2_p = .11$ . As predicted, participants ascribed more

UH traits to Moroccans in the Contact condition than in Control condition,  $F(1, 38) = 13.36$ ,  $p < .001$ ,  $\eta^2_p = .26$ . No differences were found considering N-UH traits,  $F < 1$ , (Table 4.2). Moreover, in Control condition, participants assigned more N-UH traits than UH traits to the outgroup,  $F(1, 19) = 19.25$ ,  $p < .001$ ,  $\eta^2_p = .50$ ; conversely, in the Contact condition, respondents did not differentiate between the two types of traits for Moroccans,  $F(1, 19) = 0.48$ , *ns*.

Table 4.2. Means and standard deviations of uniquely human traits.

Condition	Traits			
	Uniquely Human		Non-Uniquely Human	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Contact	4.62 a	.89	4.85 a	.93
Control	3.64 b	.85	4.75 a	.88

*Note.* A different subscript in the same row or column indicates that the two means are significantly different,  $p < .001$ .

Effects of the condition on the other dependent variables were tested by applying independent-samples *t*-test. Results are reported in Table 4.3. Findings showed that the Contact condition reduced anxiety,  $t(38) = -2.41$ ,  $p < .05$ , increased trust,  $t(38) = 2.32$ ,  $p < .05$ , and enhanced positive evaluations of Moroccans,  $t(38) = 3.20$ ,  $p < .01$ . No differences were found for empathy,  $t < 1$ , *ns*.

Table 4.3. Means and standard deviations of anxiety, empathy, trust, and attitude.

Criterion	Condition			
	Contact		Control	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Anxiety	3.38 a	.80	3.99 b	.79
Empathy	3.70 a	1.16	3.44 a	1.23
Trust	4.71a	.82	3.99 b	1.89
Attitude	4.62 a	.73	3.85 b	.79

*Note.* A different subscript in the same row indicates that the two means are significantly different,  $p < .05$ .

*Mediation analysis.* To test the mediation, a path-based analysis was conducted using Process macros (Hayes, in press). The model considered the experimental condition (dummy coded, 0 = Control; 1 = Contact) as the predictor, anxiety, empathy, and trust as parallel mediators, and, attribution of UH traits as the dependent variable. Results showed that the model accounted for a significant portion of variance for the criterion variable,  $R^2 = .32$ ,  $p < .001$ . From bootstrapping procedure, using 1,000 resamples, emerged that the point estimate for the indirect effect via trust equated .149, with a 95% bias corrected confidence interval of [.001, .459]. Since the confidence interval excludes zero a significant mediation of trust is present. No other significant mediation effects emerged.

#### **4.5.3 – Discussion**

Consistent with our hypotheses, Study 2 showed that stimulating contact with the outgroup had beneficial effects on humanity attributions. We also found positive effects of the manipulation in reducing anxiety, increasing trust and improving attitudes. Therefore, the present study experimentally replicated findings present in the literature, obtained with correlational (see, e.g., Capozza et al., 2012), longitudinal (Brown et al., 2007; Vezzali et al., 2010), and experimental designs (Wilder, 1984) according to which intergroup contact affects outgroup perceptions (Pettigrew & Tropp, 2006). Moreover, from results a mediation effect of intergroup trust emerged, namely contact enhanced outgroup humanization through the effect of trust. In contrast, anxiety and empathy did not mediate this relation.

These results are generally coherent with the available literature. First, we confirmed and extended Vezzali and collaborators' findings (2012). On the one hand, we replicated the mediation effect of trust considering a different sample, namely adult participants. On the other hand, we proved positive consequences of contact on humanity attribution to the outgroup. In addition, our results are in line with Visintin (2013) findings. In fact, he found that trust, but not anxiety and empathy, positively mediated to contact/humanity relation. Not surprisingly, empathy did not affect Moroccans humanity. In fact, Čehajić and collaborators (2009) found that dehumanization represents an antecedent, rather than a consequence, of empathy (see Chapter 2). Finally, a single study found the effect of anxiety on humanity attributions (Capozza et al., 2012). Since, in this research actual contact that participants had with outgroup members is investigated it is possible that reduced anxiety requires more profound and direct forms of contact to have a significant impact on humanity attributions.

#### **4.6 – General Discussion**

The two laboratory experiments reported here shed new light on the causal relation between intergroup contact and outgroup humanization. Although previous studies (see, e.g., Brown et al., 2007; Vezzali et al. 2012) provided evidences that contact influences humanity attributions, at our knowledge, no studies have been carried out to investigate experimentally the causal relation between the two constructs. To achieve this, we conducted two lab experiments in which outgroup humanity and contact tendencies were manipulated. We expected to find a reciprocal effect, namely we thought that humanity would have influenced contact, and contact would have improved humanity perceptions. Our predictions were partially confirmed. In Study 1, outgroup humanization did not enhance contact tendencies compared to outgroup dehumanization, namely no differences between the two experimental conditions were observed in approaching behaviors. However, in humanization condition, but not in dehumanization condition, participants were faster in approaching Moroccans than avoiding them. In Study 2, instead, our hypothesis was fully confirmed. In fact, stimulating contact with the outgroup increased attribution of uniquely human features to Moroccans. Furthermore, in the contact condition, respondents ascribed more uniquely human, than non-uniquely human, qualities to outgroup; this difference did not emerged in the control conditions. Finally, we found a mediation effect of trust, namely contact increased humanity through enhanced trust.

Keeping together, our results help to clarify the relation between contact and humanity bias. In keeping with predictions of contact hypothesis, when individuals experience contact under certain conditions (Allport, 1954), outgroup perceptions positively improve (see, e.g., Dovidio, Eller, & Hewstone, 2011; Turner, Hewstone, & Voci, 2007). Our results, in fact, showed a stronger effect when contact was manipulated than when humanity was manipulated. In addition, in Study 2, along with humanity, contact affected anxiety, trust, and attitudes. In this sense, our results are promising: even considering a basic form of intergroup interaction we obtained positive outcomes. On the other hand, manipulation did not influence empathy. Probably, developing a sense of shared emotions with the outgroup requires more deep and profound interactions.

On the contrary, in Study 1, our predictions were only partially confirmed, namely humanity did not affect contact tendencies toward Moroccans. However, in our opinion it would be too hasty to discard the hypothesis that humanity does not influence contact. Enhancing humanity perceptions resulted in a greater motivation to seek contact with

Moroccans rather than avoid them. Thus, it is possible that outgroup humanity stimulated positive affective processing (Neumann & Strack, 2000) that influenced participants' behavior, but not so strongly to enhance the motivation to seek interaction with an outgroup member. Nevertheless, Moroccans represents a highly stigmatized group, strongly associated with animality or features that man share with other living beings (see, e.g., Chapter 3, Study 1). In this sense, it is possible that our manipulation was not so effective in strengthening outgroup/humanity associations because Moroccans dehumanization is deeply crystallized in individuals' minds. So, further studies, considering different outgroups or minimal groups, are required in order to further investigate the humanity-to-contact hypothesis.

However, since our studies are the first attempt to investigate these processes, further studies should be conducted. In particular, it would be interesting to test the effects of actual contact that individuals hold with the outgroup to confirm this processes. In addition, using other humanity measures, such as computerized tasks (e.g., IAT, GNAT), would extend our findings.

Finally, our results have practical implications. In fact, since contact manipulation affected outgroup perceptions, it could be useful to implement it as a new form of simulated contact, namely as a "preparatory" strategy, along with other forms of contact, before the real face to face interaction. In particular, this intervention could be useful in intergroup contexts characterized by negative or conflictual relationships, namely relations in which direct contact could be difficult or counterproductive. This technique could be useful also because it may integrate the effects of the indirect forms of contact. In fact, the manikin task involves the active participation of the individual in moving the manikin, while other strategies such as extended contact (Wright et al., 1997), vicarious contact (Mazziotta, Mummendey, & Wright, 2011), contact trough mass-media (Schiappa et al., 2005) represent more passive forms of intergroup interaction. Thus, the combination of these strategies (active and passive) could results in more positive effects on outgroup perceptions.



# Chapter 5

## Dehumanization in Health Contexts

*“You treat a disease, you win, you lose.  
You treat a person, I guarantee you,  
you’ll win, no matter what the outcome”  
(From the movie Patch Adams, 1998)*

### 5.1 – Introduction

Most research on infra- and dehumanization has considered ethnic (e.g., Boccato et al., 2007), regional (e.g., Capozza, Boccato, Andrighetto, & Falvo, 2009), or minimal groups (e.g., Capozza et al., 2012). The study of dehumanization in health context, in contrast, has received little attention in Social Psychology. However, modern medicine and care represent a fertile environment for humanity denial (Haque & Waytz, 2012). Indeed, many aspects of modern health care systems are associated with a dehumanized representation of patients (Haslam, 2006): patients’ individuality is denied, and great importance is placed on technology. For instance, in psychiatry (Fink, 1982; Fleck, 1995; Ghaemi, 2010), especially in biological psychiatry, a discipline based on deterministic explanations and coercive treatments, patients’ autonomy and patients’ responsibility for their actions are denied (Szasz, 1973).

Denial of humanity in health contexts is not necessarily a product of caretaker intention; it is more likely, instead, that dehumanization is a product generated unconsciously from the widespread social practices and functional requirements in health care institutes (Haque & Waytz, 2012). Since the denial of a full human status to other represents a universal phenomenon (Leyens et al., 2007) it is possible that several factors of modern medicine/caring may magnify this process. In this direction Haque and Waytz (2012) discussed six potential antecedents of dehumanization in health context, three functional to medical environment and three non-functional. Functional caused of dehumanization are: mechanization, namely thinking of individuals as mechanical systems made up of interacting parts (Haslam, 2006; Haslam et al., 2008); moral disengagement, namely “the disengagement of moral self-sanctions from inhumane conduct” (Bandura, 1999, p. 193; see paragraph 1.1) derived from the need to minimize the guilt of inflicting pain; empathy reduction, namely the inability to take the perspective of others. The non-

functional causes are: deindividuation (Zimbardo, 1969), namely the “anonymization” of the individual; impaired patient agency (Gray et al., 2007; see paragraph, 1.4.1); power asymmetry (Lammers & Stapel, 2011).

In the present chapter we provide first evidence of dehumanization process and its effects in health contexts. In particular, in two studies considering two different categories of professionals, namely nurses and socio-sanitary workers, we aimed to investigate attribution of humanity toward individuals that receive healthcare assistance, namely hospitalized patients and mentally disabled persons. Moreover, a second aim was to study whether denial of humanity may serve as a coping strategy to reduce stress (Study 1) and whether it may increase avoidant (vs. approach) behavioral tendencies (Study 2).

## **5.2 – Study 1: Patients are not Fully Human. A Nurses’ Coping Response to Stress**

Nurses frequently experience stress because of the nature of their work and contact with patients and death (Landa, López-Zafra, Berrios Martos, & Aguilar-Luzón, 2008). Besides the negative effects on nurses’ physical and psychological health, stress in nursing can result in financial costs for the employing organization as well as in poor quality of patients’ care. Therefore, over the last years, growing attention has been devoted to the investigation of coping strategies used by nurses (see, e.g., Schreuder et al., 2012; Tyson et al., 2002). Nurses, in fact, encounter suffering in a wide variety of forms across different practice settings. Dealing every day with death, pain, and patients’ negative emotions may have detrimental effects on physical and mental health, and, as a consequence, on the entire health care institution; patients can ultimately suffer from these negative effects as well (Kipping, 2000). Thus, nursing is, by its very nature, a stressful occupation (Hingley, 1984; Lewis, Yarker, Donaldson-Feilder, Flaxman, & Munir, 2010; Rogers, 2003) and for this reason researchers have expressed growing interest for stress in this critical domain (for reviews see, e.g., Chang, Hancock, Johnson, Daly, & Jackson, 2005; Lambert & Lambert, 2001; Lim, Bogossian, & Ahern, 2010). In the present study, we aim to investigate whether the perception of patients as not fully human may serve as a coping strategy for reducing stress symptoms among nurses. Another aim of this study is to examine whether affective organizational commitment and affective commitment to patients may moderate the relationship between humanity perceptions and stress symptoms.



### **5.2.1 – Job Stress and Coping Strategies**

Stress is a general, unspecific alarm response occurring whenever there is a disparity between the individual's resources and the demands of the environment (Lazarus, 1991; Ursin & Eriksen, 2004; for a recent review of stress theories, see Meurs & Perrewé, 2011). Central in the cognitive models of stress (see Lazarus, 1991; Ursin & Eriksen, 2004) is the concept of cognitive interpretation, implying that the same stimulus can be perceived as pleasant or threatening, depending on individual's appraisal of the situation.

The increased arousal associated with stress responses is an inevitable but desirable reaction; in fact, resources are mobilized to handle demands coming from environment. However, persistent arousal may have negative consequences for the individual's well-being (Ursin & Eriksen, 2004) and may show up in a variety of symptoms (Bourne & Yaroush, 2003), for instance, increased heart rate, headache, anxiety, memory problems.

Notably, the effects of stress on health largely depend on the adequacy of coping strategies (Harris, 1989). A coping strategy is the cognitive or behavioral effort made to overcome a stressful condition caused by internal or external demands that tax or exceed individual resources (Lazarus & Folkman, 1984). Effective coping responses generally result in the resolution of the stressful situation and reduction of stress symptoms; conversely, ineffective coping responses increase the negative consequences of stress (Lazarus & Folkman, 1984). Lazarus (1991, 1993) identified two types of coping responses: problem-focused and emotion-focused. When problem-focused coping is activated, efforts are made to modify one's relationship with the environment or to eliminate the source of stress. Improving one's abilities and seeking for social support are examples of coping responses focused on the problem. Emotion-focused coping (or cognitive coping, see Lazarus, 2006), on the other hand, changes the way we interpret the situation; cognitive efforts are made to regulate the emotional responses generated by stressors. Avoiding thoughts about the sources of distress, positive thinking, or keeping an optimistic and positive attitude, in dealing with everyday problems, are examples of emotion-focused strategies. According to Lazarus, choosing the type of coping depends on both individual (e.g., personality) and contextual factors (e.g., availability of social support; for a personality, trait-oriented, theory of coping, see Krohne, 1993, 2001).

Studies on occupational stress, particularly in healthcare professions, have shown that problem-focused coping is the most adaptive way of dealing with stress (Ceslowitz, 1989; Schreuder et al., 2011; Tully, 2004), while reappraisal strategies may temporarily

reduce emotional distress, but can in the long run be detrimental to health (Chang et al., 2006; Lim et al., 2010; Schreuder et al., 2012; Tyson & Pongruengphant, 1996; see also Stanton, 2011).

### **5.2.2 – Job Stress and Humanity**

Research investigating the relation between humanity denial and stress reduction is scarce. A first evidence that dehumanization can be used to cope with stress was provided by Schulman-Green (2003). In Schulman-Green's study, physicians regularly working with dying patients reported using dehumanization as a coping mechanism to deal with discomfort. However, this study only considered physicians of dying patients, who are likely to evoke intense emotional reactions. We argued that denial of full humanness to patients is a more general phenomenon, not necessarily related to death. Therefore, in the current study, we examined a sample of hospital nurses working with different types of hospitalized patients. In addition, Schulman-Green did not test whether patients' dehumanization (namely, patients defined as "cases") was effective in reducing stress. More recently, Vaes and Muratore (2012) found that ascribing to patients uniquely human emotions resulted in increased burnout and reduced work engagement. Moreover, authors found a moderator effect of contact: only participants – represented by professional staff (nurses, medical doctors, socio-sanitary workers and trainees) working in four different health care institutes – with frequent contact with patients experienced more severe burnout when assigning a higher human status to them. However, Vaes and Muratore did not analyze the effects of organizational variables. It has been demonstrated that the relation between staff and organization plays a critical role in influencing different outcomes, such as well-being, turnover intentions, altruism and, exactly, burnout and stress (for review see Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). Thus, in this study, we investigated the effects of commitment (see Paragraph 5.2.3) on the association between stress and humanity attributions. Moreover, we considered a different measure of stress and a different measure of humanity. Thus, we aimed to investigate whether stress may be reduced by denying a fully human status to patients, namely by assigning them more the traits that humans share with animals than the uniquely human traits. According to Lazarus' (1991, 1993) taxonomy of coping mechanisms, dehumanization may be regarded as an emotion-focused strategy, based on reappraisal processes. Patients' suffering and excessive workload may be important sources of stress among nurses. By denying a fully human status to patients, nurses can both justify not sufficient cares and

achieve a greater detachment from suffering, thus alleviating the symptoms of stress. Therefore, we hypothesized (Hypothesis 1) that the denial of a fully human status to patients should be negatively associated with reported symptoms of stress.

### **5.2.3 – Moderator Variables**

#### **5.2.3.1 - Affective Organizational Commitment**

According to a dominant approach (the three-component model by Meyer & Allen 1991; see also Meyer et al., 2012; Meyer et al., 2002), organizational commitment is a psychological state associated with employees' relationship with the organization; commitment has important consequences on the decision to remain in the organization or to leave. Meyer and Allen identified three forms of commitment: affective commitment, namely the emotional attachment to the organization, based on identification with collective goals and values; continuance commitment, referring to the perceived costs associated with leaving the organization; normative commitment, a felt moral obligation to maintain one's membership.

Three different approaches have been used to analyze the relation between stress and organizational commitment. According to the first, organizational commitment is an antecedent, namely a predictor of physical and psychological well-being (Meyer, 2009); in particular, researchers found that affective commitment is related to a reduction in self-reported stress (e.g., Boyas & Wind, 2010; Meyer et al., 2002) and burnout (e.g., Boyas & Wind, 2010; Falvo, Trifiletti, Andrighetto, & Capozza, 2006). According to the second approach, organizational commitment is a consequence of employees' experiences within the organization (Glazer & Beehr, 2005; O'Driscoll, Ilgen, & Hildreth, 1992); for instance, dealing with stressors in the workplace may result in reduced commitment (see Antón, 2009). In the last perspective, organizational commitment has been conceptualized as a moderator of the relation between stress-related feelings and behaviors (e.g., Begley & Czajka, 1993; Schimdt, 2007). A moderation effect may be expected, for instance, for the relation between job-related anxiety (a reaction to job stressors) and intention to leave the organization (Glazer & Kruse, 2008). In a study, conducted with nurses working in hospitals, Glazer and Kruse noted that the association between anxiety and turnover intentions was weaker in nurses with high affective commitment; similar findings were observed when the moderator was continuance commitment. Probably, organizational commitment functions as an adaptive resource helping employees to make sense of the

stressful situation, thus alleviating the negative effects of stressors (for a similar view, see Antonovsky, 1979; Kobasa, 1982; Schmidt, 2007).

Thus, high-committed nurses react differently from their low-committed colleagues to job-related stressors. Moreover, at the two commitment levels, different strategies to cope with stress may be used. In the current study, we tested the moderator effect of affective organizational commitment (AOC). We decided to focus on this component, because research has shown that, compared to normative and continuance commitment, affective commitment correlates with more outcome variables and more strongly with each of them (Meyer & Herscovitch, 2001; Meyer et al., 2002). We expected that the denial of full humanness to patients would reduce the symptoms of stress when AOC is high but not when it is low. Highly committed nurses, given their identification with organizational goals, should work hard in favor of the organization and their patients (see Allen & Grisaffe, 2001). Thus, not being able to meet certain standards of care, because of insufficient professional skills or work overload, and patients' suffering (see Chan, So, & Fong, 2009) should be significant stressors for them. The denial of a fully human status to patients could be a strategy high-committed nurses employ to alleviate the symptoms of stress. Thus, we hypothesize (Hypothesis 2) that AOC should moderate the relationship between humanity attributions to patients and stress symptoms; namely, the relationship between denial of full humanness to patients and lower stress symptoms should only emerge among nurses with high AOC.

#### **5.2.3.2 – Affective Commitment to Patients**

Commitment to patients is a conceptual adaptation of commitment to customers (Vandenberghe et al., 2007). Service employees are likely to experience commitment to both the organization and customers (Siders, George, & Dharwadkar, 2001). Based on the generalized model of commitment (Meyer & Herscovitch 2001), Vandenberghe et al. suggested that commitment to customers entails three components: the desire to pursue courses of actions of relevance to customers, in order to satisfy their expectations (affective commitment); the perceived obligation to meet customers' expectations (normative commitment); and, finally, the perceived cost of failing in meeting customers' expectations (continuance commitment).

According to Vandenberghe et al. (2007), an emotional contagion is present between employees with a strong affective commitment to customers and customers. This empathic contagion may also characterize the relationship between nurses with high affective

commitment to patients (ACP) and their patients. High-committed nurses, therefore, should be stressed by patients' suffering and demands more than low-committed nurses. As a consequence, they should use patient-focused strategies to cope with stress more than their low-committed colleagues. One of these strategies could be the denial of full humanness to patients. We, therefore, hypothesized (Hypothesis 3) that ACP should moderate the relationship between humanity attributions and stress symptoms; namely, the relation between denial of full humanness to patients and lower stress symptoms should only concern nurses with high ACP.

#### **5.2.4 – Method**

##### **5.2.4.1 – Participants and Procedure**

One-hundred and nine nurses working in a hospital in a central Italy town participated in the study on a voluntary basis. The gender distribution was 54 men and 54 women (1 missing data). The majority of respondents were between 31 and 50 years (56.9%), 7.3% were aged between 21 and 30 years, and 35.8% were over 50.

A survey package, including a questionnaire and a return envelope, was administered. The questionnaire was accompanied by a letter, explaining the aims of the research and guaranteeing anonymity and confidentiality of responses. Participants were informed that the study explored the relationships between organizational climate, organizational commitment, and job-related stress. Indeed, the questionnaire presented the relevant measures for this study together with other measures. Upon completion of the survey, participants placed the questionnaire in the envelope and dropped them in a collection box. A total of 220 questionnaires were delivered, with a return rate of 49.54%.

##### **5.2.4.2 – Measures**

For all variables except stress symptoms, participants rated each item on a 7-point scale, anchored by 1 (*definitely false*) and 7 (*definitely true*), with 4 (*neither true, nor false*) as the midpoint.

*Humanity attributions.* To measure humanity attributions to ingroup (nurses) and outgroup (patients), four uniquely human and four non-uniquely human traits were used (see Chapters 3 and 4). Participants rated first the ingroup and then the outgroup on the eight items, presented in a fixed random order. The introductory sentence was: "In this hospital, nurses (patients) are characterized by..." Alphas ranged from .67 to .84.

*Affective organizational commitment.* We used the six-item scale by Meyer, Allen, and Smith (1993). Sample items are: “I do not feel emotionally attached to this hospital” (reverse code); “This hospital has a great deal of personal meaning for me” ( $\alpha = .83$ ).

*Affective Commitment to Patients.* The affective component of the commitment to customers scale (Vandenberghe et al., 2007) was adapted to the category of patients. The scale consisted of six items, such as: “I feel close to my patients”; “My patients mean a lot to me” ( $\alpha = .83$ ).

*Reported Stress Symptoms.* Fourteen symptoms – physical (e.g., headache, increased heart rate, muscle tension) and psychological (anxiety, generalized fear, memory problems) – were selected from the scale of strain developed by De Carlo, Falco, and Capozza (in press). Participants indicated on a 7-point scale (1 = *never*; 7 = *always*) how frequently, during the previous 12 months, they experienced each symptom as a consequence of situations related to work ( $\alpha = .93$ ).

### 5.2.5 - Results

For stress symptoms, AOC, a composite score was computed by averaging the respective items. As to humanness attributions, we computed two composite scores separately for the nurses’ ingroup and the patients’ outgroup, averaging the four UH traits and the four N-UH traits, respectively; to these data a 2 (Target: nurses vs. patients)  $\times$  2 (Traits: UH vs. N-UH) repeated measures ANOVA was applied. Means, standard deviations, and correlations for the study variables are provided in Table 5.1.

The 2 (Target)  $\times$  2 (Traits) ANOVA applied to humanness attributions revealed a main effect for target,  $F(1,108) = 52.55$ ,  $p < .001$ ,  $\eta^2_p = .33$ , and a main effect for traits,  $F(1,108) = 11.45$ ,  $p = .001$ ,  $\eta^2_p = .10$ , which were qualified by the two-way interaction Target  $\times$  Traits,  $F(1,108) = 7.23$ ,  $p < .01$ ,  $\eta^2_p = .06$ . Simple effects analysis showed that participants assigned both uniquely human and non-uniquely human traits to nurses more than to patients,  $F_s(1,108) > 13.64$ ,  $p_s < .001$ ,  $\eta^2_p > .11$ : for the UH traits,  $M = 5.33$  ( $SD = 1.03$ ), when nurses were the target, and  $M = 4.68$  ( $SD = 0.98$ ), when patients were the target; for the N-UH traits,  $M = 4.86$  ( $SD = 1.06$ ) and  $M = 4.52$  ( $SD = 0.89$ ), respectively. Moreover, participants perceived nurses as more defined by UH than N-HU traits,  $F(1, 108) = 20.53$ ,  $p < .001$ ,  $\eta_p^2 = .16$ , while they did not differentiate between the two types of traits for patients,  $F(1, 108) = 2.12$ , *ns*.

Table 5.1. Descriptive statistics and correlations for the main study constructs.

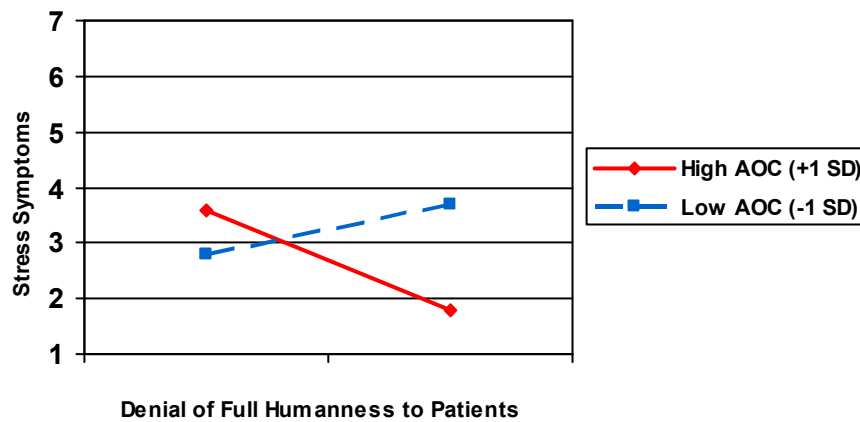
Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. UH traits (patients)	4.68	0.98	-				
2. N-UH traits (patients)	4.52	0.89	.16	-			
3. AOC	4.59	1.23	.40**	-.09	-		
4. ACP	4.90	1.14	.31**	-.10	.36**	-	
5. Stress symptoms	3.11	1.33	.29*	-.27*	-.03	.28*	-

Note. UH traits: uniquely human traits; N-UH traits: non-uniquely human traits; AOC: affective organizational commitment.

\*  $p < .01$ . \*\*  $p \leq .001$ .

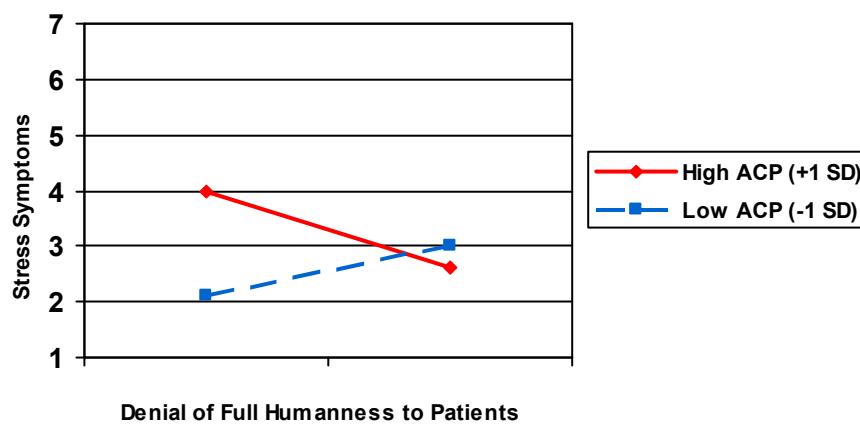
In testing the hypotheses, we used the difference between patients' N-UH and UH traits as a measure of full humanness denial: the higher the positive score, the more patients are perceived in terms of instinct and impulsiveness rather than self-control and rationality. In other words, the higher the positive score, the more strongly patients are denied a fully human status. The predicted moderation effect was tested using hierarchical regression: stress symptoms were the outcome variable. Results of the moderation analyses are presented in Table 5.2. First, we describe findings of the hierarchical regression involving the humanity measure (N-UH – UU traits) and AOC (Model 1). At Step 1, denial of full humanness to patients and AOC were both associated with a decrease in stress symptoms ( $\beta = -.52$ ,  $p < .001$ , and  $\beta = -.23$ ,  $p < .02$ , respectively). Results on denial of full humanness supported Hypothesis 1. At Step 2, the interaction between the two predictors was significant ( $\beta = -.57$ ,  $p < .001$ ;  $\Delta R^2 = .17$ ,  $p < .001$ ). Simple slope analysis (Figure 5.1) revealed that denial of full humanness to patients was associated with a reduction in stress among nurses with high AOC,  $B = -0.75$ ,  $t(108) = 7.87$ ,  $p < .001$ . Among nurses with low AOC, denial of full humanness was, in contrast, associated with an increase in stress,  $B = 0.40$ ,  $t(108) = 2.01$ ,  $p < .05$ . Findings regarding high-AOC nurses, thus, supported Hypothesis 2.

Figure 5.1. Stress symptoms as a function of denial of full humanness to patients at high (+ 1SD) versus low levels (- 1SD) of affective organizational commitment (AOC). Full humanness denial is computed as the difference between non-uniquely human traits and uniquely human traits.



Similar results were obtained when ACP was the moderator (Model 2). At Step 1, denial of full humanness to patients predicted the decrease in stress symptoms ( $\beta = -.38, p < .001$ ) (Hypothesis 1). The effect of ACP was nonsignificant ( $\beta = .16, ns$ ). At Step 2, as expected, a significant interaction emerged ( $\beta = -.40, p < .001, \Delta R^2 = .09, p < .001$ ). Simple slope analysis (Figure 5.2) revealed that the denial of full humanness to patients was negatively related to stress symptoms in nurses with high ACP,  $B = -0.53, t(108) = 5.31, p < .001$ , while it was not associated with stress symptoms in nurses with low ACP,  $B = 0.32, t(108) = 1.42, ns$ . These results supported Hypothesis 3.

Figure 5.2. Stress symptoms as a function of denial of full humanness to patients at high (+ 1SD) versus low levels (- 1SD) of affective commitment to patients (ACP).





### **5.2.6 - Discussion**

Findings confirmed the expected association between the attribution of a lower human status to patients and the reduction in stress symptoms; they also demonstrated the moderator effect of AOC and ACP. Reduced patients' humanization was associated with reduced stress symptoms in nurses with high organizational commitment or high commitment to patients. In contrast, one unexpected result concerns AOC: when AOC was low, the more nurses perceived patients as defined by non-uniquely rather than uniquely human traits, the stronger were the symptoms of stress. Maybe for nurses with low AOC, not having enough time to devote to patients, and patients' suffering were not the main sources of job-related stress. As a consequence, for these nurses, assigning patients a lower human status was not functional to reduce stress.

Being unjustified, dehumanization could have negative effects, such as a decrease in self-esteem and hedonic tone (Watson, Clark, & Tellegen, 1988), which increased the symptoms of stress. Low-AOC nurses are likely to use other strategies to cope with stress, such as: limiting prosocial actions (citizenship behaviors; Organ, Podsakoff, & MacKenzie, 2006), that require extra efforts, and making use of absenteeism or counter-productive behaviors (for the relationship between high/low organizational commitment and these behaviors, see, e.g., de Reuver & van Woerkom, 2010). These are dysfunctional coping responses; however, both low- and high-committed nurses may also use problem-focused, adaptive responses, such as planning and taking actions aimed to change the stressful situation (Carver, 1997).

Findings from the present study complement the existing literature about stress in nursing by providing empirical evidence to the contention that according a lower human status to patients works as a coping mechanism protecting nurses from stress, especially when AOC or ACP are high.

Attributing a lower human status to patients, however, may impair communication, thus reducing the likelihood of a collaborative care planning (Schulman-Green, 2003). Nurses, therefore, should be encouraged to engage in more productive, problem-focused strategies. For instance, the United Kingdom Central Council (1996) has recommended a period of regular clinical supervision. Other well-known interventions are: organizational development (Golembiewski, Hilles, & Daly, 1987), stress inoculation training (Meichenbaum, 1985), video-feedback (La Barbera, Andrighetto, & Trifiletti, 2006), and relaxation techniques (for a meta-analysis, see van der Klink, Blonk, Schene, & van Dijk, 2001).

As to the perception of patients as not fully human, nurses should be made aware of this bias. They should be helped, and motivated to engage in self-regulatory processes, in which they consider patients more in uniquely human than non-uniquely human terms (see Chapter 3, Paragraph 3.6).

A limitation of this study is its correlational design which does not allow us to draw definitive conclusions about the causal relationship between constructs. Future research should overcome this limit by using longitudinal surveys or experimental designs. Further studies should also replicate our findings, using other measures of humanity attributions, based, for instance, on primary and secondary emotions (see Leyens et al., 2007); response time tasks, like the IAT, can also be used (Greenwald et al., 2003). It must be mentioned, however, that our humanity measure has already proved its effectiveness in the field of interethnic relationships (Capozza et al., 2012). A final comment concerns the work context; participants were employed in different hospital departments. Results might be different if data were collected in high- or low-stress departments. Probably, in low-stress units, nurses do not apply the humanity bias to cope with stress, while in high-stress units this coping strategy is also used by low-committed nurses. Future research should investigate these hypotheses.

Table 5.2. Results of hierarchical regression

Model 1: Predictors	Dependent Variable: Stress symptoms	Model 2: Predictors	Dependent Variable: Stress symptoms
Step 1		Step 1	
N-UH – UH (patients)	-.52***	N-UH – UH (patients)	-.38***
AOC	-.23**	ACP	.16
$R^2$	.23	$R^2$	.21
$F$	15.89***	$F$	13.93***
$df$	(2,106)	$df$	(2,106)
Step 2		Step 2	
N-UH – UH (patients)	-.163	N-UH – UH (patients)	-.10
AOC	-.30***	ACP	.18*
N-UH – UH (patients) × AOC	-.57***	N-UH – UH (patients) × ACP	-.40***
$R^2$	.40	$R^2$	.30
$F$	23.67***	$F$	14.70***
$df$	(3,105)	$df$	(3,105)
$Fchange$	30.41***	$Fchange$	13.07***
$df$	(1,105)	$df$	(1,105)

Note. Standardized regression coefficients are reported. UH = uniquely human traits; N-UH = non-uniquely human traits; AOC = affective organizational commitment; ACP = affective commitment to patients.

\*  $p < .05$ . \*\*  $p < .02$ . \*\*\*  $p < .001$ .

### **5.3 – Study 2: Dehumanization Takes You Away. Avoidance (vs. Approach) of Persons with Intellectual Disabilities in Relation to Humanity Denial**

Research has consistently shown that people generally endorse negative attitudes toward people with intellectual disabilities (e.g., Handler, Bahrdway, & Jackson, 1994; Pittock & Potts, 1988; Yasbeck, McVilly, & Parmenter, 2004). In particular, negative attitudes have been found among: different professions such as health and social care practitioners (Nurse, Rhode, & Farmer, 1990), and police officers (Gendle & Woodhams, 2005; Henshaw & Thomas, 2012), different classes of ages such as children (Novicki, 2006), and adolescents (Hastings, Sjöström, & Stevenage, 1998), and across different national contexts (Siperstein, Norins, Corbin, & Shriver, 2003). Moreover, it has been demonstrated that negative attitudes toward mentally disabled persons may create barriers in everyday life and in attainment of their goals (Antonak & Livneh, 2000) worsening the general quality of life in domains such as education, employment, housing, and social interactions (Siperstein et al., 2003). These effects have also a negative impact on disabled themselves; in fact, mentally disabled persons are generally aware both of being discriminated and to be target of prejudice (Abbott & McConkey, 2006; Cooney, Jahoda, Gumley, & Knott, 2006; Gorfin & McGlaughlin, 2005). This awareness may produce negative self-evaluations, feelings of powerlessness, and frustration (Jahoda & Markova, 2004). For these reasons, there is a broad concern for the condition of people with intellectual disabilities in society. For example, UNESCO (1990) stressed the importance of promoting an equal education by learning support and by meeting individual needs; Italian government passed a law to promote the disabled' right to work (legge 68/99). Also in Psychology the issue is particularly sensitive and several interventions have been developed to improve attitudes toward individuals with mental disabilities (see, e.g., Doody, Slevin, & Taggart, 2012; Jones, McLafferty, Walley, Toland, & Melson, 2008).

Along with unfavourable attitudes, we propose that humanity perceptions may represent a critical dimension that negatively influences attitudes toward mentally disabled individuals. Since mentally disabled often attend health care facilities, we argue that humanity bias toward this specific target should be observed. Furthermore, humanity attributions are sensitive to power (Lammers & Stapel, 2011) and status (Capozza, et al., 2012): both individuals who hold power and high status groups tend to deny a full human status to less powerful/low status person/group. In our case, mentally disabled are generally perceived as a low status group. In fact, research has demonstrated that individuals tend to underestimate skills and abilities of mentally impaired persons believing

that they should live with their families and work in segregated workshops (Siperstein et al., 2003). Thus, we hypothesize that individuals with mental disabilities are perceived as not fully human (Hypothesis 1).

In the current research we aimed to investigate whether the denial of a full human status may have behavioral negative consequences for mentally disabled persons. Since the target does not represent a dangerous or threatening outgroup, that can elicit extreme negative reactions, we decided to focus on a more subtle and basic tendency, namely approach/avoidance behavior (see, e.g., Cacioppo et al., 1993). We hypothesize that the attribution of uniquely human traits positively affects approaching behaviors and negatively affects avoidance behaviors toward the mentally disabled persons (Hypothesis 2).

In the current study we considered different samples of professionals working with individuals with intellectual disability. Study 2a investigated, at an explorative level, whether mentally disabled persons are perceived as not fully human. To our knowledge, this is the first time that humanity perceptions are studied considering this target. For this reason, we decided to assess humanity by using two different measures: emotions (Leyens et al., 2007) and traits (see Haslam et al., 2008). Study 2b tested whether a reduced humanity may result in negative behavioral tendencies, namely less approach and more avoidance behaviors. In both studies we provided measures of attitude, namely semantic differential (Osgood et al., 1957; Study 2a, 2b) and a valence SC-IAT (Study 2b).

## **5.4 – Study 2a**

### **5.4.1- Method**

#### **5.4.1.1 - Participants and Procedure.**

Participants in this study were 40 health workers recruited in 12 different regional services for people with intellectual disabilities. The sample included 35 women and 5 men. Regarding age, 25% of respondents were between 30 and 40 years, 45% were between 41 and 50 years, 25% were between 51 and 60 years and 5% were over 60.

Participants were informed that the study investigated care staff attitudes toward mentally disabled persons, and then completed a questionnaire including the measures.

#### 5.4.1.2 - Measures

*Emotions.* Participants were presented with a list of words presented in a random order. Of the words, three were positive secondary emotions (e.g., pride), three were negative secondary emotions (e.g., shame), three were positive primary emotions (e.g., pleasure) and three were negative primary emotions (e.g., fear). The remaining words were filler. Participants were asked to select the characteristics that were typical of persons with intellectual disabilities.

*Traits.* We used the UH and N-UH traits considered in the previous studies (see Chapter 3). Participants had to report the extent to which each trait characterized persons with intellectual disabilities. Answers were given on a 7-point scale, anchored by 1 (*totally disagree*) and 7 (*totally agree*), with 4 (*neither agree, nor disagree*) as the midpoint. Alpha were .68 for UH traits and .72 for N-UH traits.

*Attitude.* Attitude toward mentally disabled persons was assessed by using the semantic differential scale. Research has demonstrated that this instrument is appropriate to measure attitudes toward people with disabilities (Ahlborn, Panek, & Jungers, 2008; Panek & Jungers, 2008; Panek & Smith, 2005). Participants completed a set of five semantic differential scales (e.g., *good-bad, pleasant-unpleasant*). Answers were given on a 7-point scale ranging from 1 (negative pole) to 7 (positive pole). Alpha was .70.

#### 5.4.2 - Results

For semantic differential, UH traits, and N-UH traits, a composite score was computed by averaging the respective items. From the means (Table 1), it appears that health care providers perceived persons with intellectual disabilities not fully human, namely more characterized by N-UH traits than UH traits,  $F(1, 39) = 96.81, p < .001, \eta^2_p = .71$ . In addition, we found a positive attitude toward disabled persons: the mean ( $M = 4.75, SD = 0.77$ ) for semantic differential was reliably different from the mid-point,  $t(39) = 6.14, p < .001$ .

Regarding emotions, we created four composite scores for the number of primary and secondary emotions (negative vs. positive). This score could vary from 0 to 3. A 2 (Emotion: primary vs. secondary) X 2 (Valence: negative vs. positive) repeated measures ANOVA was then performed. A significant main effect of emotion was obtained,  $F(1, 39) = 68.68, p < .001, \eta^2_p = .52$ . Participants attributed more primary than secondary emotions to persons with intellectual disabilities (see Table 5.3). Valence also had a significant main effect,  $F(1, 39) = 9.62, p = .01, \eta^2_p = .20$ . Thus, more positive emotions than negative

emotions were attributed to disabled persons. The two way interaction failed to reach significance,  $F(1, 39) = 2.40, ns$ .

Table 5.3. Means and standard deviations of humanity measures.

Traits		Emotions	
UH	N-UH	Secondary	Primary
4.01(0.95)a	5.76(0.72)b	2.53(2.05)a	4.38(1.78)b

*Note.* For each measures, a different subscript indicates that the two means are significantly different,  $p < .001$ . Standard deviations are given in parentheses.

### 5.4.3 - Discussion

Consistent with our hypotheses, results of Study 1 demonstrated that health care staff perceived mentally disabled people as not fully human. This humanity bias was found both using a trait-based and using an emotion-based measure (see Haslam et al., 2008); the second considering emotions (Leyens et al., 2001). Moreover, we observed a positive attitude toward the outgroup. In fact, respondents used positive adjectives to describe the disabled persons in the semantic differential scale and ascribed more positive emotions than negative emotions to the outgroup.

Thus, this pattern of results reveals an asymmetry between attitude and humanity: on the one hand, practitioners positively evaluated disabled people while, on the other hand, they denied a full human status.

### 5.5 – Study 2b

In Study 2b, we aim to extend findings of the previous study by investigating whether the denial of a full human status to persons with mental disabilities may lead to negative behavioral consequences. In particular, we hypothesized that ascribing uniquely human features would have produced more approaching, rather than avoiding, behaviors toward the target, while ascribing non-uniquely human features would have produced more avoiding, rather than approaching, behaviors toward the target. Moreover, since the semantic differential represents a measure sensible to social desirability, in the current study we included an implicit measure of attitude to assess automatic associations between mental disability and evaluation.

## **5.5.1 – Method**

### **5.5.1.1 - Participants.**

Participants in this study were 20 socio-sanitary practitioners employed in a residential centre specialized in caring people with intellectual disabilities. One respondent was excluded from analyses because of failing to complete the SC-IAT. The final sample included 19 participants. Participants' age ranged from 22 to 46 years ( $M_{age} = 34.79$ ,  $SD = 8.45$ ) and gender distribution was 12 male and seven female.

### **5.5.1.2 - Measures**

*Humanity attributions.* Humanity perceptions of mentally disabled persons were measured using attribution of primary and secondary emotions as in Study 2a.

*Attitude.* Explicit attitude toward people with intellectual disabilities was assessed using the same semantic differential scales considered in the previous study. Higher scores indicated a positive attitude toward the target. Alpha was .90.

To assess implicit attitude toward disabled people we used the SC-IAT (see Chapter 3). Stimuli were five positive words (e.g., miracle, happiness), five negative words (e.g., cancer, jail) and five mentally disabled related words (e.g., disabled, handicapped).

*Behavioral tendencies.* For measuring behavioral tendencies we use an approach/avoidance SC-IAT similar to the attitude SC-IAT with the difference that positive/negative words were replaced with stimuli meaning approach (e.g., approach, touch) and avoidance (e.g., avoid, get away). We decided to consider this technique because it has revealed its effectiveness in the study of approach/avoidance behavior (see, e.g., Ostafin & Palfai, 2006; Wiers, Rinck, Kordts, Houben, & Strack, 2010).

### **5.5.1.3 - Procedure**

Participants, examined individually, were told that the study concerned attitudes toward individuals with intellectual disabilities. First, respondents completed the attitude SC-IAT, semantic differential scale and humanity measure. Subsequently, participants performed the approach/avoidance SC-IAT. Finally, some personal information was asked. Upon completing the experiment, participants were fully debriefed.



### 5.5.2 – Results

Descriptive statistics and correlations between the variables are reported in Table 5.4 SC-IAT. To assess behavioral tendencies a D-score was computed (Karpinski & Steinman, 2006; see also Chapter 3 and 4). Higher values of the D-score indicated stronger associations with avoidance category. The mean of *D* (see Table 5.4) was not reliably different from zero for approach/avoidance SC-IAT,  $t < 1$ .

*Humanity attributions.* As in Study 1, we created four composite scores for the number of primary and secondary emotions (negative vs. positive) then we submitted the scores to a 2 (emotion: primary vs. secondary) X 2 (valence: negative vs. positive) ANOVA. A significant main effect of emotion was obtained,  $F(1, 18) = 68.68, p = .000, \eta^2_p = .52$ . Participants attributed more secondary emotions ( $M = 0.63, SD = 1.60$ ) than primary emotions ( $M = 1.74, SD = 2.31$ ) to persons with intellectual disabilities. No main effect of valence was observed. The two way interaction failed to reach significance,  $F(1, 18) = 2.40, ns$ .

*Attitude.* For semantic differential we created a composite score by averaging ratings of the five scales. Analyses showed that respondents generally endorsed positive attitudes towards mentally disabled persons. In fact, the mean ( $M = 5.71, SD = 1.13$ ) was reliably different from the neutral point of the scale,  $t(18) = 6.59, p < .001$ .

Regarding the valence SC-IAT, a D-score for implicit attitude was computed. Higher values of *D* indicate stronger negative attitude toward mentally disabled persons. The mean of *Ds* (see Table 5.4) was not reliably different from zero,  $t < 1$ .

Table 5.4. Correlation matrix among variables.

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. D Approach/Avoidance	0.05	0.34	-				
2. Secondary Emotions	0.63	1.60	-.48*	-			
3. Primary Emotions	1.74	2.31	.16	.50*	-		
4. Explicit Attitude	5.71	1.13	-.20	-.07	.14	-	
5. Implicit Attitude	0.03	0.34	-.02	-.19	-.40	-.18	-

\*  $p < .05$

*Regression analysis.* Results of the regression analysis are presented in Table 5.5. To test whether humanity influenced behavioral tendencies we performed a hierarchical regression. As dependent variable, we considered the approach/avoidance D-score. At Step 1, we regressed implicit and explicit attitudes and then, at Step 2, we entered primary and secondary emotions as predictors.

Table 5.5. Results of hierarchical regression analysis.

Predictors	Step 1		Step 2	
	$\beta$	$t(16)$	$\beta$	$t(14)$
Explicit Attitudes	.21	-0.86	-.35	-1.87
Implicit Attitudes	-.06	-0.26	.00	-0.00
Secondary Emotions	-	-	-.81**	-3.85
Primary Emotions	-	-	.60*	2.71

Note.  $R^2 = .04$  - Step 1;  $\Delta R^2 = .51^{**}$  - Step 2.

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

Unexpectedly, attitude did not affected approach/avoidance behavior ( $\beta = ns$ ). In fact, at Step 1, the model failed to reach significance,  $F < 1$ . Conversely, at Step 2, results showed a significant  $F$  change of the model,  $F(2,14) = 7.93$ ,  $p < .01$ ,  $R^2_{adj} = .42$ . Consistent with our hypotheses, secondary emotions were negatively related to avoidance inclinations ( $\beta = -.81$ ,  $SE = .04$ ,  $t = -3.85$ ,  $p < .01$ ). We also found a significant effect of primary emotions ( $\beta = .60$ ,  $SE = .03$ ,  $t = 2.71$ ,  $p < .05$ ). Thus, ascribing emotions that humans share with other animals enhanced the tendency to avoid the target group.

### 5.5.3 – Discussion

Study 2b provided first evidence that humanity attributions have negative consequences on the relationship between caregivers and individuals with mental disability. In fact, perceiving the other as not fully human produced negative behavioral tendencies namely inhibited approach and enhanced avoidance. Moreover, in the current study we replicated findings of Study 1. In fact, we found that respondents ascribed more primary emotions than secondary emotions indicating that they perceived mentally disabled as not characterized by a fully human status. Moreover, we also found a general

positive attitude toward the target group, although this result emerged only with the semantic differential scale; regarding emotions and valence SC-IAT, we did not find any effect of valence.

#### **5.5.4 – General Discussion**

Study 2 provides new insights in research on attitudes toward persons with mental disability. Our findings extend literature in mental disability research for two reasons. First, this is, to our knowledge, the first empirical study that investigates humanity attributions – considering both emotions (Leyens et al., 2007) and traits (see Haslam et al., 2008) - to persons with mental disabilities in professionals trained to caring this specific target. The wide literature, available on the topic, considered general attitudes toward persons with mental disabilities measured both in professionals (see, e.g., Aulagnier et al., 2006; Williams & Rose, 2007) and in non-professionals (see, e.g., Akrami, Ekehammar, Claesson, & Sonnander, 2006; Panek & Jungers, 2008) and humanity perceptions still represent a little investigated topic. Second, our results show that denial of full humanness leads to negative consequences, namely more avoidance than approach tendencies. Surprisingly, we also found a positive effect of primary emotions on behavioral tendencies. According to the dominant literature, only secondary emotions are relevant for humanity attributions. However, in our opinion, perceiving mentally disabled in terms of primary emotions, namely intense and easily recognizable emotions, may have weakened the link between target group and humanity. Moreover, we also found that this result depends from humanity attributions and not from attitudes toward the target. This latter result may be explained by the fact that health care providers are more aware and trained to manage unfavourable attitudes toward individuals with mental disabilities while humanity denial, being a more subtle form of prejudice (Eyssel & Ribas, 2012), is more difficult to identify and to control.

In our case, we decided to consider healthcare providers first because they represent the group who holds every day interactions with disabled and, second, because their attitudes may have the strongest effects on mentally impaired persons' well-being. The two samples considered in the research received a specific professional training to deal with intellectual disability, thus, it is important to notice that our findings revealed a critical factor that negatively influences care provider's perceptions of the individuals with intellectual disabilities. For this reason, our contribution may be useful as a potential supplement for

professional training of caregivers since it makes aware that humanity denial leads to negative consequences.

The correlational design of the study does not allow reaching a definitive conclusion about the causal relation between the variables. Further research with experimental designs is needed to clarify the mechanisms underlying the relation between humanity and behavior. Further studies should also replicate our findings considering other contexts potentially critical for persons with intellectual disabilities (e.g., education, work) and other behaviors (e.g., helping intentions, support for pro-disabled policies). Moreover, future research should investigate the functions of humanity denial in mental disability domain.

## Summary and Conclusions

*“...Remember your humanity, and forget the rest.  
If you can do so, the way lies open to a new  
Paradise; if you cannot, there lies before you the  
risk of universal death...”*

(The Einstein-Russel Manifesto, 1955)

The first empirical research that demonstrated the differential attribution of humanity in intergroup relations has been carried out more than ten years ago (Leyens et al., 2000). A lot has been done in attempting to understand the processes underlining the denial of a full human status to others and its consequences. Several authors (Bandura, 1999; Bartal, 1989; Gray et al., 2007; Haslam et al., 2008; Leyens et al., 2007; Nussbaum, 1995; Opatow, 1990; Schwartz & Struch, 1989) gave different interpretations of humanity perceptions in Social Psychology. Although these theories and models differ in some aspects, the core concept is the presence of a universal tendency to fully or partially deny humanity to the outgroups. This latter statement has been corroborated by a huge number of empirical evidences, considering different aspects of humanity, such as emotions (Leyens et al., 2007), traits (Capozza et al., 2012; Haslam et al., 2008), values (Schwartz & Struch, 1989), mind perceptions (Gray et al., 2007), different paradigms, such as explicit (e.g., Capozza et al., 2012) and implicit (e.g., Viki et al., 2006) techniques, and different intergroup relations, such as ethnic (e.g., Andrighetto et al., 2012), national (e.g., Leyens et al., 2000), professional (e.g., Iatridis, 2013).

Along with the line of research investigating the humanity attributions processes, recently, social psychologist showed increased interest in studying the consequences of humanity denial. Since it represents a form of outgroup derogation (and ingroup favoritism), perceiving the other as not fully human involves negative outcomes for groups, such as less empathy (Čehajić et al., 2009), less helping intentions (Cuddy et al., 2007) and behaviors (Vaes et al., 2003), enhanced discrimination (Pereira et al., 2009), more prejudice (Costello & Hodson, 2010) and negative attitudes (Hodson & Costello, 2007).

The purpose of the current work was to provide new insights in the study of consequences of humanity denial to others, in particular considering some critical issues, that have a significant impact in everyday life, in which the role of humanity still remain unclear, namely violence, intergroup contact, and health. In particular, the thesis is organized in three parts, each considering a single topic.

The first part has been dedicated to investigate the role of dehumanization in violence domain. Two studies were conducted in order to test whether humanity denial would have affected perceptions of threat and violent tendencies toward the outgroup, represented by Moroccan immigrants. In the first study we hypothesized that the attribution of a lower human status and the association between outgroup and animality would have increased the perception that the outgroup is threatening and ready to harm. To test our hypothesis, we administer two measures of humanity, namely attributions of traits (uniquely human vs. non-uniquely human) and a computerize task that assessed the mental associations between Moroccans with humanity and animality. Perceptions of threat were measured by adopting a sequential priming technique, namely the “Weapon Task” (Payne, 2001), in which participants had to discriminate, as quickly as possible, weapons from tools after the presentation of outgroup faces (vs. ingroup faces). Results confirmed our hypothesis: faster categorizations of weapons preceded by outgroup primes were influenced by the attributions of non-uniquely human traits to Moroccans and by their association with animal concepts.

In the second study we extended our findings by testing the effects of humanity denial on violent tendencies against the outgroup, in particular considering the moderator role of executive functions. In Study 2a we proposed that humanity denial would have been related to increased violence toward Moroccans only for participants with less efficient executive functions. Moreover, we hypothesized that, for participants with effective executive functions, dehumanization would have not affected aggressive behaviors. In this study, participants completed a Single Category Association Task (SC-IAT; Karpinski & Steinmann, 2006) to assess Moroccans humanity, a Stroop test to measure executive functions, and a simulated shooting task, an adaption of the “Weapon Task” used in the previous study, in which participants had to shoot armed targets, namely faces followed by a weapon, and not to shoot unarmed targets (faces followed by an object). Results confirmed our hypothesis. We found that, when cognitive control is high, it is possible to inhibit the tendency to be violent toward a dehumanized outgroup. Conversely, when people do not have an efficient control of their behavior, dehumanization could affect their negative reactions against the outgroup.

In Study 2b we manipulated executive functions by creating two experimental conditions: high vs. low depletion. In high depletion condition, participants completed a Stroop test consisting in incompatible and neutral trials (a string of “X”); in low depletion condition, a Stroop test with compatible and neutral trials was administered. Similarly with

the previous study, participants executed a humanity SC-IAT and the shooter task. We hypothesized that humanity denial would have influenced shooting behaviors against Moroccans only in high depletion condition. Results did not corroborate our predictions. In fact, the manipulation did not affect the efficiency of participants' executive functions.

The second part of the thesis was dedicated to the study of the causal link between humanity attributions and intergroup contact (Allport, 1954). In the first study we manipulated humanity perceptions in order to investigate whether they would have affected the motivation to seek contact with outgroup, namely Moroccans Immigrants. In the second study, we tested the inverse relation, that is, whether contact would have enhanced humanity attributions to the outgroup.

In Study 1, outgroup humanity was manipulated by a subliminal priming technique. In the humanization condition, the Moroccan outgroup was linked to human concepts and uniquely human characteristics; in the dehumanization condition, instead, outgroup was linked with animal concepts and non-uniquely human characteristics. After the manipulation, participants completed the "manikin task" (De Houwer et al., 2001): an approach/avoidance task that we adapted to reflect contact tendencies. Participants, according to the instructions, had to approach or avoid outgroup related stimuli by moving the manikin. We hypothesized that participants would have shown more contact tendencies, namely faster approach and slower avoidance, in the humanization condition compared with the dehumanization condition. Moreover, we predicted faster approach latencies than avoid latencies in only in humanization condition. Results supported the second hypothesis. Humanity manipulation did not affect approach and avoidance latencies while outgroup humanization enhanced approach tendencies more than avoidant behavior.

In Study 2 we manipulated contact tendencies by employing a modified version of the "manikin task". In the contact condition participants were trained to approach repeatedly outgroup related stimuli (faces of Moroccans) while, in the control condition, participants executed the same task, but considering neutral stimuli (pieces of furniture). Outgroup humanity was assessed by using uniquely human and non-uniquely human traits. In addition, we measure anxiety, empathy, trust, and attitudes, since they represent critical dimensions in contact literature (Pettigrew & Tropp, 2008). We hypothesized that outgroup contact would have increased humanity of Moroccans, compared to control condition. Furthermore, we hypothesized, in the contact condition, higher empathy, increased trust and empathy, and better attitudes than in the control condition. Hypotheses

were fully supported. As predicted, contact promoted Moroccan humanization compared to the other condition. We also confirmed findings available in contact literature. In fact, in contact condition, participants reported less anxiety, more trust and better evaluations of the outgroup. Nevertheless, no effect of empathy emerged. Finally, we also found a mediation effect of trust in the relation between condition and humanity.

Finally, in the third part we investigated the effects of humanity perceptions in health contexts. In a study, conducted with hospital nurses, we found that the denial of a full human status to patients served as a strategy to cope with stress. Moreover, findings showed the moderator role of affective organizational commitment (Meyer & Allen, 1991) and affective commitment to patients (Vandenberghe et al., 2007). Only high committed, both with hospital and with patients, nurses deny humanity to patients in order to decrease job related stress.

In the last study, we investigated attributions of humanity and their consequences in practitioners working with mentally impaired persons. First, we found that individuals with mental disabilities were perceived as not fully human. This latter result was obtained considering different aspects of humanity, namely attribution of uniquely human traits and emotions. Second, we provide first evidences that the denial of a full human status influences behavioral tendencies. In fact, on the one hand, the attribution of uniquely human emotions to mentally disabled was positively correlated with approaching behaviors, measured with SC-IAT. Moreover, attitudes did not affect behavioral tendencies.

To sum up, our results are new for different reasons. First, we provide some new evidence of the effects of humanity denial considering social issues that are relevant in everyday life. In fact, despite western societies endorse equality and mutual respect for individuals and groups, we continue to be witnesses of negative attitudes and detrimental behaviors toward disadvantaged minorities. In particular, in Italy, stigmatized groups still experience poor quality of life due to discrimination (Baussano, 2012).

Also health contexts represent a critical domain negatively affected by dehumanization (Haque & Waytz, 2012), since many expressions of modern medicine endorse a dehumanized perception of patients (Haslam, 2006). These deceitful representations may involve negative consequences at different levels: poor quality of care, less patients' satisfaction, increased stress for nurses, and financial costs for health facilities.



It is, therefore, clear the importance of studying humanity attributions in these domains in order to understand the mechanisms that lead individuals to devalue and discriminate other groups, thus, preventing harmonious intergroup relationships.

Second, the current work presents some aspects of innovation in research on humanity attributions. In particular, in the first part, we provide some new evidences of the effects of dehumanization in facilitating threat perceptions and violence against the outgroup. Along with unfavorable perception of the outgroup, such as negative stereotype (Correll et al., 2002) and attitudes (Payne, 2001), we demonstrated that humanity denial contributes, on the one hand, to promote stereotypical images of stigmatize outgroups, and, on the other hand, to curb moral restraint to be harmful toward them. Interestingly, this latter point is also influenced by behavioral control.

In the second part, our contribution was to confirm and extend the understanding of the relation between humanity attributions and intergroup contact. Since actual findings are based on correlational (Capozza et al., 2012) and longitudinal evidences (Brown et al., 2007), we provide, at our knowledge, the first experimental evidence of the causal link between the two constructs.

In the final part, we explored a domain still little investigated, namely humanity perceptions in health contexts. In fact, there are not many studies that tested humanity denial in these domains, in particular considering practitioners as the ingroup. Our research, on the one hand, showed that nurses and socio-sanitary workers express humanity bias toward patients and individuals with mental disabilities, and, most important, this perceptions lead to reduced stress and avoidance tendencies.

Moreover, we deeply hope that our results could ignite and stimulate future research in order to confirm, extend, and overcome potential limitations. It would be of great interest, indeed, to replicate our findings by using different paradigms, measures and intergroup relations; moreover, further studies should be conducted to deeply investigate our findings. For example, to test whether the use of humanity denial as a coping strategy differs among different hospital departments; considering the effect of hierarchy, namely whether medical doctors use dehumanization more than nurses. Furthermore, future research may concentrate on the study of the effects of humanity perceptions on violence considering different forms of executive functions depletion, such as tiredness or anxiety<sup>7</sup>.

Last but not least, we highlight the practical implications of our findings. In particular, by knowing the mechanism underlying humanity denial, it is possible to develop

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<sup>7</sup> For further details see the respective chapters.

targeted interventions in order to smother or eradicate dehumanization and its negative consequences for the outgroup. First, make people aware of this bias may be a starting point to base subsequent interventions. Moreover, according to Chapter 4, stimulating intergroup positive encounters results in ameliorating humanity perceptions that, in turn, should decrease the negative consequences associated with dehumanization. In particular it would be interesting to use our contact manipulation to implement initial strategy to promote more direct and complex intergroup interactions. In addition, our results have revealed the importance of focusing on individuals' executive functions. In order to curb the detrimental effects of humanity denial, it would be useful to concentrate on training of executive functions<sup>1</sup>.

In conclusion, we should not underestimate the power of humanity - just perceiving animals as similar to humans increases moral concern toward them (Bastian et al., 2012) - simply because it probably represents the single dimension that joins all men and women across cultures and places. To be honest, treating other as human beings requires civility and moral sensibility that are, after all, uniquely human qualities.





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