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# **INGROUP'S STATUS AND IMPLICIT ATTRIBUTIONS OF HUMANITY**

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*A mia madre, a mio padre  
e a Nicola*

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## Introduction

The aim of the thesis is to explore the role of ingroup status on intergroup perceptions of humanity.

In recent years, some researchers have investigated the tendency to attribute a lesser humanity to outgroup (see, e.g., Goff, Eberhardt, Williams, & Jackson, 2008; Leyens, Demoulin, Vaes, Gaunt, & Paladino, 2007; Haslam, 2006). The pioneering works in this field were provided by Leyens and colleagues (see, e.g., Leyens et al., 2001, 2003). These authors examined the attributions to ingroup and outgroup of a specific human feature, the secondary emotions (e.g., pride, regret). They found that these emotions are attributed more to ingroup than outgroup. Thus, the outgroup is perceived as less human, not fully defined by a uniquely human attribute. Leyens and colleagues defined this effect *infrahumanization*. Several studies showed the strength of this effect: it does not depend on greater familiarity with the emotional experiences of ingroup members (Cortes, Demoulin, Rodriguez, Rodriguez, & Leyens, 2005); it was revealed using both explicit (see e.g., Leyens et al., 2001; see also Demoulin, Rodriguez, et al., 2004) and implicit measures (see Boccato, Cortes, Demoulin, & Leyens, 2007; Paladino et al., 2002). It was also demonstrated that this perception leads to negative behavioral consequences (Vaes, Paladino, Castelli, Leyens, & Giovanazzi, 2003).

Moreover, the tendency to *infrahumanize* the outgroup is not moderated by status. It was also found in groups having lesser power or socioeconomic status (see, e.g., Cortes et al., 2005; Leyens et al., 2001; Paladino et al., 2002; Paladino, Vaes, Castano, Demoulin, & Leyens, 2004; Delgado, Rodriguez, & Rodriguez, 2006); however, results concerning status could depend on the uniquely human attribute used. Indeed, emotions are a uniquely human feature independent from structural dimensions of society. If other uniquely human attributes, such as intelligence or talent, or an overall concept of humanity are considered, findings concerning status could be different. In particular, our prediction is that lower status groups might assign in equal measure to ingroup and outgroup or, even, more to outgroup, attributes which activate the concept of humanity. Instead, in higher status groups, the concept of humanity should be

associated more with ingroup than outgroup, since their members may assign more uniquely human features to ingroup.

Across five studies, we tested the moderating role of status on attributions of humanity.

In the first two studies, we analyzed two real groups with a different socioeconomic status, Northerners (higher status group) and Southerners (lower status group) in Italy. In the first study, more exploratory, we considered only the lower status group. Instead, in the second study attributions of humanity were measured for both groups. The third study considered the relationship between Americans and Italians. In this study, status was manipulated: in the higher status condition, attributes of Italian superiority were made accessible (e.g., creativity in arts and letters), in the lower status condition, instead, attributes of American superiority were made accessible (e.g., creativity in technology). In the fourth study, we manipulated the perception of status of two minimal groups (overestimators vs. underestimators). Finally, the aim of the fifth study was to replicate findings obtained in previous studies considering other concepts representing the humanity dimension, compared to previous studies.

In all studies, we expected that people in high status conditions assign a privileged human status to ingroup and a lesser humanity to outgroup. Instead, we expected that members of lower status groups associate attributes linked with humanity to the same extent to ingroup and outgroup or, even, more to outgroup than ingroup. In lower status groups, the lesser association of ingroup rather than outgroup with humanity, could be one of the processes leading to justifying and maintaining the existing social system, in line with system justification theory (see Jost, Banaji, & Nosek, 2004).

The studying of humanness perception is a “socially” sensitive intergroup phenomenon; thus, it is convenient to use nonconscious, implicit measures, since they obviate concerns about strategic impression management (see Greenwald & Banaji, 1995). Actually, for our purposes, it is convenient to use the Go/No-go Association Task (GNAT), an implicit technique recently developed by Nosek and Banaji (2001), basing on the logic of Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998).

Our research represents an important contribution to the study of intergroup attributions of humanity: studies on this issue which analyzed not emotions but the general concept of humanity are few (Boccatto, Capozza, Falvo, & Durante, 2008; Viki et al., 2006), and did not examine the moderating effect of status. Moreover, this research might broaden knowledge concerning phenomenon of implicit outgroup favoritism. Indeed, this process has been investigated only considering implicit intergroup evaluations; to our knowledge, no study on this issue has involved implicit attributions of humanity.



# Chapter 1

## Perceiving others as less than humans: theoretical interpretations and empirical evidences

### 1.1 Dehumanization and intergroup violence

*“When we tracked down the Tutsis in the swamps we did not see human beings anymore. I mean people like us, with the same thoughts, feelings and stuff like that. We hunted like beasts, the hunters were beasts, the prey were beasts, animal instincts had taken possession of our souls.”*

Testimony given by Pio, member of the Interahamwe militia, extremist Hutus during the Rwandan civil war.

(Hatzfeld, 2004, p. 55)

In 1994 the Republic of Rwanda was the scene of one of the most violent events of the 20th century. Between April 6th and the middle of July of that year about 800.000 Tutsis and 200.000 moderate Hutus were killed, at a rate three times higher than the extermination of the Jews (Gourevitch, 1998). A genocide quickly removed from the collective conscience, of which Western public opinion had distorted information. This was an “intimate genocide” (Staub & Pearlman, 2001), in which the women, men and children who were massacred shared their language, customs and religion with the people who killed them (Hatzfeld, 2004). The killings were perpetrated with incredible ferocity and were often accompanied by episodes of violence against women and other forms of physical and psychological violence and torture (Staub, 2006).

This genocide was inserted in a context of rivalry and conflict between Hutus and Tutsis which had for a long time characterized the country. The Tutsis in fact, although being in a minority with respect to the Hutus (they represented about 14% of the population) constituted, at least until the first half of the 20th century, the economically and socially dominant group in the country. The Tutsis were wealthier, and had power, while the Hutus were agriculturalists (Des Forges, 1999). In 1959, a Hutu rebellion brought the Hutus to power; from then until the early 1990s, Rwanda proclaimed its independence from Belgian

colonizers and a few Hutu families shared power carrying out discriminatory policies against the Tutsi minority. Already between the 1960s and 1970s, in fact, the first mass killings were carried out, forcing many Tutsi families to flee to neighbouring Uganda. In 1990, the Rwanda Patriotic Army, made up for the most part of exiled Tutsis, invaded the country to overthrow the Hutu government. This was the beginning of a civil war which ended three years later and led to the creation of a transition government shared by Hutus and Tutsis. However, during those years the tensions between the two ethnic groups grew steadily, aggravated by a strong economic crisis which further destabilized the country. On April 6th 1994 the airplane carrying the President Juvenile Habyarimana was shot down by a missile; the day after in the capital Kigali, on the pretext of a revenge, the massacres and physical elimination of the Tutsi population and the democratic Hutu opposition began, perpetrated by the Presidential Guard, interhamawe paramilitary forces, and young Hutus.

The decades of conflicts between the two ethnic groups, economic motives, the indifference of the West, are without doubt important causes, but they are not enough to provide an explanation for this genocide. They are not able to fully explain why thousands of people decided to humiliate and kill, in less than a hundred days, people who until the day before had been work colleagues, neighbours or even relatives. Besides these causes it is necessary therefore to resort to an ideology of “Hutu power” which was diffused among the Hutu ethnic groups through government institutions and the mass-media. A delegitimizing ideology which intensified even more the feelings of contempt and hatred toward the Tutsis, and which progressively excluded this group from the moral and social norms which regulated society (Bar-Tal, 1989; Opatow, 1990; Staub, 1990). Through this propaganda, the Tutsis were stripped of the capacity to experience human feelings and emotions, they were derogated as being inferior, as animals. In other words, they were dehumanized. In the course of that year, the most important popular Hutu radio stations, like Radio Rwanda, invited the Hutu population to go out of their houses and hunt and squash the Tutsi “nyenzi” (beetles).

Therefore, in Rwanda dehumanization played an important role as precursor to the moral exclusion of outgroup, the process by which derogated groups are placed “outside the boundary in which moral values, rules and considerations of fairness apply” (Opatow, 1990, p. 1). When a group is dehumanized, its members are not only morally excluded, but they are no longer viewed as persons with feelings and hopes (Bandura, 1999; Keen, 1986; Kelman, 1973). It is easier to perpetrate aggressive acts toward people when they are viewed as low animal forms (Bandura, 1999).

Therefore, dehumanization is an important component to most of the genocides or situations of intergroup violence that have happened throughout the course of history (see Lindqvist, 1998). In *Mein Kampf*, Hitler assimilated Jews to different animals: polyps (they spread everywhere), hyenas (dangerous and mean), lice (irritating but eliminable). Even Washington defined American Indians as wolves, since he perceived both Indians and wolves as predatory animals (Drinnon, 1990). Outgroup dehumanization is a phenomenon which can be seen not only in past conflicts but also in our present day society. For instance, this is the way an exponent of the Northern League (a political party in the coalition of the Italian government) expressed himself only a few months ago in reference to the presence of Gypsies in Italy: “Mice are easier to wipe out than gypsies because they are smaller...”. It’s interesting to note how, the month after these declarations, following the presumed kidnapping of a baby girl by a young Rom, in Naples some gypsy encampments were attacked and set on fire and their inhabitants forced to flee.

### *1.1.1 Dehumanization: an extreme case of prejudice*

The tendency to dehumanize other people, with its extremely negative consequences, has been the object of many interpretations. Bar-Tal (1989; 2000) considers dehumanization a particular strategy of delegitimitazion of outgroup; it 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). For the author, dehumanization is a

psychological process which originates from the same principles as group categorization (see e.g., Rosch, 1978; Tajfel & Turner, 1979) defining stereotypes or prejudice. However, it has some unique features that differentiate it from stereotype and prejudice. First of all, the dehumanized group is permanently excluded from norms and values ruling a society; when, instead, a group is negatively stereotyped, it may continue to be accepted inside the boundaries of society. Ingroup members feel intense negative emotions, such as disgust, fear, anger, toward the dehumanized outgroup. Moreover, dehumanization usually involves aggressive and harmful behaviours which the dehumanizing group enacts or potentially enact toward the dehumanized outgroup.

Further, Bar-Tal (1989) holds that this process, as all other categorization processes, fulfils different functions both for individuals and groups. Mainly, dehumanization justifies extremely negative and aggressive behaviours committed toward the dehumanized group: considering “others” such as demons, savages or gooks, provides a cognitive explanation to justify extremely aggressive actions perpetrated toward the outgroup. However, this justification may even precede and lead to these actions: the dehumanized group is, indeed, often perceived as highly threatening for ingroup and for its existence; thus, ingroup members feel an obligation to act toward the dehumanized group in order to protect their group. An American soldier in the Vietnam war symbolizes this function clearly:

*“When you go into basic training you are taught that the Vietnamese are not people. You are taught, they are gooks and all you hear is “gook, gook, gook”... You are trained “gook, gook, gook,” and once the military has got the idea implanted in your mind that these people are not humans, they are subhuman, it makes it a little bit easier to kill ‘em ”*  
(Boyle, 1972, p.141).



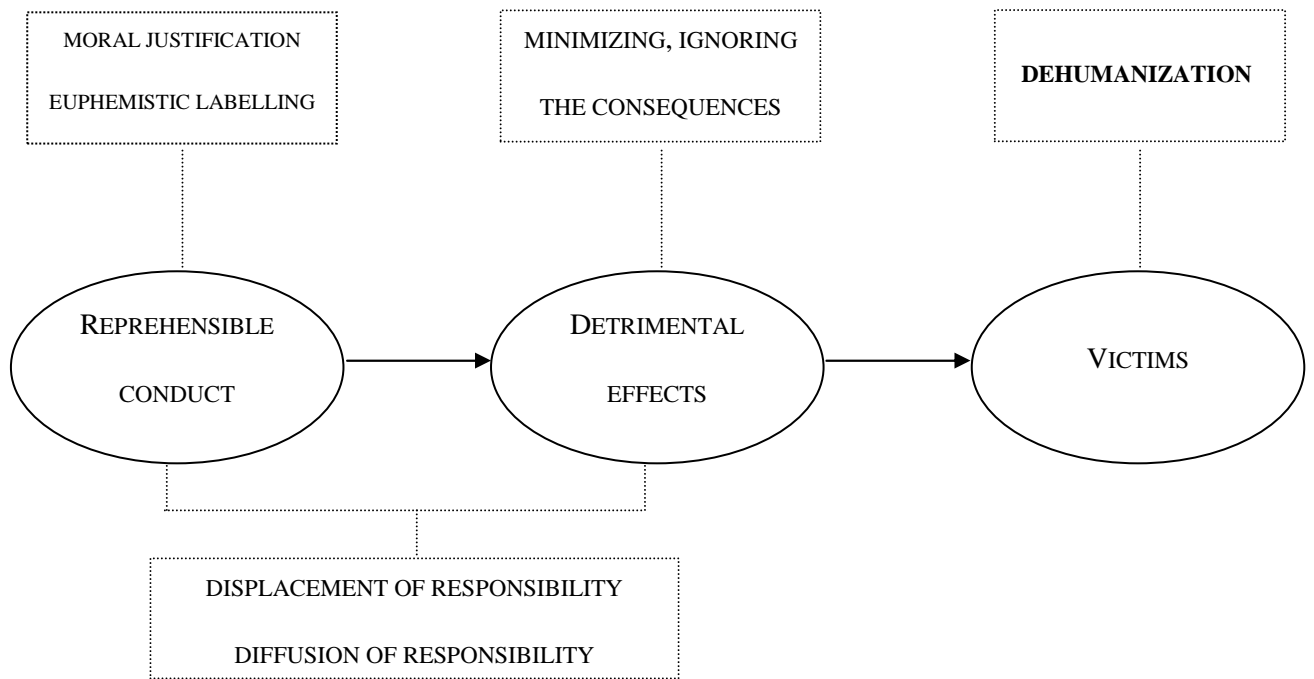
### *1.1.2 Moral disengagement and dehumanization*

One of the most important theoretical analyses regarding dehumanization considers this phenomenon as an antecedent of moral disengagement process (Bandura, 1999; 2002). According to the author, indeed, perpetration of inhuman and aggressive behaviors toward an outgroup is determined by the progressive disengagement of the moral sphere which habitually regulates the attitudes and behaviours of an individual or of a group.

Already during the first phases of development and socialization, behavior is regulated by social and moral sanctions which serve as a guide and define the boundaries of what is morally right and what is morally wrong. Namely, Bandura holds that exercise of moral agency has a dual aspect: an “inhibitive” aspect and a “proactive” aspect. The “inhibitive” aspect consists in the capacity of restraining from behaving inhumanely. The “proactive” aspect is expressed in the capacity of behaving respecting social values and norms. However, this mechanism does not have an automatic activation. Indeed, under certain conditions and within particular contexts, some psychological strategies can act determining the disactivation of the exercise of moral agency and leading to the perpetration of inhuman conducts. As shown in Figure 1, the disengagement strategies may focus on: (a) cognitive reconstruction of the unacceptable behaviour (e.g., moral justification), (b) the underestimation of the agentive role in the harmful action (e.g., displacement of responsibility), (c) the reinterpretation of the consequences of inhuman actions, or (d) the derogation of the recipients of the aggressive acts (dehumanization).

Thus, dehumanization is the disengagement strategy operating on the final stage of the self-regulatory process, focusing directly on the recipients of the inhuman acts. In this case, self-censure is deactivated by stripping outgroup members of human qualities; considering “other” such as nyenzy, hyenas or rats, deactivates empathetic emotional reactions toward the “other” and makes it easier to perpetrate aggressive and inhuman conducts.

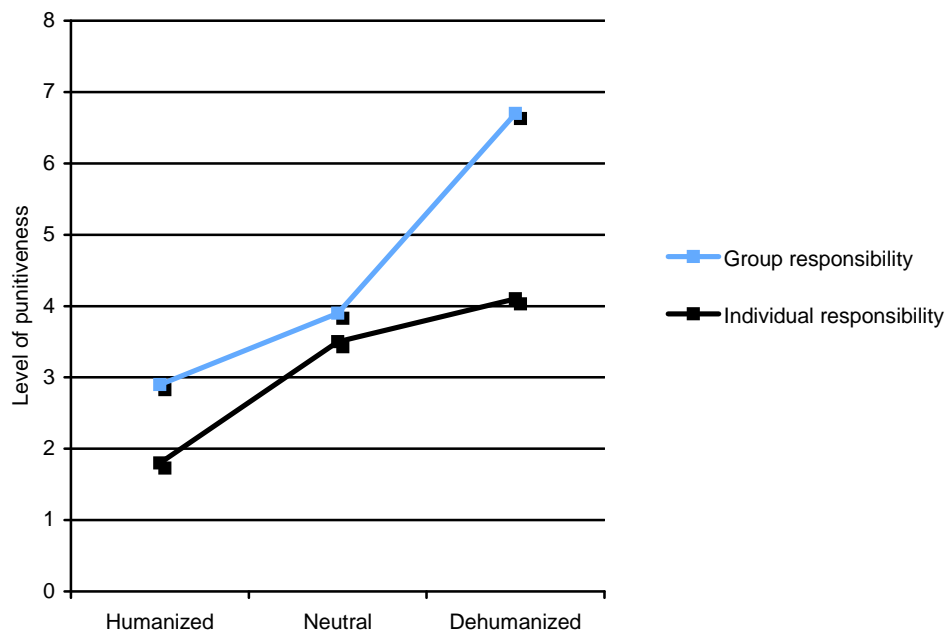
Figure 1. Activation of disengagement strategies at different points in the self-regulatory process.



*Note.* From “Moral disengagement in the perpetration of inhumanities,” by A. Bandura, 1999, *Personality and Social Psychology Review*, 3, 193-209. Copyright 2000 by Sage Publications.

Consistent with this view, Bandura, Underwood and Fromson (1975) investigated the combined effects of dehumanization and diminished sense of personal responsibility on the perpetration of harmful behaviors toward outgroup members. In this experimental study, participants were given the power to punish a group of problem solvers – confederates – with different intensities of electric shock for deficient performances. Recipients of the punishment were described as “animal-like” (dehumanistic condition), as “nice” (humanistic condition), or were not described at all (neutral condition). Moreover, punishment was administered individually (individual responsibility condition) or collectively (collective responsibility condition). As shown in Figure 2, findings displayed that dehumanized individuals were punished more harshly than other conditions; moreover, the highest level of punishment was found when the participants acted collectively and individuals were dehumanized.

Figure 2. Level of punitiveness as a function of diffusion of responsibility and dehumanization of recipients.



Note. From “Dishinhibition of aggression trough diffusion of responsibility and dehumanization of victims,” by A. Bandura, B. Underwood, and M. E. Fromson, 1975, *Journal of Research in Personality*, 9, 253-269. Copyright 1975 by Elsevier Publications.

### 1.1.3 Basic values and dehumanization

Schwartz and Struch (1989) developed an interesting theoretical approach stressing the role that basic personal values play in dehumanization. Basic personal values are defined as “central cultural and individual goals people hold and aspire to achieve” (Schwartz and Struch, 1989, p.153); thus, they are one of the most important criteria that influence people’s behaviors and the evaluation of own and other behaviors. Most important, beliefs about value hierarchies of a group – the preferences people have among group values – express the “distinctive humanity” of a group and reflect “the perceiver’s view of the fundamental human nature of the members of that group” (p.153). Depending on different societies and cultures, value hierarchies of outgroups might be perceived as different or even opposite to those of the ingroup. For instance, western society classifies “freedom” at the top of a values hierarchy and “obedience” at the bottom, whereas a collectivistic society might consider “obedience” at the top and freedom at the bottom. Schwartz and Struch hold that when the basic values hierarchies of an outgroup are perceived as opposite to the

values of the ingroup, members of that outgroup may be perceived as lacking in humanity. Moreover, the authors think that two value domains are particularly important as “hallmarks” of perception of humanity: “prosocial” 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.

In an exploratory study, Schwartz and Struch (1989) investigated the correlation between the perception of humanity of the outgroup and the perception of value similarity between groups, considering the relationship between Israeli Jews and Arabs. To measure value similarity, they used an adapted version of Rokeach’s scales (1973): the respondents had to rank 18 values (e.g., a world peace, freedom, self-control, belief in God) according to its importance in guiding a person’s life; they had to classify these values both for ingroup and for outgroup. Correlation between value hierarchy attributed to the ingroup and value hierarchy attributed to the outgroup represented the index of perception of value similarity. To measure perception of humanity of outgroup, they asked respondents what proportion of outgroup members they think can perform some human (e.g., caring for the handicapped) or inhuman (e.g., exploiting others) behaviors. Among the sample of Jewish Israeli students, this measure of perception of outgroup humanity correlated significantly with the index of value similarity ( $r = .41$ ).

#### *1.1.4 Moral exclusion and dehumanization*

Opatow (1990) considers dehumanization as a “symptom” that defines “moral exclusion”; it is a psychological process occurring when “groups are perceived as outside the boundary in which moral values, rules, and considerations of fairness apply” (Opatow, 1990, p.1). According to the author, the perception that “others” are excluded by those boundaries leads to serious behavioral consequences. Indeed, people who are “morally excluded” are considered as negligible, useless for society. Thus, to perpetrate non acceptable

(e.g., exploitation) or aggressive behaviors (e.g., genocide) toward them becomes easier or, even, fair (right).

Exclusion from moral community is mainly predicted by two factors: a situation of conflict and feelings of unconnectedness; several researches (see, e.g., Bandura et al., 1975; Deutsch, 1973) have shown that, when another is perceived as “unconnected” to oneself, it’s more likely that destructive or aggressive behaviors coherent with moral exclusion are activated.

Opatow asserts the importance of recognizing “symptoms” that define moral exclusion to forestall this process. Namely, she distinguishes in “ordinary symptom,” such as psychological distance or deindividuation, which occurs in everyday life and without people necessarily excluding others from the moral community. “Exclusion specific” processes, instead, always lead to moral exclusion and “signal that interpersonal or intergroup relation is taking a destructive course” (Opatow, 1990, p. 11). Actually, dehumanization, defined by Opatow as “repudiating others’ humanity, dignity, ability to feel, and entitlement to compassion”(Opatow, 1990, p. 10), is just one of these “exclusion specific processes”; another extreme manifestation of moral exclusion is, for instance, the derogation of outgroup, that is the denigration of others by regarding them as lower life forms or inferior beings.

## **1.2 Infracommunitarianization**

Although dehumanization is a phenomenon widely analyzed, only recently social psychological researchers have begun to investigate empirically the attribution of “humanness” to groups.

First empirical evidences were supplied by Leyens and colleagues (see, e.g., Leyens et al., 2001, 2003). Although their line of research was definitely stimulated by different interpretations of dehumanization (see Bandura, 1999; Bar-Tal, 1989, 2000; Opatow, 1990; Staub, 2006; Schwartz & Struch, 1989), they introduced the concept of “infracommunitarianization,” which moves away the phenomena previously analyzed.

The tendency to “infra-humanize” other people is a psychological process originating from the intersection of two social constructs: ethnocentrism (see,

e.g., Sumner, 1906) and essentialist beliefs (see, e.g., Haslam, Rothschild, & Ernst, 2002; Rothbart & Taylor, 1992).

Originally, ethnocentrism was defined as a universal belief 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). Even modern reinterpretations of ethnocentrism (Brewer & Campbell, 1976; LeVine & Campbell, 1972) emphasize the dual aspect of this construct, represented by tendencies – strongly associated – to favor one's own group (e.g., Diehl, 1990) and derogate outgroup (e.g., Fein & Spencer, 1997).

The term “psychological essentialism,” proposed by Medin (1989; Medin & Ortony, 1989) in his work on categorization processes, indicates people's belief that things have underlying natures, making them what they are. Thus, things looking similar (that is, belonging to the same category) are assumed to reflect the same essence. The notion of “essence” was recently introduced to the domains of social psychology and social stereotypes (in particular, see Haslam, et al., 2002; Yzerbyt, Rocher, & Schadron, 1997; Rothbart & Taylor, 1992); in these domains, “essentialism” is defined as the tendency to attribute different essences to social groups. These essences serve both to explain the differences between groups and to unite members of a given group (Campbell, 1958). To believe that different essences distinguish social groups leads to perceive the existence of immutable and stable boundaries between groups. Rothbart & Taylor (1992) argue that differences between social categories can be explained based on a genetic essence (e.g., White vs. afro-American people), a linguistic essence (e.g., Roman vs. Germanic roots), a religious essence (e.g., Muslim vs. Christian) or a cultural essence (e.g., individualistic vs. collectivistic).

Based on this perspective, Leyens and colleagues considered a particular essence, that should be common to all social groups (Leyens et al., 2007): the “human essence.”

Thus, the assumption underlying infrahumanization model is that if people are universally ethnocentric – favoring ingroup and derogating outgroup – and if people attribute essences to explain differences between groups, it follows that

they will reserve a privileged “human essence” to their own group. Instead, an “infra-human essence” will be attributed to other groups. In other words, people will perceive ingroup defined by different uniquely human attributes – attributes that are not shared with other animals – whereas outgroup will be infra-humanized, that means perceived with non-fully human attributes. As emphasized by Leyens and colleagues (see, e.g, Leyens et al., 2007; Leyens et al., 2003), the first interesting evidences of this phenomenon were provided by Sumner (1906) or Levi-Strauss (1952); indeed, these authors noted that primitive societies used “fully human” appellations to define their clan or tribe, such as “the Humans”, “the People”; to define, instead, other groups they used not “fully human” or derogating names.

### *1.2.1 Infrachumanization and emotions*

A number of different characteristics define the “human essence”; to reveal which of these characteristics are considered more important, Leyens et al. (2000; see also Miranda & Gouveia-Pereira, 2006) asked French-speaking Belgians and Spanish students, what characteristics are, in their opinion, typically human. The characteristic most cited was intelligence, followed by language, sentiments, positive sociability (e.g., sociable), values and negative sociability (e.g., selfish). Emotions were almost never cited. Since different studies focused on the role of intelligence (see, e.g., Crocker, Major, & Steele, 1998) or language (see, e.g., Giles & Coupland, 1991) in intergroup discrimination, Leyens and colleagues decided to focus on the “emotional side of prejudice”, namely, on the distinction between “sentiments” (uniquely human) and “emotions” (non uniquely human).

Actually, the distinction between “sentiments” and “emotions” exists only in Latin languages; in Anglo-Saxon languages, for instance, this distinction is meaningless. Demoulin, Leyens, 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. Moreover, they hypothesized the existence of underlying characteristics that lead

to the distinction between uniquely and non-uniquely emotions. Participants were Spanish, French-speaking Belgians, Flemish-speaking Belgians and American students. Participants were presented with a list of emotional terms (both positive and negative); each of these emotions had to be evaluated in terms of humanity and of other characteristics (e.g., duration, visibility). Namely, the main question concerning humanity was: “In your judgment, is the ability to experience this characteristic exclusive to human beings or can animals also experience it? (*not at all exclusive to humans* vs. *very exclusive to humans*)” (Demoulin, Leyens, et al., 2004). Primarily, findings showed that western people associate some emotions only with the human category (uniquely human emotions); other emotions are, instead, associated both with humans and animals. Authors showed that this “privileged” link between some emotions and the human category is also present in the implicit association in memory of people. Moreover, results showed that there are some characteristics, common to the four groups of participants, which determine the distinction between uniquely and non-uniquely emotions. Interestingly, these features correspond to the criteria used by researchers (see, e.g., Ekman, 1992; Epstein, 1984; Izard, 1977; Sroufe, 1979) to differentiate between “primary” and “secondary emotions”. The first, such as anger, fear, pain, excitement, pleasure (see Table 1), concern both human beings and other highly evolved primates, involve low cognition processes, appear later in development, have a short duration, and are caused by external factors. “Secondary emotions,” such as shame, melancholy, pride, serenity (see Table 1), belong only to human beings, involve complex mental processes and the development of morality, have a long duration, and are mainly caused by internal factors.

The main hypothesis of infrahumanization model derives from the distinction between primary and secondary emotions: since people reserve for their own group a “fully human essence” and associate secondary emotions with the human category, it follows that a privileged link will exist between ingroup and secondary emotions. No prediction, instead, can be formulated concerning primary emotions, since they are associated both with the human and animal category (Leyens et al., 2007).



Table 1. Prototypical primary and secondary emotions as a function of the language

English	Spanish	Dutch	French
<i>Primary emotions</i>			
Surprise	Sorpresa	Verrast	Surprise
Rage	Rabia	Voede	Rage
Anger	Enfido	Boos	Colére
Pain	Dolor	Pijn	Douleure
Pleasure	Placet	Plezier	Plaisir
Happiness	Alegria	Tevredenheid	Joie
Fear	Miedo	Schrik	Peur
<i>Secondary emotions</i>			
Tenderness	Ternura	Tederheid	Tendresse
Love	Amor	Liefde	Amour
Help	Espera	Hoop	Espérance
Guilt	Culpabilidad	Schuld	Culapbilité
Shame	Verguenza	Beschaamd	Honte

*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 *Infrahumanization and ingroup favoritism*

The tendency to infra-humanize outgroups was demonstrated in an impressive series of studies, using different techniques, different stimuli, and considering several intergroup relationships (for a review, see Leyens et al., 2007). However, the first empirical evidence was provided by Leyens and colleagues between 1999 and 2001 (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. Usually, inhabitants of Spanish peninsula represent the dominant groups and perceive themselves more competent than Canary Islanders; on the other hand, Canary Islanders perceive themselves more pleasant (Leyens et al., 2000).

Both the dominant and the subordinate group were examined. In these first a procedure was introduced, common to most of the following studies: participants were presented with a questionnaire with a number 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). For each group (inhabitants of Spanish peninsula vs. Canary

Islanders), 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.

As predicted by the infrahumanization model, both Canary Islanders and inhabitants of Spanish peninsulas attributed a larger number of secondary emotions to ingroup than to outgroup. Instead, concerning primary emotions, no difference was found.

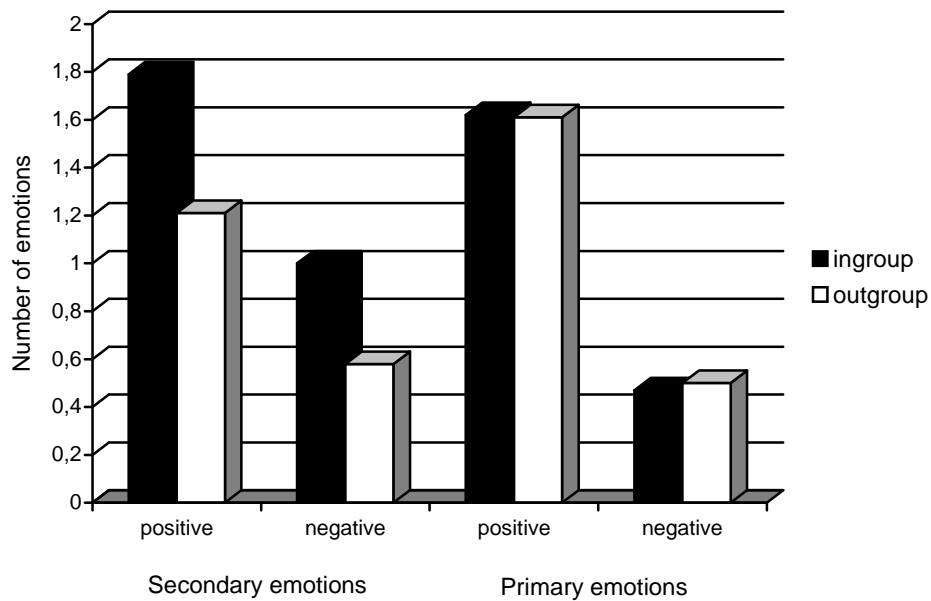
The same findings were found considering primary and secondary emotions with positive and negative valence (Leyens et al., 2001; Study 2): participants associated to their own group more uniquely human emotions, regardless of the valence of these (see Figure 3). This is particularly interesting to the distinction of infrahumanization effect from ingroup bias: people prefer to reserve a “fully human essence” to ingroup, even if it implies attributing negative characteristics to their own group (negative secondary emotions).

### *1.2.3 Infrahumanization and automatic associations*

Leyens and colleagues argue that infrahumanization is a subtle kind of ethnocentrism (see e.g., Leyens et al., 2007); people are not aware of ascribing more uniquely human characteristics to ingroup and of considering outgroup as less human. Following this reasoning, it was necessary, for the development of the infrahumanization model, to analyze whether there was an automatic “privileged link” in memory between uniquely human emotions and ingroup.

Paladino et al. (2002) investigated this link using an adapted version of the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998). IAT (for further details about this implicit technique, see Chapter 3, paragraph 3.1) allows us to reveal implicit attitudes measuring automatic associations, stored in memory, between two target categories (e.g., ingroup vs. outgroup) and two attributes (e.g., positive vs. negative). IAT implies two main phases: a compatible and an incompatible block. In the compatible block, target categories and attributes that are assumed to be associated in memory (e.g., ingroup + positive words and outgroup + negative words) share the same key of response;

Figure 3. 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.

in the incompatible block, instead, target categories and attributes that are assumed to be non associated in memory (e.g., ingroup + negative words and outgroup + positive words) share the same key. Paladino et al. (2002) used the IAT to study the implicit association of primary and secondary emotions with ingroup and outgroup: in the compatible block, the task of participants was to press the same key when a typical name of ingroup or a secondary emotion appeared at the center of the screen, a different key both for a typical name of outgroup or a primary emotion. In the incompatible block, the same keys were used for primary emotions and ingroup names, and for secondary emotions and outgroup names. Latencies for each block were measured. Since it was assumed that secondary emotions were more associated to ingroup rather than outgroup, Paladino et al. (2002) expected faster responses in the compatible (ingroup names + secondary emotions, outgroup names + primary emotions) than incompatible block (outgroup names + secondary emotions, ingroup names + primary emotions). Hypotheses were fully confirmed in four different studies, considering different intergroup relations and different valence of emotions. In

the first study, for instance, the relationship between Belgians (ingroup) and North-Africans was considered; in Study 2 and 3, the relationship between Spanish (ingroup) and North-Africans. Moreover, in the third study, they considered also primary and secondary emotions with a negative valence. More interestingly for our purposes, in the last study authors analyzed this automatic association examining a group of different status from previous studies; namely, they considered the relationship between Walloons (ingroup) and Flemish in Belgium. The Flemish community represents more than half of the Belgium population, and it's considered a group with more political and economic power than Walloons. Even considering a group of lower status than outgroup, secondary emotions are implicitly more associated to ingroup than outgroup.

Actually, the structure of IAT does not allow us to define whether faster responses in the compatible task depend on a stronger association between secondary emotions and ingroup names or a stronger association between primary emotions and outgroup names (for further details, see Chapter 3, paragraph 3.1).

To confirm the hypothesis that only the implicit association between ingroup and secondary emotions leads to infrahumanization of outgroup, Boccato et al. (2007) investigated this different association using sequential priming techniques (for a review, see Wittenbrink & Schwartz, 2007). These techniques, indeed, allow us to detect separately the strength of each type of association between ingroup, outgroup, primary and secondary emotions.

In one study, for instance, to Belgian participants were subliminally primed labels that represented ingroup and outgroup: the word BELGE for ingroup, the word ARABE for outgroup. Each prime was followed by a stimulus target: a word or a non word. Task of participants was to press a different key if the stimulus target was a word or a non word (Lexical Decision Task; see, e.g., Wittenbrink, Judd, & Park, 1997). The words were primary and secondary emotions, half positive and half negative. Results showed that participants 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. Instead, prime of groups did not affect reaction times when they were followed

by primary emotions. The same results were obtained using a different sequential priming technique, a Person Categorization Task (see Kawakami & Dovidio, 2001), and considering a different intergroup relationship: White vs. Black people.

These studies point out that, both at an explicit (see e.g., Leyens et al., 2001) and an implicit level, the effect of infrahumanization concerns only the link between uniquely human emotions and ingroup. Primary emotions, instead, are not considered a criterion to differentiate between ingroups and outgroups, since they belong both to humans and animals.

#### *1.2.4 Infrahumanization and behavioral consequences*

Within the infrahumanization model, several studies (see, e.g., Carella & Vaes, 2006; Vaes, et al., 2003) have investigated whether the tendency to reserve a “fully human” essence to one’s own group can lead to negative behavioral consequences toward outgroup members. In particular, Vaes and colleagues hold that observing outgroup members expressing secondary emotions should lead to negative behaviors toward them. Indeed, it can be perceived as an attempt to raise outgroup to the privileged status of ingroup, threatening its “fully human” essence. Authors investigated this using different paradigms and examining different contexts, involving, for example, helping (Carella & Vaes, 2006; Vaes et al., 2003) or avoidance behaviors (Vaes et al., 2003).

In one study, for example, Vaes et al. (2003) used an adapted version of lost e-mail paradigm (see Castelli, Zogmaister, & Arcuri, 2001) derived from Milgram’s (1977) lost letter technique; following this paradigm, a huge 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 condition, the sender presented himself as a researcher coming from the university (ingroup member) or a researcher coming from the private sector (outgroup member). Moreover, to half of participants the e-mail message started with a secondary emotion (I’m filled with indignation), to the other half with a primary emotion (I’m beside myself

with rage). Two different measures were considered: number of responses and the usage of second-person singular person. Indeed, it was assumed that use in participants' replies of a greater number of informal than formal pronouns was an index of empathy and solidarity. Similarly to other studies using this paradigm, no difference was found concerning number of responses. Concerning the use of the second-person singular person, the greatest "solidarity score" was found when sender presented himself as an ingroup member using a secondary emotion (indignation); instead, he was treated more formally when he was an outgroup member and used the same secondary emotion. When the sender used a primary emotion (rage), no differences in "solidarity score" were found as a function of group membership. An interesting development of this study was carried out by Carella and Vaes (2006). They introduced a new technique called lost *SMS*, similar to lost e-mail technique. Using this paradigm, a number of *SMS* were randomly sent to a sample of Italian people. The sender of the message introduced himself as a fictitious Italian friend (ingroup member) or as a fictitious German friend (outgroup member). He expressed a need for help using a secondary emotion (resentment) or a primary emotion (rage). In the same manner as the previous study, *SMS* responses were written in a more friendly and empathetic tone when the sender was an ingroup member and expressed himself using a secondary emotion compared to when he was an outgroup member and used the same secondary emotion. No difference was found when a primary emotion was involved.

In another study, Vaes et al. (2003), examined behavioral reactions toward an ingroup or an outgroup member who described their past week in terms of primary (e.g., pleasure, fear) or secondary (e.g., hope, regret) emotions. Participants were asked to form an impression of that individual. After this impression-formation task, participants were submitted to an approach-avoidance test (see Castelli & Paladino, 2002). This technique allows the analysis of behaviors of approach or avoidance outside the awareness of participants. As predicted, the expression of secondary emotions affected approach-avoidance behaviors of participants: indeed, when these emotions were used by an ingroup member, participants displayed a faster approach behavior toward him; when,

instead, an outgroup member described himself using secondary emotions, participants were more prompt to avoid him. Once more, these differences between ingroup and outgroup members were not found when primary emotions were involved.

This study is a further confirmation that people discriminate others basing on secondary emotions, and, thus, that only uniquely human emotions play a role in the preservation of “human essence.”

#### *1.2.5 Infracommunication and intergroup violence*

Recently, a number of studies (Castano & Giner-Sorolla, 2006; Tam, Hewstone, Cairns, Tausch, Maio & Kenworthy, 2007; see also Zebel, Zimmermann, Viki, & Doosje, 2008) have analyzed the role of infracommunication on situations of intergroup violence or mass killing.

For instance, Castano and Giner-Sorolla (2006) tested whether awareness of atrocities perpetrated by ingroup members toward an outgroup enhances infracommunication effect. In one study, effects of British colonization on Australian Aborigines were made salient to English students. Namely, in “high-impact” condition the responsibilities of the English for the almost total extermination of the Aborigine population, as a result of military campaigns or diseases introduced by the English, were made salient; in “low-impact” condition, instead, effects of colonization and the responsibilities of the English were minimized. As predicted, participants displayed a stronger infracommunication effect in “high-impact” condition than “low impact” condition. This result can be explained by the main function that dehumanization fulfills for groups (see Bar-Tal, 1989): considering outgroup as “non fully human,” cognitively justifies ingroup of violent behaviors committed against members of outgroup. Interestingly, although salience of atrocities perpetrated by ingroup increased feelings of guilt and willingness to provide collective reparations, these variables were not associated with attribution of secondary emotions to outgroup.

Tam et al. (2007) explored the role of infracommunication in Northern Ireland, a region that is undergoing a phase of post-conflict reconciliation. The

aim of their research was to identify factors that improve or worsen relations between Catholics and Protestants. A previous study (Cairns, Tam, Hewstone, & Niens, 2005) showed that intergroup forgiveness is the most important variable that allows to resolve conflicts and improve relations between groups. However, several factors predict the development of intergroup forgiveness. Tam et al. (2007) found that inhumanization and anger toward outgroup are variables that decrease intergroup forgiveness. Namely, in their research showed that the people who inhumanized the outgroup are less willing to forgive outgroup for past wrongs committed.

### *1.2.6 Inhumanization and familiarity*

Actually, different attributions of secondary emotions to ingroup and outgroup could be explained in terms of a greater familiarity with one's own group. Secondary emotions, indeed, are less visible and more difficult to detect than primary emotions (see Shaver, Wu, & Schwartz, 1992). Since interaction and contact is more frequent with ingroup members, secondary emotions might be recognized more easily in ingroup members and so perceived more typical of one's own group; it could explain why uniquely human emotions are attributed more to ingroup.

Cortes et al. (2005) carried out three studies to demonstrate that familiarity does not affect this different emotional attribution. In Study 1 and 2 the attribution of primary and secondary emotions to three different targets was investigated: the self, the ingroup, and the outgroup. According to familiarity hypothesis, people should attribute a greater number of secondary emotions to the self than to the ingroup, because the self is more familiar than ingroup. Moreover, assuming that ingroup is perceived more familiar than outgroup, a greater number of secondary emotions should be attributed to ingroup than outgroup. Instead, basing on inhumanization theory, it is expected that people attribute more secondary emotions to ingroup and to the self than outgroup.

In Study 1 results supported inhumanization theory: participants – students from University of Laguna, Tenerife – assigned more secondary emotions to ingroup than outgroup, and to the self than outgroup. More



importantly, ingroup was characterized by more secondary emotions than the self. This result is not consistent with familiarization theory. Concerning primary emotions, no difference was found between the three target groups. Moreover, valence of emotions did not affect infrahumanization effect. The same findings were replicated in Study 2, where the three target groups were evaluated in a within-condition.

In Study 3, familiarity effect on attribution of secondary emotions was tested in a different way: participants – Walloon students from University of Louvain La Neuve – had to assign primary and secondary emotions to four different target groups : ingroup (Walloons), Flemish, Parisians and residents of Prague. Moreover, perception of familiarity with outgroup (e.g., Approximately, how many people of [name of outgroup] do you know?), perception of relevance of outgroup (e.g., To what extent are [name of outgroup] important for Walloons?) and likeability of outgroup was measured. Findings showed that, compared to ingroup, only to Flemish was attributed a lower number of secondary emotions. No infrahumanization effect was found comparing ingroup with Parisians and residents of Prague. Once more results contrasted with the familiarity hypothesis: perception of familiarity correlated even negatively with attribution of secondary emotions to outgroup; it means that the more an outgroup is perceived familiar, the less secondary emotions are attributed to it. Interestingly, even perception of relevance correlated negatively with attribution of secondary emotions to outgroup: the same amount of secondary emotions of ingroup was attributed to outgroups perceived as non relevant for ingroup (residents of Prague and Parisians). Thus, Parisians and residents of Prague, perceived as non familiar and non relevant for ingroup, were not infrahumanized, while Flemish, perceived as familiar and relevant for ingroup, were considered not “fully human”. These results are particularly interesting; first of all because they demonstrate that a different attribution of secondary emotions is not explained by familiarity; in the second place, they introduce a first interesting moderator of infrahumanization effect: the perception of relevance of outgroup. However, it was introduced only for an exploratory purpose and it necessitates

further supports. Indeed, several groups might be perceived as non relevant for ingroup but they could nonetheless be considered as less human than ingroup.

### *1.2.7 Infracommunication and ingroup status*

Although relevance remains the best predictor of infracommunication, Leyens and colleagues investigated the influence of other variables on the attribution of uniquely human emotions. For example, Delgado et al. (2007; see also Leyens et al., 2007) examined the role of friendship, similarity, information and status on the assignment of primary and secondary emotions to different countries (e.g., German), regions of the world (e.g., South America) and continents (e.g., Europe). Friendship, similarity and amount of information concerning outgroup correlated positively with the attribution of secondary emotions: more outgroup was perceived as similar, friendly and known, more secondary emotions were attributed to it. Status, instead, did not predict the assignment of secondary emotions.

Concerning this issue, status is probably the most analyzed predictor in the infracommunication model. Several researchers have showed that status does not affect the attribution of secondary emotions; it means that tendency to infracommunicate others was also found in groups having lesser power or socioeconomic status: in the inhabitants of the Canary Islands toward the mainland Spanish (Leyens et al., 2001); in French-speaking (Walloons) toward Flemish-speaking Belgians (the latter have more political and economic power; see Cortes et al., 2005; Paladino et al., 2002); in Italians toward Germans in the U.E. (Paladino et al., 2004); in British toward U.S citizens (Delgado et al., 2006). However, Leyens (Leyens et al., 2003; Leyens et al., 2007) argues that it does not mean status does not moderate at all perceptions of humanity. These results might be explained by the particular characteristic of “human essence” chosen, emotions; indeed, emotions were selected because of their independence from structural dimensions of society. For instance, Leyens and colleagues (Leyens et al., 2001; Leyens et al., 2003) found that considering other uniquely human dimensions, such as intelligence or talent, status influences perceptions of humanity; dominant groups could infra-humanized others basing on secondary

emotions and other uniquely human attributes. Dominated groups, instead, could inhumanize others only through secondary emotions. Thus, dominant groups use more dimensions (e.g., intelligence) to inhumanize the other, dominated groups only secondary emotions.

#### *1.2.8 Infra- and de-humanization*

Tendency to inhumanize the “others” appears, therefore, a robust effect: it does not depend on greater familiarity with the emotional experiences of ingroup members (Cortes, et al, 2005); it is distinguished by ingroup favouritism (see Leyens et al., 2001; Leyens et al., 2003). It was revealed using different instruments, such as: trait lists including primary and secondary emotions (Cortes et al., 2005; Leyens et al., 2001; Leyens et al., 2003); techniques measuring automatic associations, such as the IAT (Paladino et al., 2002) or subliminal priming (Boccatto et al., 2007); tasks of recognition memory (Gaunt, Leyens, & Demoulin, 2002). It was finally shown individuals tend to approach and help ingroup members but not outgroup members expressing secondary emotions (Vaes, et al., 2003).

Inhumanization is a universal phenomenon, which regards most of intergroup relations; conflict between groups, for instead, is not a necessary condition for it to occur (see e.g., British vs. US citizens, Viki & Calitri, 2008; minimal groups, Miroslawska & Kofta, 2004/2005). Inhumanization is a “subtle,” unconscious form of prejudice that occurs in everyday life (Leyens et al., 2007). To inhumanize others means to perceive one’s own group as possessing more uniquely human characteristics than another group. So, inhumanization originates from the comparison between ingroup and outgroup. All that stresses how this phenomenon is qualitatively and quantitatively distinct from dehumanization. To dehumanize an outgroup, indeed, implies to totally deprive its members of their group of their humanity and of their capacity of feelings and hopes. This explains why dehumanization occurs only in extreme situations, when intergroup relation is extremely critical, such as armed conflicts or situations of harsh discrimination and segregation.

Comparison between ingroup and outgroup does not matter in dehumanization, focus is the outgroup and its denigration.

### **1.3 Beyond secondary emotions**

Empirical evidences provided by Leyens and colleagues have strongly supported the infrahumanization model. Nevertheless, the tendency to infrahumanize others is a particular phenomenon, which deals with perception of others as “no fully human” considering only a uniquely human attribute, secondary emotions. Recently, for several researchers the necessity has emerged (see e.g., Boccato et al., 2008; Haslam, 2006; Goff et al., 2008; Viki et al., 2006) to empirically investigate perceptions of humanity in a broader perspective, considering the more general concept of humanity.

#### *1.3.1 Implicit associations with human-related and animal-related words*

First, Viki and colleagues (2006) provided empirical evidences that infrahumanization effect is confirmed even considering an overall concept of humanity. In their studies, the attribution to ingroup and outgroup of words commonly associated with humans and animals was implicitly explored. Through a pre-test, 10 human (e.g., person, wife, humanity) and 10 animal (e.g., creature, pet, wild) words were chosen (see Table 2); moreover, these words were evaluated neither too positively nor too negatively and mean valence for the two sets of stimuli was not different. In Study 1, this association was investigated through IAT (Greenwald et al., 1998); the relationship between British and Germans was considered. All participants were British. Findings showed a significant difference in reaction times between compatible (British names + human words, German names + animal words) and incompatible (German names + human words, British names + animal words) tasks. Participants reacted faster when ingroup names were associated with human-related words and outgroup names were associated with animal-related words, compared with the opposite. A further support of this different association was supplied using a more explicit paper and pencil measure (Viki et al., 2006, Study 3) and considering another

outgroup (Italians). British participants were asked to link ingroup and outgroup names with animal and human-related words that best characterized that name. As predicted, more human-related words were linked to ingroup names than outgroup names.

Thus, this first evidence supports the idea that people consider their own group more prototypical of humanity, even when dimensions represent a global concept of humanity.

Table 2. Human-related and animal-related words used by Viki et al. (2006)

Human words	Animal words
Wife	Pet
Maiden	Mongrel
Woman	Pedigree
Person	Breed
Husband	Wildlife
Humanity	Critter
People	Cub
Civilian	Creature
Man	Feral
Citizen	Wild

### 1.3.2 *The privileged link between ingroup and image of humanity*

Boccatto et al. (2008) also investigated whether people perceive their own group more prototypical of humanity than the other group. In order to detect direct associations in memory between the two groups and human and animal species, Boccatto et al. (2008) used a sequential priming procedure. In Study 1, associations between ingroup and outgroup names with human and ape faces were measured. The relationship between Northern and Southern Italians (for further details, see Chapter 4, paragraph 4.3) was considered. Participants – Northern Italians students – were supraliminally primed with names typical of North (e.g., Walter) or South (e.g., Ciro) Italy. Each prime was followed by a

monkey or a human picture. The task of participants was to classify the pictures as human or ape (Person Categorization Task; see Kawakami & Dovidio, 2001). Findings showed that participants identified human pictures more rapidly when they were preceded by an ingroup name rather than an outgroup name. In contrast, concerning ape pictures, no differences in reaction times were found as a function of the prime. Similar results were found with a different sequential priming procedure (Boccatto et al., 2008; Study 2). In this case, Northern participants were subliminally primed with a human or an ape face; afterwards they had to perform a LDT (Lexical Decision Task). Target stimuli were Northern, Southern names or non-words. Participants had to decide whether a target stimulus was a name or not. Northern names were processed faster than Southern names when they were preceded by the human image. Instead, the ape image did not produce any effect on the identification of names. Thus, together, these studies demonstrate the bi-directional preferential association between ingroup and a general concept of humanity: ingroup exemplars activate the image of humanity more promptly than outgroup exemplars (Study 1), the image of humanity activates the ingroup more promptly than outgroup (Study 2).

Moreover, similarly to the infrahumanization effect, it is the link between ingroup and the human dimension which produces differentiation. People, instead, do not consider the link between the outgroup and the animal concept as a dimension that differentiates between groups.

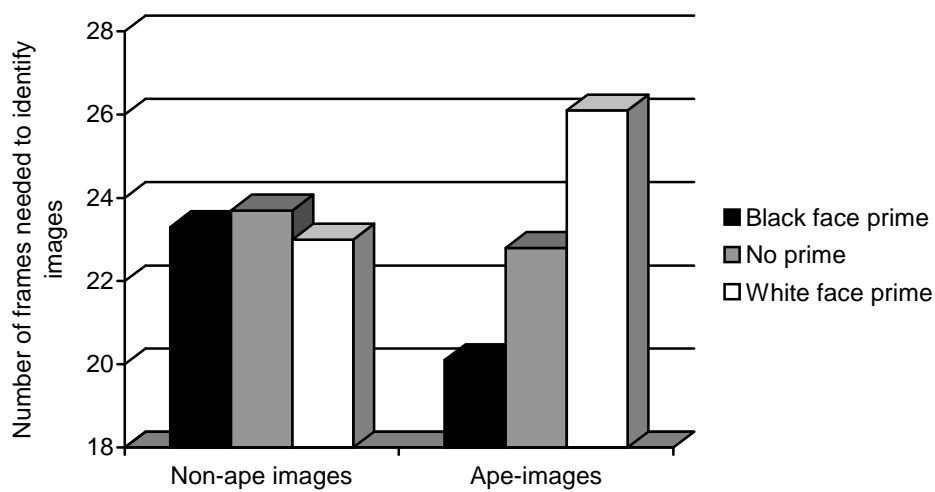
### *1.3.3 The negro-ape metaphor*

Within analysis of intergroup perceptions of humanity, Goff et al., (2008) carried out an interesting series of experimental studies. In fact, their research departs from previous literature for two reasons. First, they focused on a particular case of intergroup attributions of humanity. Namely, they analyzed the implicit representation of a dehumanizing historical stereotype, existing in the USA: the Negro-ape metaphor; authors argue that explicitly Black people are not more depicted as ape-like. However, this association persists in White US citizens, outside their awareness; indeed, they hold that this metaphor is still culturally and socially strongly rooted in US society. Secondly, implicit Black-

ape metaphor should affect both White people's cognitive processes and judgments. Thus, the first time in literature on perceptions of humanity, Goff et al. (2008) examined how perceiving others as less than human influences judgments on criminal justice contexts.

In Study 1, authors tested, through an original procedure, the main hypothesis of their research: the existence of an implicit association between Black people and apes. Participants, both White and non-White students, performed two tasks apparently unrelated. In the first task, participants were subliminally exposed to Black faces, White faces or a neutral image, through an "attention vigilance task" (see Eberhardt, Goff, Purdie, & Davies, 2004). Participants were instructed to fix a dot appearing at the center of the screen. The task of participants was to recognize if a flash of light appeared on the left or on the right side of the screen. Each flash mainly consisted of a White face for a third of participants, Black face for another third or a neutral image for another third. All faces were presented for a brief time, without participants being aware. The second task was presented as a test to measure the speed at which people can identify objects. In this case, participants observed a series of short fragments of images that started as "fuzzy" and then constantly became easier to identify. Participants were instructed to stop the sequence just when they identified the image. Images were pictures of apes or pictures of non-ape animals (e.g., alligator, dolphin). Main prediction was that participants subliminally exposed to Black faces recognized ape images more promptly than participants exposed to White faces. Results fully confirmed this hypothesis (see Figure 4): participants exposed to Black faces required less fragments to correctly identify ape images. Concerning non-ape images, no differences in number of fragments required were found as a function of prime. Moreover, this effect was found both among White-participants and non-White participants and it was not correlated with explicit racial attitudes. More interestingly, exposition to White faces even inhibited the identification of ape-images.

Figure 4. Mean frame number at which the animal could be detected as a function of animal type and race prime.



*Note.* From “Not yet human: Implicit knowledge, historical dehumanization, and contemporary consequences,” by P. A. Goff, J. L. Eberhardt, M. J. Williams, and M. C. Jackson (2008), *Journal of Personality and Social Psychology*, 94, 292-306. Copyright 2008 by APA journals.

These results are particularly interesting: first, they confirm that dehumanization of Black people concerns only a specific association – Black people with ape – and it does not involve other kinds of animals. Second, the negative association between ape and White people “is also consistent with early biologically racist accounts of evolution that rendered Blacks as least evolved (ergo closest to apes) and Whites as most evolved (ergo farthest from apes)” (Goff et al., 2008, p. 304; Jahoda, 1999; Lott, 1999).

Presence and strength of Black-ape metaphor was confirmed in three later studies (see Goff et al., 2008). However, material consequences of this association remained unexplored. For this reason, authors carried out a study to investigate whether this dehumanizing metaphor leads people to justify violence against Black people. In this study, White male students were subliminally primed with ape words or big ape words through an “attention vigilance task,” similar to previous studies. Afterwards, participants viewed a videotape with a group of police officers violently beating a suspect. Depending on condition, the suspect was a Black or a White person. After the vision of this video clip, participants responded to some items measuring to what extent people justified violence perpetrated by police officers (e.g., “How justified were the police in



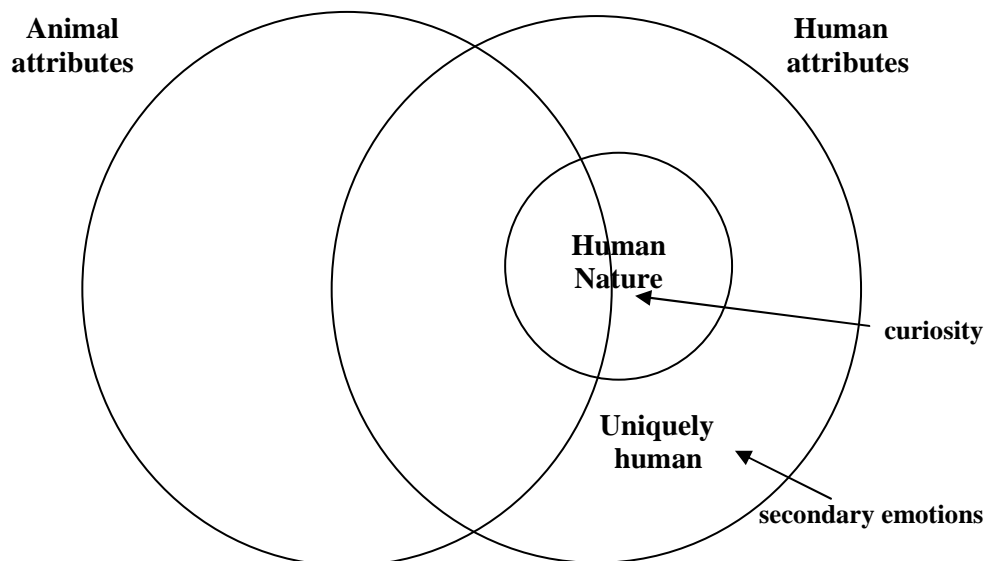
using the amount of force they used?”). Data analysis showed participants who saw the video with the Black suspect perceived violence against him more justified when they were exposed with ape words rather than big cat words. Instead, violence against the White suspect was never justified, independently of whether participants were primed with ape words or big cat words. Thus, salience of association ape-Black people affects people’s judgments on aggressive actions perpetrated against Black people. Moreover, this effect was not moderated by an individual implicit prejudice against Black people.

#### **1.4. Two senses of humanness, two forms of dehumanization**

Recently, Haslam (2006) has formulated an important theoretical perspective that deeply analyzes the concept of humanness, that is “the quality that is denied to others when they are dehumanized” (Haslam, 2006, p. 252). Namely, the author sustains the existence of two different senses of humanness, represented by “uniquely human” traits (e.g., moral sensibility, secondary emotions) and traits typically belonging to “human nature” (e.g., curiosity). Uniquely human characteristics are the key aspects that define boundaries between human beings and animals. Thus, these aspects define sense of humanness comparatively, differentiating it from the related dimensions of animals; infrahumanization research entirely focused on these aspects of humanity.

In fact, Haslam (2006; Haslam, Bain, Douge, Lee, & Bastian, 2005) holds that humanness is even defined through traits perceived as essentially and prototypically human, defining the core concept of humanity, but that not necessarily distinguish the human species from other animals (see Figure 5). For instance, although curiosity belongs both to humans and animals, it is a fundamental trait characterizing human nature.

Figure 5. Schematic representations of the two senses of humanness.



*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.

Thus, “uniquely human” characteristics and “human nature” are here clearly distinguished, whereas within infrahumanization model the two concepts are considered in the same way.

In a series of studies, Haslam et al. (2005) found that “uniquely human” traits and “human nature” traits are not correlated. “Human nature” traits (e.g., ambitious, curious, imaginative, passionate, sociable) are generally perceived positively and conceptualized in terms of cognitive flexibility, warmth, emotional responsiveness and agency. Instead, “uniquely human” characteristics (e.g., idealistic, talkative, conservative, artistic, polite, analytical) are not judged positively or negatively and are involved in domains of morality, self-control, intelligence, and sociality. Moreover, “human nature” traits endorse the “essentialization” of humanness, since they are perceived as aspects universal and inborn, deeply rooted in each individual. In contrast, “uniquely human” traits appear later in development, involve social learning and refinement and vary across cultures.

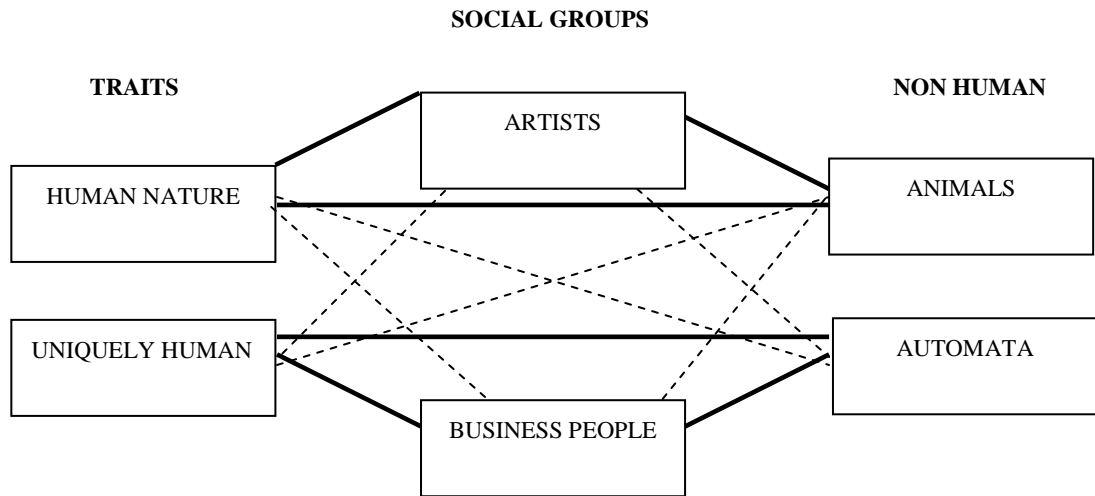
Haslam argues that two distinct forms of dehumanization occur when the two different senses of humanness are denied. Namely, when “others” are viewed as lacking in “uniquely human” characteristics they are animalized; that is, they

are considered as unintelligent, uncultured and lacking in self-control; thus, their behaviors should mainly be driven by impulse and instinct and not mediated by high cognitive processes (Haslam, 2006). Instead, “others” are mechanized when they are perceived as lacking in “human nature” traits; in this case, “others” are perceived as lacking in emotionality, warmth and flexibility. They are associated with features typical of an automaton, such as rigidity, inertia and coldness. So, these two different forms of dehumanization correspond to two different comparisons: animalistic dehumanization involves a contrast between human beings and other animals; mechanistic dehumanization, instead, assimilates “others” to automata.

Loughnan and Haslam (2007) used Go/No-go Association Task (GNAT; Nosek & Banaji, 2001; for a detailed description see Chapter 3, paragraph 3.2) to assess implicit associations between two different social groups, two senses of humanness and two kinds of dehumanization. They hypothesized that artists, a social group portrayed as imaginative, instinctive, thus high in human nature dimension, might be perceived as lacking in “uniquely human” traits, such as rationality or organization; instead, they hypothesized that business people, a social group perceived high in “uniquely human” traits, (e.g., coldness, organization) should lack “human nature” characteristics; these different associations might lead to associate business people with automata (mechanistic dehumanization) and artists with animals (animalistic dehumanization, see Figure 6).

Through a pre-test, authors selected stimulus words used in GNAT. Concerning senses of humanness, 10 traits rated high in “uniquely human” dimensions (e.g., humble, rude) and 10 traits rated high in “human nature” dimensions (e.g., sociable, nervous) were selected. For each category, 5 traits were positive and 5 negative. Social categories were represented by words such as painter or sculpture for artists, briefcase or money for business people. Concerning nonhuman words, animal dimension was represented by different kinds of animals (e.g., alligator, elephant), automata were represented by words such as computer or artificial.

Figure 6. Schematic associations of the hypothesized associations (bold lines indicate strong associations, dotted lines weak associations).



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

Data analysis showed that artists are attributed fewer “uniquely human” traits, business people fewer “human nature” traits. Further, animals are more associated to “human nature” traits, automata to “uniquely human” traits. The last association concerns social groups and nonhuman categories: a group lacking in “uniquely human traits” (artists) is implicitly associated with animals, a group lacking in “human nature” traits (business people) is implicitly associated with automata.

The model developed by Haslam sustains that dehumanization even occurs in interpersonal relations (self-other). It’s an interesting step further regarding dehumanization research; indeed, de- and infrahumanization have always been considered phenomena belonging to an intergroup context. In three studies, Haslam et al. (2005) found that people ascribed more human nature traits to themselves rather than others. Interestingly, this effect was not mediated by self-enhancement, that is by the individual inclination to attribute more desirable characteristics to the self than others, in order to maintain the most favorable self-image (see, e.g., Mikulincer & Shaver, 2005). Instead, “uniquely human” traits were equally attributed to the self and others. This result is consistent with infrahumanization research; indeed, Cortes et al. (2005) found that the same

amount of secondary emotions, a uniquely human trait, was assigned to ingroup and the self.

Finally, Haslam's (2006) analysis extends research on dehumanization in two directions: it considered another sense of humanness – human nature – and another kind of dehumanization – the mechanistic one. Moreover, Haslam's studies showed how perception of lesser humanity is not limited to an intergroup context, but also concerns the interpersonal comparison.

### **1.5 Social neuroscience and dehumanization**

During most of the 20<sup>th</sup> century, neuro- and social sciences were viewed as two separate fields. But, recently, advances in methods and instruments within neuroscience have led to the development of a new discipline – social neuroscience – that integrates social and biological sciences. The main aim of neuroscience is, indeed, to investigate biological mechanisms underpinning social processes and behavior. Although not all group phenomena can be interpreted through neural activation and pathways (Dovidio, Pearson, & Orr, 2008), neuroscience can provide an important contribution to social psychology, applying methods and techniques of neuroscience to develop new theories concerning social processes or better explore old ones. Recently, Harris e Fiske (2006), focusing on dehumanization process, gave a meaningful example of how neuroscience and social psychology can interact, and “how social psychology data can generate further neuroscience predictions, and vice versa” (Harris & Fiske, in press).

Several studies have shown that the Medial Prefrontal Cortex (MPFC; for a review, see Amodio & Frith, 2006) is the brain region most reliably involved in social cognition. In particular, it has been demonstrated 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 how 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 & Happe, 1995) have shown an

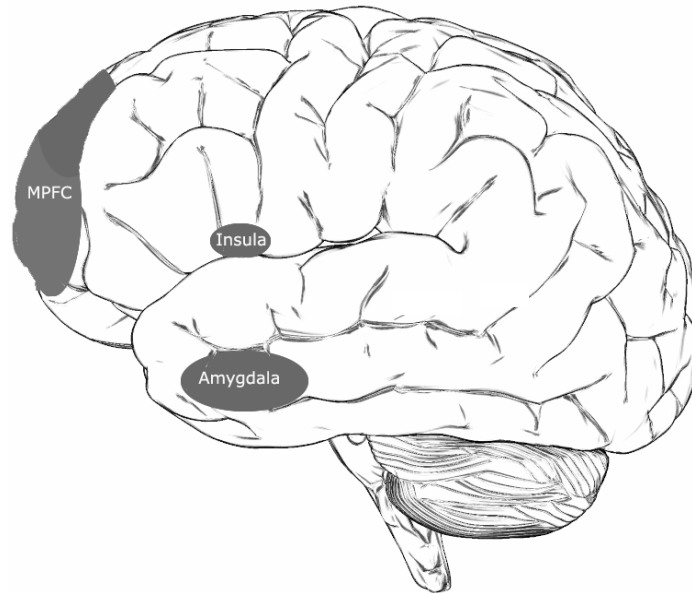
increased MPFC activity when individuals are engaged in theory of mind tasks, or when they are asked to make inferences toward a person, rather than an object (see Harris, Todorov, & Fiske, 2005).

Stereotype content model (SCM; Fiske, Cuddy, Glick, & Xu, 2002) assumes that stereotypes are articulated in two dimensions – warmth and competence (see also Fiske, Cuddy, & Glick, 2007). The warmth dimension concerns benevolent or harmful intentions of a target group. The competence dimension, instead, concerns the capability of enacting or not one's intentions. These dimensions locate social groups into four Warmth  $\times$  Competence quadrants. Depending on their location, social groups elicit different emotional responses. Social groups high both in competence and warmth (e.g., in US sample, Olympic athletes or astronauts) elicit complex positive emotions, such as pride and admiration. Social groups belonging to other two quadrants (low-competence, high-warmth; high-competence, low-warmth), instead, elicit ambivalent emotions: groups high in competence but low in warmth (e.g., business people, rich people) elicit envy and jealousy; groups stereotyped as warm but not competent (such as, disabled or elderly people) elicit pity and sympathy. The worst kind of prejudice is addressed to groups perceived lacking both in warmth and competence, such as homeless, addicts or poor people. These groups evoke disgust. Groups stereotyped as low-low could be dehumanized. Thus, these groups should lead to a different activation of MPFC, compared with other groups, since they are not perceived as human.

Participants were presented with a series of pictures of social targets, belonging to each of the four quadrants. During the presentation of these stimuli participants neural activity was recorded (fMRI; Harris & Fiske, 2006). Significant MPFC activity emerged when participants were exposed to social targets eliciting pity, envy or pride. A not significant activation of this region emerged when exemplars belonged to the low-low quadrant. Moreover these stimuli led to a significant activation of left insula and right amygdala, two brain regions activated in response to disgusting (insula) or frightening (amigdala) objects (see Figure 7).

In sum, current research provides empirical evidence that some groups are more associated to non-human than human agents.

Figure 7. 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

### Status differences and outgroup favoritism

During the first decades of past century, collective movements enacted by disadvantaged groups were focused on economics or labor domains. After 1960s, more heterogeneous social movements appeared, tending at social change in identity, lifestyle, culture or politics. Most of these, such as women's, gays', afro-Americans' movements, aimed at achieving changes for obtaining an effective enhancement of one's conditions within society (see, e.g., Levy, 1992; Williams, 1987).

Despite this improvements, disparity between dominant and subordinate groups persist both in economic and social dimensions of everyday life, such as education, employment or healthcare (see Dagsupta, 2004; Ridgeway, 1997).

The majority of research in social psychology has focused on contents of stereotypes held by members of advantaged groups toward disadvantaged groups. Ingroup favoritism, outgroup derogation, negative beliefs developed by dominant groups were considered to have more impact on the conditions of subordinate groups, whereas attitudes and stereotypes by subordinate groups toward dominant groups were thought to have a minimum impact (Dasgupta, 2004). Thus, perceptions of low-status groups remained virtually unexplored for most of the past century.

At the same time, social identity theory (Tajfel, 1981; Tajfel & Turner, 1979), self-categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) or realistic conflict theory (Sherif, 1966) have investigated the tendency of people to favor their group in terms of attitudes, behaviors or beliefs. The main focus of these perspectives was to analyze the individual and social motivations leading people to favor ingroup and discriminate against outgroup.

Recently, some new perspectives (see e.g., Jost & Banaji, 1994; Sidanius & Pratto, 1999) posit that people are not always motivated to show ingroup bias or outgroup derogation. Indeed, motivational processes affecting intergroup bias can be different, depending on the context. Namely, in some circumstances, low

status groups can even be motivated to favor outgroup. This latter phenomenon, although explored only recently, seems to play a crucial role in the maintenance differences between groups in society.

## **2.1 Intergroup bias and social identity theory**

Social identity theory (Tajfel, 1981; Tajfel & Turner, 1979, 1986) is considered the main framework to understand why people favor their groups and derogate others. Social identity theory was developed by the unexpected findings obtained from the “minimal groups” paradigm; they showed that to categorize people into two groups on the basis of a trivial categorization (e.g., a flip of coin) it is sufficient to produce favoritism toward others who share the same group membership. Favoritism was demonstrated in different domains, such as social stereotyping, resource allocation, and evaluation of performance (see e.g., Billig & Tajfel, 1973; Tajfel, Billig, Bundy, & Flament, 1971). Tajfel explained these results introducing the concept of “social identity”; it is considered as an important part of self-concept, originated from group membership. Tajfel argues that, since people generally need to evaluate themselves favorably and because group membership is a fundamental part of self-concept, people will tend to evaluate more positively their own group than other groups. Thus, according to the author, people are motivated to elevate individual and group self-esteem through favorable comparisons between ingroup and relevant outgroups (see, e.g., Hogg & Abrams, 1988).

Because social identity theory was developed through research on “laboratory groups” with no history of interaction, this theory seems to infer that ingroup favoritism is a universal phenomenon, typical of all social groups and of all intergroup contexts (see e.g., Hogg & Abrams, 1988; Mullen, Brown, & Smith, 1992).

Actually, several researches (for a review, see Bettencourt, Charlton, Dorr, & Hume, 2001), basing on a social identity perspective, showed that, intergroup bias is a process strongly dependent on intergroup status differences, rather than a process expressed by all social groups to the same extent.

Indeed, Tajfel and Turner (1979, 1986) stressed that strategies of favoritism adopted by high and low status groups are influenced by socio structural variables characterizing intergroup relations. These are: legitimacy of status, defined as the extent to which high and low status groups accept the status structure as legitimate; the stability of status, defined as the extent to which an alternative status position for a group as a whole is likely to be realized; the permeability of group boundaries, that is the extent to which group members can leave one group and join another (Bettencourt et al., 2001; Tajfel & Turner, 1979, 1986). Importantly, most of the studies that examined the role of status assessed ingroup bias separately for evaluative dimensions that were relevant and irrelevant to the status distinction. Indeed, when members of a low status group recognize outgroup superiority, they know that social comparison with high status groups on “status-relevant” dimensions will be detrimental for their social identity. Thus, to avoid that, low status members adopt different strategies, depending on the perceived nature of the social context. In particular, in some circumstances, low status groups move comparison toward new dimensions, irrelevant for status but spawning more favorable outcomes for their social identity. So, for instance, a group that interiorized its inferiority in economic or power dimensions, will tend to ignore that, considering other aspects of social comparison by which they perceive themselves superior, such as culture or sociability.

Supporting social identity perspective, an interesting meta-analysis conducted by Bettencourt et al. (2001) considered 92 studies where ingroup bias of high and low status groups was assessed.

First of all, supporting social identity perspective, authors highlighted how generally high status groups, compared with low status groups, tend to favor ingroups over outgroups both on relevant and irrelevant dimensions. However, magnitude of bias is influenced by sociostructural variables.

In particular, status stability moderates ingroup evaluations in the same way on relevant and irrelevant dimensions. When status is stable, high status groups evaluate their group more positively than low status groups. Instead, when status is perceived as unstable, high and low status groups show similar

levels of ingroup favoritism, since low status groups enhance the positive evaluation of their group, especially on dimensions irrelevant for definition of status. Outgroup evaluations, instead, are not moderated by the perceived stability of status hierarchy.

In contrast, the perception that status structure is legitimate influences both ingroup and outgroup evaluation, depending on which dimensions are considered. When status relevant dimensions are considered, high status groups show greater levels of ingroup favoritism than low status groups, regardless of whether status is perceived legitimate or not; instead, on the same dimensions, high status groups tend to evaluate more negatively outgroup than low status groups only when status structure is legitimate. Concerning irrelevant dimensions, high status groups tend to evaluate more favorably ingroup only when status structure is legitimate. Findings concerning low status groups are different: indeed, when these perceive status differences as legitimate, they tend to show low levels of ingroup bias. In contrast, when they perceive their status as illegitimate, they adopt competitive strategies to obtain a positive identity; namely, they show negative evaluations of outgroups on status relevant dimensions and, at the same time, enhance positive evaluations of ingroup on dimensions irrelevant for status.

Group boundary permeability also moderates the effects of status on ingroup bias, but only when status irrelevant dimensions are considered. Concerning relevant dimensions, high status groups always show more ingroup bias than low status groups, regardless of whether group boundaries are perceived permeable or not. Regarding irrelevant dimensions, when boundaries between groups are perceived impermeable, low and high status groups favor their group similarly; instead, on a permeable condition, low status groups tend to favor outgroup when there is the possibility of joining outgroup, they favor ingroup on irrelevant dimensions, adopting a creative strategy, when opportunities for individual mobility are rare (see Ellemers, Wilke, & van Knippenberg, 1993; Tajfel & Turner, 1979, 1986).

Bettencourt and colleagues (2001) observed that the interaction of socio-structural variables moderates effects of status on ingroup bias only when

irrelevant dimensions are considered. Moreover, permeability plays the most important role in determining the magnitude of intergroup bias. Interestingly, when group boundaries are perceived permeable, high status groups tend to evaluate more positively ingroup than low status groups, both in irrelevant and relevant dimensions, regardless of stability and legitimacy status perception. Indeed, perception of permeable group boundaries creates a feeling of threat in high status members, which preserve and reinforce their position on a pervasive way, asserting their superiority not only on status relevant dimensions but also on irrelevant dimensions. In contrast, in this condition, members of low status groups may aim to join outgroup and so they may distance themselves from ingroup; thus, they may have little need to favor ingroup distinctiveness, even on irrelevant dimensions. In contrast, status legitimacy has an additional influence on irrelevant dimensions, when group boundaries are perceived impermeable. In this case, when status difference is perceived both illegitimate and unstable, ingroup bias of low status members increases, reaching the same magnitude as high status members. Indeed, when low status groups members see few possibilities of joining outgroups, but perceive their position as illegitimate and unstable, they try to achieve a positive distinctiveness competing with outgroup on new dimensions, irrelevant to status. When group boundaries are impermeable and status is legitimate, high status members persist in favoring their group more than low status members, but this difference is less marked than in the permeable condition. Indeed, high status groups are less motivated to assert their superiority, since their status is not threatened. Again, this decreasing of ingroup bias effects is observed only for irrelevant dimensions. On status relevant dimensions, high-status groups are always more biased than low status groups, regardless of whether status is perceived as stable or unstable, legitimate or illegitimate.

These findings together support the hypothesis that ingroup bias is not expressed to the same extent by all groups, but motivation to favor one's own group depends on ingroup status and on some socio structural variables, such as perception of status legitimacy and of permeability of group boundaries.

Actually, most social identity research has tended to investigate different forms and different expressions of ingroup favoritism, but they have underestimated the role of outgroup favoritism, at least empirically. However, Tajfel and Turner (1979) theorized the existence of this phenomenon; namely, they stated that “where socio structural differences in the distribution of resources have been institutionalized, legitimized, and justified through a consensually accepted status system” (p. 39) the result will be a disappearance of ingroup bias or even, an outgroup favoritism among low status members.

## **2.2 System justification theory**

Social identity theory always considered perceptions of legitimacy and stability as independent variables, which easily moderate effects of ingroup status on intergroup bias. For this reason, the understanding of why low status members decide to accept the existing status quo or decide to reject it (Jost, 2001) was neglected. In particular, according to Jost, little is known about why many status inequalities are perceived legitimate and fair even by low status groups, despite the fact that this perception contrasts group-serving motivation.

System justification theory (Jost & Banaji, 1994; Jost et al., 2004; Jost, Burgess, & Mosso, 2001) hypothesized the existence of a different motivation which influences intergroup bias, although this may not be directly related with the achievement of ingroup positive distinctiveness; namely, authors sustain that people are intrinsically motivated to “use ideas about groups and individuals to justify the way things are, so that the existing social arrangements are perceived as fair and legitimate, perhaps even natural and inevitable (Jost, 2001, p. 95).

Authors sustain that three different motivations drive people’s attitudes and behaviors within intergroup relations. The first motivation is an “ego justification,” and concerns personal need to feel valid, justified and legitimate as an individual actor. The second is a “group justification,” which is defined as a need to maintain a positive image of one’s own group, favoring ingroup members and derogating outgroup members on different domains, such as stereotyping, evaluations, or resource allocations. The third is the “system justification” and includes all the psychological needs that aim to rationalize and

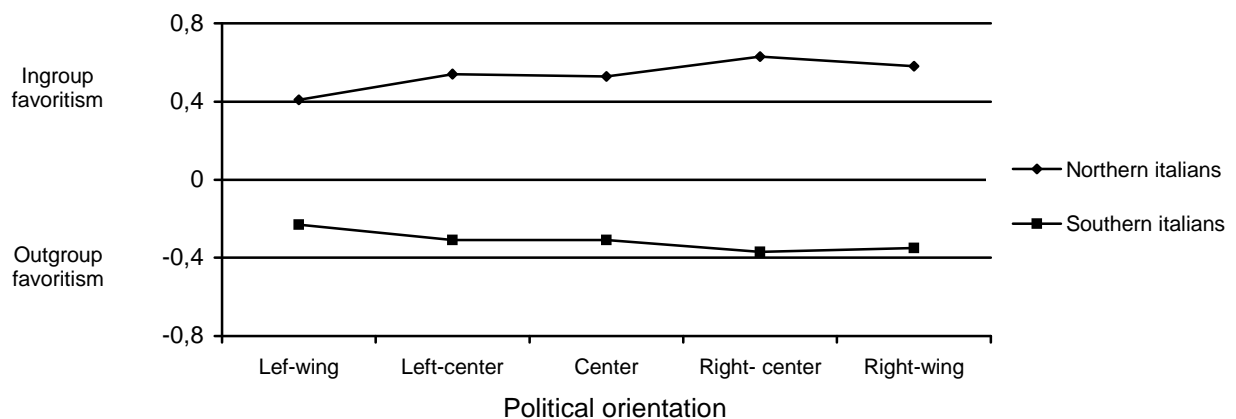
justify the existing status quo, perceiving it as legitimate, fair and inevitable. These needs involve both cognitive factors, such as cognitive conservatism (Greenwald, 1980) or need for cognitive closure (Jost, Kruglanski, & Simon, 1999), and motivational factors, such as the fear of equality (Lane, 1962) or the belief in a just world (Lerner, 1980).

System justification theory assumes that “for members of high status groups, motives for ego justification, group justification, and system justification are consistent and complementary, whereas for members of low status groups, these motives are often in conflict with one another” (Jost, Burgess, & Mosso, 2001, p. 365). When status differences are stable and social change is unlikely, both in high and low status group members “system justifications” prevails; namely, low status members will tend to adopt strategies that permit the perpetuation and legitimization of the existing status quo, even if these contrast “ego” or “group” justification. For instance, members of disadvantaged groups tend to consider intragroup or interpersonal comparisons, rather than intergroup comparisons (Jost, 1997), or they perceive existing institutions or social norms as fair and legitimate, even when there are reasons to suspect that they are not (see e.g., Tyler & McGraw, 1986). More importantly, members of low status groups will tend to exhibit outgroup favoritism, by internalizing unfavorable stereotypes of their group and assigning favorable stereotypes to members of successful groups (Jost & Banaji, 1994; Jost et al., 2004).

The aim of the first studies carried out by Jost and colleagues (Jost & Banaji, 1994; Jost et al., 2004; Jost, Mosso, Rubini, & Guermandi, 2000) was to demonstrate that outgroup favoritism is a “real phenomena,” which takes place both inside and outside the laboratory (Jost et al., 2004). According to the authors, one of the main examples of outgroup favoritism concerns the internalization of inferiority among Southern Italians, who since the unification of Italy have always occupied a lower socio economic status than Northern Italians (Capozza, Bonaldo, & Di Maggio, 1982; see also Chapter 4, paragraph 4.3). Jost et al. (2000) considered survey data collected on a sample of 2,000 Italians. Respondents had to rate to what extent a number of different stereotype traits were held by Northerners and Southerners. Stereotypes were both positive

(e.g., honest) and negative (lazy). As shown in Figure 8, Northerners exhibited ingroup favoritism, perceiving ingroup more characterized by positive stereotypes and outgroup by negative stereotypes. Instead, Southerners tended to favor outgroup, perceiving ingroup more characterized by negative stereotypes and outgroup by positive stereotypes.

Figure 8. Degree of ingroup and outgroup favoritism among Northern Italians and Southern Italians as a function of political ideology.



*Note.* From “Conflicts of legitimation among self, group, and system: The integrative potential of system justification theory.” by J. T. Jost, D. Burgess, and C. Mosso, 2001, in J. T. Jost, and B. Major (Eds.), *The psychology of legitimacy: Emerging perspectives on ideology, justice, and intergroup relations* (pp. 363–388). Copyright 2001 by Cambridge University Press.

Moreover, as shown in Figure 8, a first possible moderator of the expression of ingroup or outgroup favoritism is political orientation. Indeed, it appears that ingroup favoritism of high status group (Northerners) and outgroup favoritism of low status groups (Southerners) vary as a function of political ideology. Namely, people with right wing ideologies tend to justify the existing status quo more than left-wing people, through ingroup favoritism in the case of Northerners, and outgroup favoritism in the case of Southerners. However, this moderation effect is stronger for right-wing Northerners. Indeed, Jost et al. (2001) asserted that, in high status members, right-wing ideologies, which combine elements of strong ethnocentrism with a conservative system justification, are perfectly congruent with their advantaged position. Instead, in

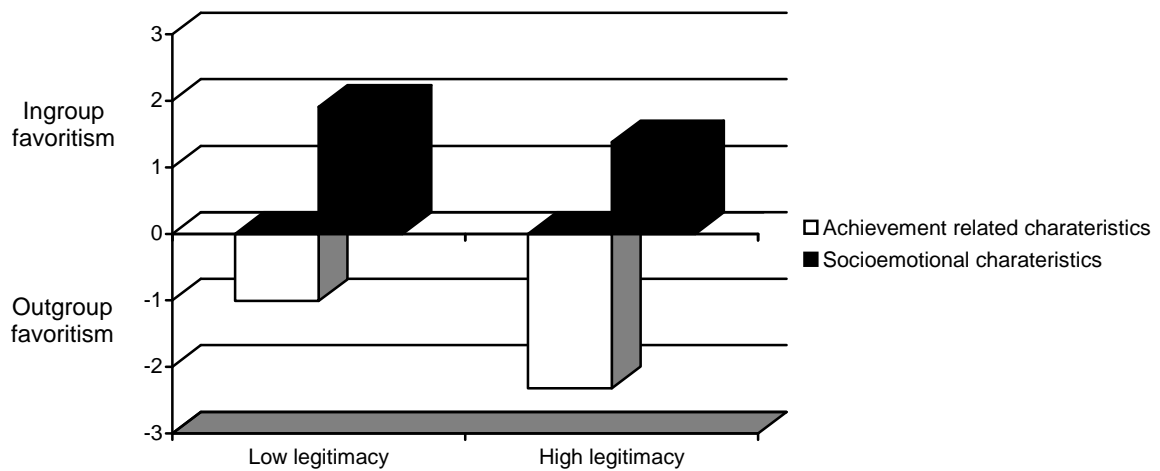


right-wing low status members the ethnocentric hostility contrasts with the conservative system justification, reducing the effect.

In a second series of studies, Jost et al. (2001) explored if perceptions of legitimacy of socio-economic differences between groups moderate expressions of ingroup and outgroup favoritism. Authors assumed that perception of a legitimate status difference increases, at the same time, outgroup favoritism among low status members and ingroup favoritism among high status members. For instance, in an interesting study, Jost and colleagues (2001) manipulated the perception of legitimacy; students of the University of California in Santa Barbara were led to believe that they were either less socially and economically successful than students of the University of California in Los Angeles. Namely, they were told that the other group was either more intelligent, hard-working, skilled at verbal reasoning than outgroup (achievement-related characteristics) and more friendly, honest and interesting (socio-emotional characteristics) than their own group. In the condition of low legitimacy it was said that conditions of inferiority were unjustified and due to discrimination on the part of outgroup members. In the high legitimacy condition it was said that status differences were justified and due to efforts and abilities on the part of outgroup members. As shown in Figure 9, perception of legitimacy moderates expressions of ingroup and outgroup favoritism among low status members, both for status-relevant traits (e.g., intelligence) and status irrelevant traits (e.g., friendly). Namely, in low legitimacy condition participants showed lesser outgroup favoritism in status-relevant traits and more ingroup favoritism in status irrelevant traits. The opposite pattern was observed, instead, in the high legitimacy condition.

Thus, perception of legitimacy is a socio structural variable that moderates effects of outgroup favoritism on low status members. It's interesting to note how, within system justification theory, this variable appears both an antecedent of outgroup bias and an outcome of it. Indeed, among low-status members legitimacy of status differences enhances expressions of outgroup favoritism and, at the same time, it is enhanced by strategies of outgroup favoritism.

Figure 9. Ingroup and outgroup favoritism among low status group members as a function of perceived legitimacy and type of characteristic.



*Note.* From “Conflicts of legitimation among self, group, and system: The integrative potential of system justification theory.” by J. T. Jost, D. Burgess, and C. Mosso, 2001, in J. T. Jost, and B. Major (Eds.), *The psychology of legitimacy: Emerging perspectives on ideology, justice, and intergroup relations* (pp. 363–388). Copyright 2001 by Cambridge University Press.

With regard to this issue, Rubin and Hewstone (2004) sustain that, although system justification theory has provided indubitable evidence of the existence of outgroup favoritism, it has been unable to systematically identify the socio structural variables that determine this phenomenon. In other words, they assert that system justification theory is unable to predict when social groups decide to adopt strategies that aim to bring social stability and to justify the system and when, instead, they decide to adopt strategies that aim to bring about social change.

However, this theory provided an important contribution to the development of research on intergroup processes; namely, highlighting that even disadvantaged groups can play an active role in the conservation of the existing status quo, is an important topic in order to understand why, even in present-day societies, huge social inequalities persist.

### **2.3 Implicit outgroup favoritism**

From the latter half of the 20<sup>th</sup> century social psychology made use of new and more sophisticated instruments and techniques to investigate intergroup biases (for a review, see, e.g., Wittenbrink & Schwartz, 2007; Gawronski, in press; see also Chapter 3); these new techniques have allowed us to detect people's attitudes and beliefs on an implicit level, outside their awareness and their intentional behavior. It turned out really useful for the development of social psychology research, since, as noted by several researchers (see e.g., Devine, 1989; Gaertner & Dovidio, 1986), changes in social norms and values have led to a deep transformation of the expression of intergroup biases, that, in most cases, has moved from an explicit to a "hidden" level, more subtle and unconscious.

Initial investigations of implicit intergroup biases focused entirely on attitudes and beliefs held by members of advantaged toward members of disadvantaged groups (Dasgupta, 2004). For instance, it was evidenced that White Americans, on an implicit level, show a preference toward their group and tend to evaluate negatively African Americans (see e.g. Dasgupta, McGhee, Greenwald, & Banaji, 2000; Devine, 1986; Gaertner & Dovidio, 1986; Fazio, Jackson, Dunton, & Williams, 1995; Kawakami, Dion, & Dovidio, 1999) or other ethnic groups, such as Latinos (see e.g., Ottaway, Hayden, & Oakes, 2001) or Asians (Son Hing, Li, & Zanna, 2002). Similar results were found even outside United States context, for instance between White Australians and aborigines (Locke, MacLeod, & Walker, 2001) or between Germans and Turkish immigrants (Gawronski, Ehrenberg, & Banse, 2003). Interestingly, although most implicit investigations have focused on pure evaluations, some researchers have focused on the implicit stereotypes held by majority groups toward minority groups (see e.g., Devine, 1989; Kawakami & Dovidio, 2001; Wittenbrink et al., 1997).

Nevertheless, implicit attitudes and beliefs held by low status toward high status groups remained unexplored for several years. Moreover, before the development of system justification theory, almost no research contemplated the idea that members of low status groups could exhibit the same implicit biases

held by high status groups against their own kind (Jost, Pelham, & Carvallo, 2002).

The first important evidence of implicit outgroup favoritism was provided by Jost et al. (2002). In their line of research they investigated implicit intergroup bias using different techniques. For instance, implicit bias of undergraduate students of San Jose State University (low status group) and of Stanford University (high status group) was assessed through three different sessions of IAT. In the first IAT, implicit self-evaluation was assessed: task of participants was to classify self-relevant concepts and not self-relevant concepts with positive and negative words. In the second IAT implicit ingroup evaluation was assessed, considering the strength of association of ingroup vs. outgroup-related words with positive vs. negative words. In the last IAT implicit stereotype attribution was considered, requiring participants to classify ingroup and outgroup-related words with traits related to the academic world (e.g., intelligence, organized) and with traits related to social life (e.g., relaxed, fashionable). Concerning implicit ingroup evaluation, IAT data showed that Stanford university students (high-status group) associated more quickly positive words with ingroup-related concepts and negative words with outgroup-related concepts, rather than negative words with ingroup-related concepts and positive words with outgroup-related concepts. This difference was not found in San Jose State University (low status group). Thus, members of the high status group exhibited implicit ingroup favoritism, whereas members of the low-status group did not. Further, both groups associated more quickly academic traits with Stanford University rather than San Jose State University, and the social life traits with San Jose State University rather than Stanford University. Instead, concerning implicit-self evaluation, both groups of students showed a positive evaluation of themselves. Correlational analysis demonstrated that in high status members implicit favoritism was positively correlated with implicit self-esteem; instead, in low status members this correlation was negative. More interestingly, in low status members the tendency to associate academic traits with the high status group and extra-curriculum traits with ingroup was positively correlated with tendency to show favoritism for outgroup. Thus, within members of low

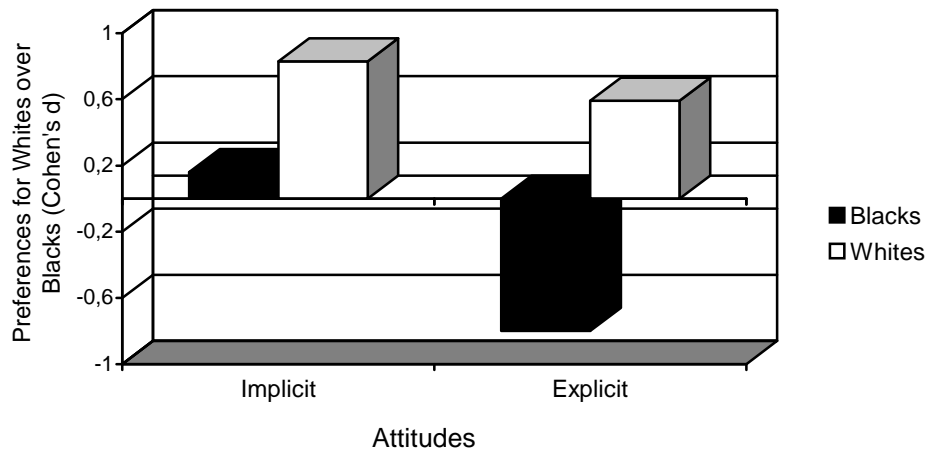
status groups, the internalization of cultural stereotypes, identifying the condition of inferiority, is correlated with the exhibition of outgroup favoritism. These results are an important confirmation of system justification perspective; indeed, the proof that ingroup inferiority occurs even on an implicit level allows us to reject the objection that outgroup favoritism, found through explicit measures, easily reflect strategies of impression management or public conformity.

Further studies have revealed the existence of implicit outgroup favoritism. For instance, Nosek, Banaji and Greenwald (2002) measured via internet explicit and implicit intergroup bias of a large sample of White and Afro-American people. Also in this study implicit attitudes were measured through IAT. Considering White (high status group) and Afro American (low status group) respondents, separately, analysis showed how, explicitly, both groups displayed a favoritism for ingroup; this preference was even stronger in Black respondents. Instead, on an implicit level, preference for ingroup increased in White respondents, disappeared and even became a weak outgroup preference in Black respondents (see Figure 10). These findings showed how some low status groups exhibit outgroup favoritism only implicitly. Indeed, it might be that these groups unconsciously internalize their inferiority condition but that they don't want to accept it explicitly.

Although literature on minority racial attitudes is relatively small, asymmetry in the expression of implicit versus explicit bias appears an appealing issue; indeed, besides Nosek's and colleagues work, other studies have shown high levels of explicit ingroup bias (Brigham, 1993; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005), while others have shown no ingroup bias or even outgroup favoritism using implicit measures (see e.g., Ashburn, Knowles, & Monteith, 2003; Jost & Burgess, 2000; Nosek et al., 2002).

In a recent research, Livingston (2002) analyzed the relationship between Afro-Americans' implicit and explicit attitudes and to what extent the perceived negativity from outgroup moderates these two attitudes. According to Allport (1954), the minority group's feeling that majority perceives it negatively, or discriminates it, may determine minorities' affective or behavioral outcomes.

Figure 10. Implicit and explicit attitudes toward Whites versus Blacks by respondents race.

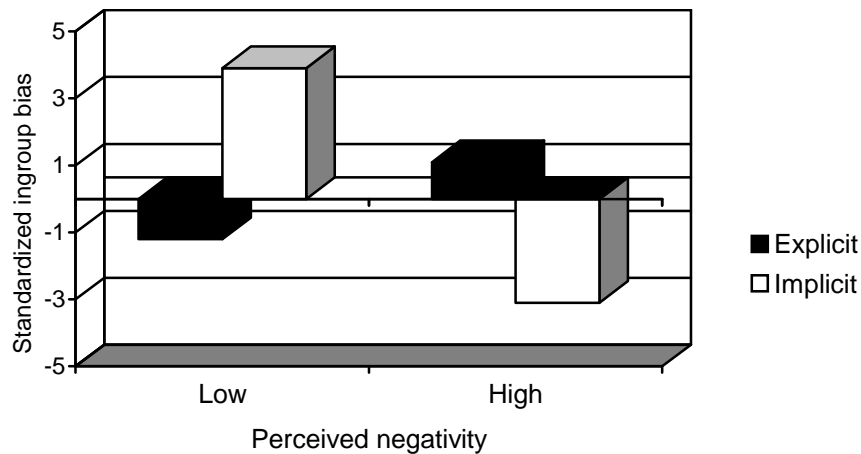


Note. From "Harvesting implicit group attitudes and beliefs from a demonstration web site," by B. A. Nosek, M. R. Banaji, and A. G. Greenwald, 2002, *Groups dynamics theory. Research and practice*, 6, 101-115. Copyright 2002 by the Educational Publishing Foundation.

Namely, members of minority group might internalize this perception or might project the negative evaluation to majority outgroup. Livingston (2002) hypothesized that both internalization and projection of perceived negativity occur; namely, he predicted that this perception is redirected to outgroup explicitly, while, unconsciously, this perception might be internalized. So, perceived negativity would lead in Afro-Americans to an increase of ingroup favoritism on explicit measures, while it would lead to a decrease of ingroup favoritism or, even, to favoritism toward White people, on implicit measures. The author tested these predictions in two different studies. In both studies, only Afro-American people were considered; explicit attitudes toward White people were tested through a feeling thermometer, while implicit attitudes were measured through a modified version of bogus pipe-line paradigm (Fazio et al., 1995) or through a classical IAT. As seen in Figure 11, overall, respondents showed an explicit strong preference toward ingroup rather than outgroup, while, on implicit measures, no ingroup bias was found. Interestingly, on explicit measures, high perceived negativity was correlated with ingroup favoritism, while, on implicit measures, it was correlated with outgroup favoritism. Thus, the more Blacks believe that the majority of Americans hold a negative societal

image of their group, the less they exhibit an implicit ingroup favoritism but they are more prone to favor ingroup on an explicit level.

Figure 11. Standardized ingroup bias scores for participants high and low in perceived negativity. Higher scores indicate greater ingroup bias.



*Note.* From “The role of perceived negativity in the moderation of African Americans’ implicit and explicit attitudes,” by R. W. Livingston, 2002, *Journal of Experimental Social Psychology*, 38, 405-413. Copyright 2002 by Academic Press.

Thus, the extent of outgroup favoritism exhibited by minority groups seems to be moderated by different variables: (a) political orientation (Jost et al., 2000), (b) perceived legitimacy of status differences (Jost et al., 2001), or (c) perceived negativity from outgroup (Livingston, 2002).

Recently, Rudman, Feinberg, and Fairchild (2002) assessed implicit and explicit intergroup bias across four different minority groups. Namely, they considered different minority groups – Jews, Asians (high status), overweight (medium status), poor (low status) – endorsing different status positions in American society. Each group was compared with a majority group – Jews vs. Christians, Asians vs. Whites, overweight vs. slim, poor vs. rich people. Authors hypothesized that the degree of status difference between perceivers’ ingroup and the comparison outgroup might moderate the exhibition of implicit ingroup favoritism. That is, high status minorities (Jews and Asians) should exhibit more implicit ingroup favoritism than low status minorities (overweight and poor). Moreover, they predicted that low status minorities might tend to show an

outgroup favoritism or an ingroup derogation on implicit measures. Instead, on explicit measures, no differences in ingroup favoritism as a function of status differences were expected to be found.

Primarily, authors assessed the perception of group status differences. As expected, each minority perceived itself to be lower in status than comparison outgroup. Interestingly, Jews and Asians perceived themselves as having an equal relative status, and both groups perceived themselves as having a higher status than overweight and poor people. Further, overweight people perceived themselves to be higher in status than poor people. In each group implicit attitudes were measured through a classical IAT: participants had to associate ingroup or outgroup stimuli with pleasant or unpleasant stimuli. Explicit attitudes were measured through a feeling thermometer. Findings showed a common tendency to favor ingroup on explicit measures; poor people even exhibit an explicit ingroup bias similar to Jews and Asians. In contrast, implicit ingroup bias varied as a function of ingroup status: Jews and Asians showed high levels of implicit favoritism toward ingroup, similar to self-reported ingroup bias. Overweight people, instead, exhibited an implicit tendency to favor outgroup; however, the highest level of outgroup favoritism was found in poor toward rich people. More importantly, group status perception moderated implicit ingroup favoritism: the lower the ingroup status perception, the lower the level of implicit ingroup favoritism. In contrast, explicit ingroup bias was not correlated with ingroup status perception. Thus, when status differences are large enough, members of minority groups seem to unconsciously internalize a false consciousness and they adopt implicit attitudes of outgroup favoritism, in order to preserve the existing status quo. Instead, similar to other studies (see, eg., Crocker & Major, 1989; Nosek et al., 2002; Twenge & Campbell, 2002), consciously minority groups want to adopt strategies of ingroup favoritism and they appear not to accept their inferior position.

These studies together seem to support system justification theory: minority groups, although not consciously, tacitly accept their inferiority and adopt strategies of outgroup favoritism that, rationalizing the status quo, impede



the enacting of behaviors aimed to overcome discrimination and inequality (Jost & Banaji, 1994).



## Chapter 3

### Measuring unconscious intergroup attitudes

During the last decades, self-reported measures have revealed a decreasing of intergroup prejudice and stereotypes (see, e.g., Brigham, 1974; Campbell, 1971; Gaertner & Dovidio, 1986). However, several studies, using less intrusive measures, have constantly showed discriminatory behavior toward outgroup (see, e.g., Cooper, 1974; Duncan, 1976; McConahay, 1983). For instance, Gaertner and Dovidio (1977) demonstrated that white bystanders are less ready to help black victims than white victims, in situations in which the reluctance to help is attributable to factors other than race. These behaviors are manifested by individuals that explicitly are both high and low-prejudiced. Thus, it is predictable that attitudes of derogation and devaluation of outgroup are persisting, much more than self-report measures have detected; namely, it was conceived that many prejudices and negative stereotypes toward other groups have taken different forms because of societal changes. Indeed, from the second half of 20<sup>th</sup> century, institutions and mass-media have supported a diffusion of social norms and values endorsing respect and tolerance toward outgroups, especially if ethnic minorities. Thus, people perceive it socially inappropriate to be explicitly prejudiced toward others. Nevertheless, it does not mean that negative attitudes toward outgroup have disappeared, but it's likely that they have gone "underground," becoming more subtle and latent or, in most cases, unconscious. On this assumption recent theories were developed, such as "aversive racism" (Gaertner & Dovidio, 1986), "modern racism" (McConahay, 1983) or "subtle vs. blatant prejudice" (Pettigrew & Meertens, 1995). Thus, assessing intergroup attitudes using explicit measures appears constrictive, since respondents steadily keep under control their answers and manage their attitudes in order to appear as more socially desirable as possible (see Greenwald & Banaji, 1995).

For this reason, social psychology has searched for new techniques capable of capturing attitudes outside the conscious awareness of participants. At the time, cognitive psychology was improving paradigms to measure memory

without a conscious recollection of past events of individuals (see e.g., Jacoby, 1991; Schacter, 1987). These new paradigms, together with theories on semantic memory (see e.g., Neely, 1977; Posner & Snyder, 1975), have led to a development of new techniques that investigated cognition outside volition control (Dasgupta, 2004). In fact, social psychology adapted these techniques to its purposes, allowing the investigation of implicit social cognition, defined as feelings, attitudes, thoughts held toward a social object affected by “traces of past experience” but without people’s awareness, intention, and/or control (see Bargh, 1989, 1994; Greenwald & Banaji, 2005).

A first contact between implicit cognition and social psychology was provided by Dovidio, Evans, and Tyler (1986; see also Gaertner & McLaughlin, 1983). In their pioneer works, the authors investigated the spontaneous activation of stereotypes held toward Blacks among Whites, using Meyer and Schvaneveldt’s (1971) procedure of semantic priming. In their procedure, to participants was presented a prime (e.g., BLACK) immediately followed by a stimulus target (e.g., athletics). Task of participants was to indicate, pressing a response key, whether the stimulus target was “always true” or “always false” of the prime category. Response latencies were measured, assuming that they were facilitated by the semantic associations between prime and the following stimulus. This assumption derived from the concept of spreading activation (see Neely, 1977): activation of a prime spreads to semantically associated concepts achieved in memory, leading to a quicker recognition of targets related with that concept. Thus, if the prime is semantically related with the target, shorter latencies are expected. More recently, Wittenbrink et al. (1997) improved this sequential priming procedure, exposing participants to primes related with racial categories of black and white people. Target stimuli were strings of letters representing meaningful or meaningless words. Namely, meaningful words were traits stereotypical of black people (e.g., athletic, lazy) or of white people (e.g., organized, materialistic). Task of participants was to categorize as quickly as possible if the target stimulus was a word with meaning or not. Analysis of latencies (for scoring procedures, see Wittenbrink and Schwartz, 1997) showed

that responses of white participants were shorter when typical black stereotypes were preceded by the exposition of a Black-related prime.

Fazio et al. (1995) developed a similar sequential priming procedure. In this case, the evaluative association was investigated between a given prime and a target, rather than the semantic association. Namely, in their standard procedure, participants are exposed to a racial category prime (e.g., picture of a Black), immediately followed by a positive (e.g., happiness) or negative (e.g., cancer) target word. Task of participant is to decide if the target word is positive or negative. It is assumed that if the prime is associated with negative valence it should lead to a faster response to negative words. Similarly, if the prime stimulus facilitates responses with positive words, it is assumed to be associated with positive valence.

In both sequential priming procedures, the prime can be presented subliminally – outside the awareness of participants (see e.g., Olson & Fazio, 2002; Wittenbrink et al., 1997) – or supraliminally (see e.g., Fazio et al., 1995; Kawakami & Dovidio, 2001). Nevertheless, in the latter case it's important to fix a short interval between the onset of the prime and the onset of the target (SOA; see Wittenbrink & Schwartz, 1997) in order to prevent responses intentionally controlled by participants.

### **3.1 The Implicit Association Test**

Nowadays, social psychology researchers can avail themselves of different implicit techniques (for an overview, see Gawronski, in press), such as Affect Misattribution Procedure (Payne, Chen, Govorun, & Stewart, 2005), Extrinsic Affective Simon Task (EAST; De Houwer, 2003) or Approach-Avoidance Tasks (see e.g., Chen & Bargh, 1999; Wentura, Rothermund, & Bak, 2000). However, the most prominent implicit technique is the Implicit Association Test (IAT), developed by Greenwald et al. (1998). In the 10 years since its publication, more than 200 papers reported use of the IAT technique (Lane, Banaji, Nosek, & Greenwald, 2007). Although most of the studies investigated implicit intergroup attitudes (see, e.g., previous chapters), this technique was used in several domains of psychology, such as marketing (Maison, Greenwald, & Bruin, 2001),

health (Czopp & Monteith, 2003) or business (Banaji, Bazerman, & Chugh, 2003).

Similarly to cognitive priming procedure, IAT detects implicit attitudes by measuring the automatic associations between concepts. Nevertheless, IAT differs from sequential priming for structure and psychometric attributes. Basically, IAT measures the strength of association between pairs of concepts. In particular, during IAT session participants have to classify a number of different stimuli grouped in four distinct categories, using two different response keys. Two categories of stimuli represent the target concepts (e.g., flowers vs. insects), the other two the evaluative dimension (e.g., positive vs. negative). The underlying assumption of IAT is that the classification task will be facilitated when categories closely associated (e.g., flowers and positive) share the same response key, compared to when they do not.

In standard IAT procedure, stimuli – words, pictures, or symbols – are always presented one at a time on the center of a computer screen, in a randomized order, and remain on the screen until participants have responded (but for other procedures, see Wittenbrink & Schwartz, 2007). Participants classify stimuli pressing two keys located on the left or on the right of the keyboard.

In Table 3 an example of IAT (Greenwald et al., 1998, Study 3) is schematically showed, that assesses the implicit attitudes held by white people toward black people in United States. IAT is composed of five different stages. In Stage 1, participants familiarized with target concepts (Black vs. White). They had to discriminate between them pressing the left-key if stimulus – a typical black name (e.g., Latonya) – belonged to the category of Blacks, the right key if stimulus – a typical name of white people (e.g., Katie) – belonged to the category of Whites. In Stage 2, participants had to discriminate between evaluative attributes, pressing the left key if stimulus was a pleasant word (e.g., lucky), the right key if stimulus was an unpleasant word (e.g., poison). In Stage 3, the two previous tasks were combined: Blacks' names and pleasant words were assigned to the same left response key, Whites' names and unpleasant words to the same right response key. In the case of combined tasks, category-related stimuli and

evaluative attributes were presented in an alternated order. In Stage 3a, participants familiarized with the new task. In Stage 3b, critical stimuli were presented. Stage 4 was functional for the following steps: in this phase the response key assigned to the two groups target was inverted. Indeed, in 5a and 5b combined stages, participants had to press the left key to white names and pleasant words, the right key to black names and unpleasant words. It's important to note that the order of presentation of Stage 3 and Stage 5 was presented in a counterbalanced order.

It was assumed that difference in response latencies between the two combined tasks represented the strength of the association of the first pairings of concepts (Blacks + pleasant words vs. Whites + unpleasant words) compared with the second pairings (Whites + pleasant words vs. Blacks + unpleasant words).

Table 3. Schematic overview of implicit racial attitudes IAT (Greenwald et al., 1998)

Stage	Function	Left key	Right key
1	Practice	Blacks	Whites
2	Practice	Pleasant words	Unpleasant words
3a	Practice	Blacks + pleasant words	Whites + unpleasant words
3b	Test	Blacks+ pleasant words	Whites + unpleasant words
4	Practice	Whites	Blacks
5a	Practice	Whites + pleasant words	Blacks + unpleasant words
5b	Test	Whites + pleasant words	Blacks + unpleasant words

Thus, if overall response latencies are shorter in the second stage than the first one, it is inferred that Blacks are more associated with unpleasant words and Whites with pleasant words, rather than Whites with unpleasant and Blacks with pleasant words. In other words, it is concluded that white Americans hold an implicit ingroup bias toward black Americans.

Recently, some important modifications have been proposed for IAT scoring procedure. In 2003, Greenwald, Nosek, and Banaji introduced an improved algorithm to calculate IAT measure; with respect to the usual scoring procedure, in the new algorithm also data from combined practice blocks were

considered (Stage 3a and 5a), a latency penalty for errors was calculated, and individuals' latency variability was considered. Not yet published works have removed combined practice trials, combining Stage 3a and 3b and Stage 5a and 5b in a single block (see, e.g., Teige-Mocigemba, Klauer, & Rothermund, in press).

From the beginning, IAT was revealed as the most reliable, flexible and sensitive automatic evaluation measure (see, e.g., Lane et al., 2007). Nevertheless, IAT has been the object of some critiques (see, e.g., Rothermund & Wentura, 2004; Gawronski, in press), and some important limitations have been highlighted (see, e.g., Nosek, Greenwald, & Banaji 2005). In particular, IAT does not allow us to obtain the strength of association of a single concept with evaluative attributes. Indeed, implicit attitude toward a target concept is always detected in comparison with the contrasting concept (e.g., Blacks vs. Whites). For instance, response latencies for stimuli linking black people with negative words are always obtained with stimuli linking white people with positive words. It is not, therefore, possible to establish whether the shorter latencies, in this block, depend on the association between Whites and positive valence, between Blacks and negative valence, or on both possibilities (Blanton & Jaccard, 2006; Nosek et al., 2005). In other words, it is not possible to establish whether implicit intergroup bias depends on ingroup enhancement, outgroup devaluation, or on both phenomena.

For this reason, different versions of IAT have been proposed. For instance, the Single Category Implicit Associations Test (SC-IAT; Karpinski & Steinman, 2006) eliminates the need for a contrast category and measures the association between a single target and the two evaluative attributes.

### **3.2 The Go/No-go Association Task**

Nosek and Banaji (2001) have developed the Go/No-go Association Task (GNAT; Nosek & Banaji, 2001), which, basing on the logic of IAT, allows us to detect independent measures of attitude toward the two categories.

Like priming procedures and IAT, GNAT measures implicit attitudes by assessing the automatic associations between target concepts and evaluations



(positive or negative). Nevertheless, GNAT differs from other techniques because the strength of association is not calculated through response latencies. Indeed, GNAT index is obtained basing on signal detection theory (SDT; Green & Swets, 1966). In SDT, the sensitivity index ( $d'$ ) measures the ability to discriminate target stimuli (signal) from distracter ones (noise). Usually, this ability is calculated using error rates, rather than response latencies.

In GNAT, implicit attitudes toward a target-category are detected through two conditions, namely, blocks of trials. Stimuli – words or pictures – are presented one at a time on the computer screen for a brief period of time. In one condition respondents are asked to identify the stimuli that represent the target category (e.g., fruits) and those which express an evaluative attribute (e.g., good). The fruits and the positive words (e.g., miracle) are the targets (the signal). In the other condition targets are the fruits and negative words (e.g., cancer). Participants are instructed to press the space bar (*go*) as quickly as possible if a target stimulus appears on the screen, and not to press any key (*no go*) if a distracter stimulus (noise) appears. In the example, in the first block, distracter stimuli are bugs and negative words, in the second they are bugs and positive words. The two blocks allow us to measure the automatic attitude toward fruit.

“Trials where signal items are correctly responded to are named *hits*; those where the noise items are incorrectly categorized as signal are defined as *false alarms*. Trials where noise items are not responded to are scored as *correct rejections*; *misses* are the trials where signal items are not categorized” (Nosek & Banaji, 2001, p. 633). For each trial block,  $d'$  is obtained by subtracting the proportion of noise items to which participants did not respond correctly (false alarms) from the proportion of signal items to which participants responded correctly (hits); both are converted into  $z$ -scores. The higher  $d'$  is, the stronger the ability to discriminate the signal from the noise. The rationale underlying the use of  $d'$  is that participants should be more capable of discriminating signal from noise, when the two components of the signal (e.g., fruit and positive words) are positively associated, with respect to when they are not associated or are negatively associated (e.g., fruit and negative words). If a positive automatic attitude toward fruit is expected, the  $d'$  relative to the block, in which fruit and

positive words are the targets, should be higher than the  $d'$  relative to the block in which the targets are fruits and negative words. The reversed pattern should be found if a negative automatic attitude toward fruits is expected. To measure the automatic attitude toward the bugs the following two blocks are used: bugs + positive words; bugs + negative words. Commonly, for each block, critical trials are preceded by practice trials that allow the respondent to become acquainted with the task.

At the beginning of each block, target labels appeared and remained on the screen in the upper left and upper right quadrants to remind participants of the stimuli which had to be identified (e.g., fruits and positive words). For each critical stimulus, the response deadline is commonly 800 ms. However, Nosek and Banaji (2001; Study 1) demonstrated that adequate error rates are obtained employing deadlines ranging from 500 to 850 ms. A subsequent trial begins when participants hit the space bar or the response deadline is reached. After the disappearance of the stimulus and before the beginning of the next trial an interstimulus interval (ISI) is present. During the ISI, for trials where participants responded correctly, a green “O” appears after the stimulus; for trials where participants are incorrect a red “X” appears. Four practical blocks precede critical ones, so that respondents learn to discriminate between two target-objects (e.g., fruit vs. insects) and two evaluative attributes (e.g., positive vs. negative words). For these blocks, trials belonging to a category (e.g., fruits) are signal items, those belonging to the contrasting category are distracter items (e.g., bugs). In this case, a 1000 ms response deadline is used. In GNAT procedure, for each participant order of blocks and order of trials within each block is randomized (see Table 4).

Nosek and Banaji (2001) state that GNAT is able to detect implicit attitudes with flexibility with respect to the contextual background in which the target category is evaluated. To test this feature, authors performed three studies. In one study, automatic attitudes toward fruit and bugs were measured contrasting a generic context, rather than a single category. Thus, distracters were items not belonging to a same category (e.g., fruits or bugs), but were items taken from different categories (e.g., potato, flannel, gem, horse) and not systematically

balanced for valence. In a following study, automatic attitudes were measured contrasting a common superordinate context. So, when fruits were signals, distracters were other kinds of food (e.g., butter, beef). When bugs were signals, other kinds of animals (e.g., dog, eagle) were distracters.

Table 4. Schematic overview of Go/No-go Association Task (Nosek & Banaji, 2001)

<b>Block</b>	<b>Function</b>	<b>Signal categories</b>	<b>Distracter categories</b>
1	Practice	Fruits	Bugs
2	Practice	Bugs	Fruits
3	Practice	Positive words	Negative words
4	Practice	Negative words	Positive words
5a	Practice	Fruits + Positive words	Bugs + Negative words
5b	Test	Fruits + Positive words	Bugs + Negative words
6a	Practice	Fruits + Negative words	Bugs + Positive words
6b	Test	Fruits + Negative words	Bugs + Positive words
7a	Practice	Bugs + Positive words	Fruits + Negative words
7b	Test	Bugs + Positive words	Fruits + Negative words
8a	Practice	Bugs + Negative words	Fruits + Positive words
8b	Test	Bugs + Negative words	Fruits + Positive words

In the last study the contrast category was absent (attribute-only context). So, for instance, when fruits and positive words were the signal, distracter stimuli were only negative words. This latter study is particularly important, since for the first time an automatic attitude was measured without any type of contextual category of comparison.

Results showed that GNAT measure was effective even when the context background was manipulated. Namely, in all three studies fruits were evaluated positively and bugs were evaluated negatively. However, sizes of these effects varied depending on the context. Namely, the strongest effects were found using a single-category context; effects slightly smaller were found using a superordinate context; the smallest effects were revealed with attribute-only context.

In the same line of research, Nosek and Banaji (2001) demonstrated properties of GNAT in an intergroup context. In particular, they studied implicit

attitudes toward white and black people. Black and white faces were selected as category-target stimuli; stimuli concerning evaluative attributes were positive and negative words. Results showed that among white people, ingroup and outgroup elicited two opposite implicit evaluations. Namely, ingroup was evaluated in a positive way, outgroup in a negative way. Thus, implicit ingroup bias toward black people depends both on a favorable attitude toward ingroup and a negative attitude toward outgroup.

Thus, evidence showed GNAT represents a good development of IAT. Although GNAT was recently introduced, it has already been employed in different domains. For instance, it was used to study attitudes toward genetically modified foods (Spence & Townsend, 2006), or toward phobic stimuli (e.g., Teachman, 2007). Nevertheless, in intergroup relations field, papers that report use of the GNAT are relatively few (see, e.g., Blair, Ma, & Lenton, 2001). Interestingly, Montaruli, Andrighetto and Capozza (2008) investigated, for the first time, implicit preferences toward acculturation strategies (see e.g., Berry, 1997), using attribute-only GNAT.

Finally, as described in Chapter 1, in studying implicit humanness perception, GNAT has been extensively applied by Loughnan and Haslam (2007; see also O'Connor et al., 2007) and by Capozza, Andrighetto, and Falvo (2006).

## Chapter 4

### **Ingroup status and perceptions of humanity: five experimental studies**

#### **4.1 Introduction**

Across four studies, we explored the moderating effects of ingroup status on implicit attributions of humanity.

Within the infrahumanization model, Leyens and colleagues showed that the tendency to infrahumanize others is not moderated by ingroup status (see Chapter 1, paragraph 1.2.7). Indeed, several studies (see Table 5) demonstrated that also groups having lesser power or socioeconomic status attribute secondary emotions to a greater extent to ingroup than outgroup. This tendency was found using both explicit and implicit techniques (see, e.g., Paladino et al., 2002).

Table 5. Studies showing infrahumanization both in high and low status groups.

<b>Study</b>	<b>Lower status group</b>	<b>Higher status group</b>
Leyens et al., (2001, Study 1 and 2)	Inhabitants of the Canary islands	Inhabitants of the mainland Spanish
Paladino et al., (2002, Study 4)	Walloons	Flemish
Cortes et al. (2005, Study 3)	Walloons	Flemish
Paladino et al. (2004, Study 2)	Italians	
Delgado et al. (2006)	British	

However, Leyens himself claims that “these findings do not mean that group status has no role at all in infrahumanization” (Leyens et al., 2007, p. 152). Results of their studies might be explained by the particular trait of humanity

chosen; indeed, secondary emotions were selected because of their independence from structural dimensions of society. Uniquely human emotions are an attribute that does not contribute to hierarchically structuring a society. Thus, people tend to attribute more secondary emotions to ingroup; in the infrahumanization perspective, all motivational processes linked with enhancement of ingroup condition within society are excluded. Coherently with this assumption, different studies (see e.g., Miroslawaska & Kofta, 2004/2005; Leyens et al., 2001; Paladino et al., 2002; see also Demoulin, Rodriguez et al., 2004) have shown that infrahumanization and ingroup bias are two not related processes.

Actually, already in some of Leyens and colleagues' papers (Leyens et al., 2001; Leyens et al., 2003) it was hypothesized that high status groups might infrahumanize others on the basis of other uniquely human features, such as intelligence or talent. Low status groups, instead, could infrahumanize others only through secondary emotions. However, these assumptions were only suggested and studies testing them have not been published.

Thus, it appears necessary to explore more systematically the role of status on the perceptions of humanity, considering other uniquely human features linked with ingroup status, such as intelligence, talent, ambition, volition (Haslam et al., 2005; see Leyens et al., 2003). In this case, status might moderate intergroup perceptions of humanity. Indeed, motivational processes leading to justifying and maintaining the existing social system (Jost, et al., 2004; see also Chapter 2, paragraph 2.2) might prevail on the motivation of defending ingroup humanity. Thus, subordinate or lower status groups, at least implicitly, could not assign a privileged human status to ingroup, associating some uniquely human features in equal measure to outgroup and ingroup or, even, more to outgroup.

These assumptions may be tested using the global concept of humanity, rather than a specific human feature. Our prediction is that the whole concept of humanity, for lower status groups, should be associated in equal measure to ingroup and outgroup or, even, more to outgroup. Members of lower status groups may, in fact, assign more to outgroup than ingroup attributes that activate the concept of humanity (for the automatic association between secondary emotions and humanity, see Demoulin, Leyens, et al., 2004; Vaes, Paladino, &

Leyens, 2006). In the same vein, in higher status groups, the concept of humanity should be associated more with ingroup than outgroup, since their members may assign more uniquely human features to ingroup, or may assign these features to a greater extent to ingroup than outgroup.

We decided to consider the global concept of humanity for two reasons. First of all, the consequences for members of lower status groups could be extremely negative if implicit preferences worked hand in hand with implicit attributions of humanity. Secondly, studies on intergroup perceptions of humanity that analyze the general concept of humanity are few (Boccatto et al., 2008; Viki et al., 2006; see Chapter 1, paragraph 1.3.1), and do not examine the moderating role of status. As regards the global concept of animality, Goff, et al. (2008; see Chapter 1, paragraph 1.3.3) considered the ape image. Goff and colleagues found that, in the U.S. society, Blacks are implicitly associated with apes more than with other animals. However, these findings do not concern the intergroup attributions of humanity, but the implicit representation of a dehumanizing historical stereotype (“the Negro-ape metaphor”).

In studying humanness perceptions, it is convenient to use nonconscious, implicit measures. These measures, as explained in Chapter 3, obviate concerns about strategic impression management (see Greenwald & Banaji, 1995); in addition, they may reveal representations which are not available to conscious introspection, corresponding to unwanted views (e.g., the Negro-ape metaphor) or to unfavorable evaluations of oneself and the ingroup. Actually, also the technique most commonly used by infrahumanization theorists (e.g., Leyens et al., 2001) is indirect: when choosing the typical traits of ingroup and outgroup, participants are not aware of ascribing them uniquely (secondary emotions) or non-uniquely (primary emotions) human attributes.

## **4.2 Overview of the Studies**

To test our hypotheses, concerning the effects of status on the attributions of humanity, we performed five studies. In Study 1, the relationship between Northern and Southern Italians was considered; only Southern participants were examined (the group with lower socioeconomic status). On the basis of

infrahumanization results (see, Cortes et al., 2005; Leyens et al., 2001; Paladino et al., 2002), it could be predicted that Southerners associate humanity more with ingroup than outgroup. The alternative hypothesis was that, when the general concept of humanity is used, the lower status group does not differentiate between ingroup and outgroup or, even, assigns a privileged human status to outgroup. In Study 2, humanity representations were measured for both groups. The hypothesis was that Northerners (the higher status group) would associate humanity more with ingroup than outgroup.

In Study 3, we chose the Italians/Americans relationship (participants were Italian). In this study, status was manipulated: in the higher status condition, attributes of Italian superiority were made accessible (e.g., creativity in arts and letters); in the lower status condition, instead, attributes of American superiority were made accessible (e.g., creativity in technology). In Study 4, we manipulated the status of minimal groups: overestimators (ingroup) and underestimators (outgroup). In the higher status condition, overestimators were described as performing upper-level jobs at a higher rate compared to underestimators; in the lower status condition, they were described as performing these jobs at a lower rate. Both in Study 3 and Study 4, perceptions of lesser humanity of outgroup should only be found in the condition of higher status of ingroup. Finally, in Study 5 we verified whether results obtained in previous studies were replicated using different stimuli representing dimensions of humanity and animality.

In all studies, as an implicit technique the Go/No-go Association Task (GNAT; Nosek & Banaji, 2001; see Chapter 3) was used. In our GNAT design, the two target categories are ingroup and outgroup, the two attributes are humanity and animality. The strength of the association between a target category and a target attribute (e.g., ingroup and humanity) is assessed by the degree to which items belonging to the category or attribute can be discriminated from distracter items (e.g., items representing the outgroup or animality). Four blocks of trials are usually used, in our studies (see Table 6): ingroup + humanity; outgroup + humanity; ingroup + animality; outgroup + animality. The first block – ingroup + humanity – requires the simultaneous identification of



items representing the two concepts: participants have to press the space bar for these items and not to press any key for items representing the contrast concepts (outgroup and animality). The second block requires the simultaneous identification of items expressing outgroup or humanity.

Table 6. Structure of “humanity” Go/No-go Association Task. Critical blocks

BLOCK A	<b>Target stimuli (signals)</b>	ingroup names + human category
	<b>Distracters stimuli (noise)</b>	outgroup names + animal category
BLOCK B	<b>Target stimuli (signals)</b>	ingroup names + animal category
	<b>Distracters stimuli (noise)</b>	outgroup names + human category
BLOCK C	<b>Target stimuli (signals)</b>	outgroup names + human category
	<b>Distracters stimuli (noise)</b>	ingroup names + animal category
BLOCK D	<b>Target stimuli (signals)</b>	outgroup names + animal category
	<b>Distracters stimuli (noise)</b>	ingroup names + human category

The extent to which humanity is more associated with ingroup than outgroup ought to be evidenced by the relative ease in discriminating humanity when paired with ingroup than with outgroup. Namely, accuracy in discriminating targets from distracters should be higher for the humanity/ingroup than humanity/outgroup pairing. The difference in accuracy may be taken as a measure of evaluation of ingroup as more human than outgroup. The comparison between the outgroup + humanity and outgroup + animality blocks may evidence dehumanization effects: the lower status outgroup may, in fact, be denied many human attributes and, therefore, it may be associated more with animality than humanity.

We used the GNAT, instead of IAT, although the psychometric attributes of IAT are better known (see Lane et al., 2007), since, to test our hypotheses, we needed to compare ingroup humanity with outgroup humanity; the comparison outgroup humanity with outgroup animality, moreover, could allow us to discover dehumanization effects: the strength of these separate associations can not be detected with the IAT. In research concerning perceptions of humanity,

the GNAT has been extensively applied by Loughnan and Haslam (2007; O'Connor et al., 2007; see Chapter 1, paragraph 1.4) and by Capozza et al. (2006).

### **4.3 Northern and Southern Italians**

In the first two studies we considered the relationship between the inhabitants of South and North Italy.

North and South of Italy have been exposed to different historical influences. Spanish had the major impact in the South, since it ruled for over three centuries. Instead, House of Savoy (North-West) and Austrians (North-East) ruled, respectively, North-West and North-East of Italy during XIX century.

Furthermore, a socio-economic disparity between Southern regions and the rest of Italy has always existed. Already before unification of the Italian peninsula, South of Italy appeared as an underdeveloped area: its economy was solely agricultural, its society was semi-feudal, anchored to tribal-like family interests (Banfield, 1970). In contrast, North of Italy was affirming as a modern society, becoming more and more industrialized. This difference became a problem after the unification, raising a long-standing political issue known as the “Southern question.” After the Second World War, institutions began looking at the “Southern question” in a more systematic way. The most important effort to promote economic development of Southern Italy was the *Cassa del Mezzogiorno*. Through this measure, the Italian government allocated some funds aimed at an improvement of Southern public infrastructures, such as roads or water works. Moreover, the government attempted to stimulate Southern economy through credit subsidies and tax advantages, that should have attracted new capital and provide employment. Results of this *Cassa* were diverse. On the one hand, some Southern rural areas were brought into the modern world for the first time. On the other hand, most of the investments were allocated for doubtful political reasons or for construction of useless infrastructures. Moreover, the renewal of the funds for the *Cassa del Mezzogiorno* provoked one of the first open conflicts between Northerners and Southerners. Indeed, the Northern ruling

class opposed the renewal of the funds because it considered that they should be used for the development of depressed areas of the North.

During 1950s and 1960s all Italy had an economic growth, and the economic gap between South and Centre-North of Italy narrowed. During 1970s and 1980s the situation became worse for Southerners: corruption, clientelism, and organized crime increased, government investments were allocated for administrative or political reasons rather than economic development. During the last decades of the past century, in the North of Italy resentment toward Southerners increased; indeed, they were perceived as unable to manage government funds, and thus an obstacle to Italian economic development. In 1991, a political party was founded – Lega Nord (Northern League) – which endorsed movements of protest held by North population and advocated for a greater economic regional autonomy, especially for North Italy.

Nowadays, even if Southern social and economic conditions have much improved, disparities between North and South Italy continue to persist. The South is the least prosperous area of Italy. The income of Southern families continues to be significantly inferior with respect to Northern families. Also the unemployment rate is different: while, in the North, it is around 4% in the South it is around 11%.

Social psychology began to investigate the relationship between Northerners and Southerners in the last years of 1950s (Battacchi, 1972). According to Capozza (Capozza et al., 1982), first studies showed that Southerners seem to accept their inferiority: they perceive themselves at an inferior level compared with Northerners, both in socio-economic dimensions, such as income or production, and in some psychological dimensions, such as laboriousness and self-control. Moreover, Southerners do not see the Northerners as the cause of their underdevelopment (Capozza et al., 1982). Interestingly, from these first works it emerged that Southerners try to assimilate some positive traits of Northern identity. For instance, it was found that Southern immigrants acquired in a brief time the linguistic standard of their adopted country. When it is not possible to assimilate traits of dominant groups, Southerners seem to adopt a social creativity strategy (see e.g., Giles, Taylor, & Bourhis, 1977; Lemaine,

Kastersztein, & Personnaz, 1978): they make comparisons with high status group on new dimensions, never before used, that yield to more favorable outcomes for ingroup and enhance group identity. On the other hand, Northerners have always perceived themselves superior, both economically and socially. However, they have always defended their position and their identity, perceiving the Southern immigration as a threat.

Capozza et al. (1982) explored the strategies used by Southerners and Northerners when they are compared with the outgroup in two distinct periods: at the beginning of 1960s and at the end of 1970s. The first period was a moment of great social and economic expansion for all Italy. At the time, authors found that Southerners tended to combine social creativity strategy with mechanisms linked with assimilation. Indeed, the low status group assigned to ingroup a positive distinctiveness to unusual dimensions, such as strength or courage. At the same time, Southerners recognized as ideal attributes typical traits of Northerners, such as laboriousness and self-control; moreover, they did not consider highly desirable the typical traits of their own group, such as impulsiveness. In contrast, Northerners considered traits typical of their own group (laboriousness, tenacity) coinciding with ideal and placed ingroup superior to outgroup on every dimension of comparison.

Findings were different at the end of 1970s, a period of social and economic crisis for Italy, in which the industrial world and its values were declining. Northerners' self-image diminished: they no longer considered as ideal the traits typical of ingroup. Southerners, instead, tended to deny Northerners any positive qualities and attributed only to ingroup the traits that were at the basis of previous outgroup superiority. These last results showed that, in fact, Southerners have not always accepted their inferiority, and, within particular periods of Italian history, Northerners' superiority has been called into question.

Nevertheless, after 1970s and 1980s, the shared nature of this status difference reemerged. Jost et al. (2000; see Chapter 2, paragraph 2.2) showed that Northerners exhibited ingroup favoritism, perceiving ingroup more defined by positive stereotypes (e.g., honest) and outgroup by negative stereotypes (e.g., lazy). Instead, Southerners tended to favor outgroup, perceiving ingroup more

characterized by negative stereotypes and outgroup by positive stereotypes. Recently, Durante (2008), on the basis of the Stereotype Content Model (Fiske et al., 2002), has demonstrated that, consensually, the cultural stereotype of Southerners is defined in terms of more warmth than competence. Finally, if the evaluative dimension of semantic differential is used, which is not linked to status, it is found that Southerners declare their superiority, while Northerners do not differentiate between the two groups (see, e.g., Trifiletti, 2008).

## 4.4 Study 1

### 4.4.1 Method

*4.4.1.1 Participants.* Participants were 19 Southern undergraduate students (all female), enrolled in psychology courses at the University of Catania (Sicily).<sup>1</sup> Mean age was 24.16 ( $SD = 2.17$ ).

*4.4.1.2 Materials.* In the application of GNAT, we used 52 stimulus words: 14 were typical names of Southerners (7 male and 7 female); 14 were typical names of Northerners (7 male and 7 female); 14 were human and 14 were animal categories (see Table 7). Northern and Southern Italian names are easily distinguishable and, on the basis of a pilot-study, we used names which were matched for typicality and length.

With a second pilot-study the human and animal categories were chosen. Fifteen participants rated 40 human and 15 rated 40 animal categories on a 9-step bipolar scale: 1 = *extremely positive*, 9 = *extremely negative*, 5 = *neither positive nor negative*. The selected categories had either positive or neutral valence (see Table 8); the mean for human categories was  $M = 3.52$  ( $SD = 0.79$ ), that for animal categories was  $M = 3.43$  ( $SD = 0.83$ ),  $t < 1$ . The two sets of stimuli were matched for word length.

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1. We thank Assistant Professor Zira Hichy and Professor Orazio Licciardello for their assistance with data collection.

Table 7. Stimulus words used in GNAT. Study 1

<b>Critical stimuli</b>			
<u>Southern names</u>	<u>Northern names</u>	<u>Human categories</u>	<u>Animal categories</u>
Assunta	Carlotta	Bianchi (Whites)	Airone (Heron)
Carmela	Eliana	Democratici (Democrats)	Cammello (Camel)
Carmine	Elio	Giovani (Young people)	Cocodrillo (Crocodile)
Ciro	Ennio	Infermieri (Nurses)	Elefante (Elephant)
Concetta	Flavio	Insegnanti (Teachers)	Gazzella (Gazelle)
Filomena	Luciana	Medici (Doctors)	Leopardo (Leopard)
Gennaro	Piero	Operai (Workers)	Scimmia (Monkey)
Pasquale	Vanda	Studenti (Students)	Scimpanzè (Chimpanzee)
Rocco	Vilma	Svedesi (Swedes)	Tigre (Tiger)
Rosalia	Walter	Volontari (Volunteers)	Zebra (Zebra)
<b>Practice stimuli</b>			
<u>Southern names</u>	<u>Northern names</u>	<u>Human categories</u>	<u>Animal categories</u>
Alfio	Eugenia	Attori (Actors)	Corvo (Raven)
Agata	Gino	Europei (Europeans)	Leone (Lion)
Annunziata	Ludovica	Italiani (Italians)	Gabbiano (Seagull)
Calogero	Oscar	Polacchi (Poles)	Pecora (Sheep)

*4.4.1.3 Procedure.* Participants were examined individually. GNAT was run using the Inquisit software (Version 2.00) on Pentium (R) 4 computer (CPU 3.00 GHz 2.99GHz, 496 MB of RAM). Four blocks of trials were used, each block consisting of 40 trials; stimuli – showed one at a time in a randomized order – were 10 Southern names, 10 Northern names, 10 human categories, and 10 animal categories. At the beginning of each block, target labels appeared and remained on the screen in the upper left and upper right quadrants to remind stimuli which had to be identified (e.g., Southern names and human categories). Participants were required to press the space bar (go) for items belonging to either of the labeled targets, and do nothing (no go) for items which did not belong. The targets (the signal) in the four blocks were: Southern names + human categories; Southern names + animal categories; Northern names + human categories; Northern names + animal categories. Distracter trials (the noise) were terms from the contrasting group and category. The first 16 trials in each block were practice trials. They were followed by a reminder screen, before the beginning of the 40 critical trials (Nosek & Banaji, 2001). The 16 stimuli (four for each of the two groups and the two types of categories) were different from the ones used in the critical trials. Responses to the practice trials were dropped from analyses. The response deadline was 800 ms for each stimulus. A

subsequent trial began when participants hit the space bar or the response deadline was reached. A 400 ms interstimulus interval (ISI) was used (see Blair, Ma, & Lenton, 2001).

Table 8. Means of the scores of positivity versus negativity for the human and animal categories

<b>Human categories</b>	<b><i>M</i></b>	<b><i>SD</i></b>
Volunteers	1.93***	1.34
Doctors	2.60***	1.76
Students	3.00***	1.41
Democrats	3.07***	1.75
Young people	3.07***	1.49
Nurses	3.47**	1.85
Workers	3.60***	1.18
Swedes	3.73**	1.49
Italiano	3.80**	1.37
Teachers	3.87**	1.36
Europeans	4.00**	1.07
Actors	4.13*	1.46
Poles	4.13*	1.19
Whites	4.80	0.68
<b>Animal categories</b>	<b><i>M</i></b>	<b><i>SD</i></b>
Elephant	2.93***	1.49
Heron	3.00***	1.46
Seagull	3.00***	1.73
Monkey	3.00***	1.25
Camel	3.07***	1.79
Sheep	3.07***	1.44
Leopard	3.13***	1.55
Zebra	3.13***	1.41
Lion	3.20**	2.21
Tiger	3.20***	1.70
Gazelle	3.40***	1.30
Chimpanzee	3.40***	1.24
Raven	4.93	1.16
Crocodile	5.67	1.45

*Note.* On the 9-step scale, 1 indicates *extremely positive*, 9 *extremely negative*, 5 *neither positive nor negative*. Asterisks indicate that the mean is different from the neutral point of the scale.

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

During the ISI, for trials where participants responded correctly, a green “O” appeared after the stimulus; for trials where participants were incorrect a red “X” appeared. The two letters lasted 200 ms. Before the experimental blocks, four practice blocks were presented, each consisting of 20 trials. For these blocks, targets were: 10 Southern names; 10 Northern names; 10 human categories; 10 animal categories. Distracter stimuli were items from the contrasting category. For each participant, order of blocks and trials in each block was randomized. On completion of the experiment, participants were debriefed and thanked for their involvement.

*4.4.1.4 Sensitivity measure.* For each block, sensitivity in discriminating targets from distracters was measured using the sensitivity index ( $d'$ ), based on Signal Detection Theory (Green & Swets, 1966; see also Chapter 3, paragraph 3.2).  $D$ -prime is obtained by subtracting the proportion of noise items to which the participant did not respond correctly from the proportion of signal items to which he/she responded correctly. Both proportions are converted in z-scores. Higher values indicate a better discrimination between targets and distracters and, therefore, a stronger association between the target categories.

#### *4.4.2 Results*

Data relative to one participant were removed for excessive errors on one of the four blocks ( $d' < 0$ ).<sup>2</sup> Sensitivity measures were submitted to a 2 (target group: ingroup vs. outgroup names)  $\times$  2 (target categories: human vs. animal) ANOVA with the two variables serving as within-participant variables. Neither the main effect of target group,  $F < 1$ , nor that of target categories,  $F(1,17) = 3.30$ ,  $p < .09$ , was significant. The analysis revealed instead an interaction between the two factors,  $F(1,17) = 13.50$ ,  $p < .003$ ,  $\eta_p^2 = .44$  (see Figure 12).

We, therefore, compared the means for the two pairings: ingroup names + human categories and outgroup names + human categories. The difference was significant,  $t(17) = 3.70$ ,  $p < .003$ ,  $d = 0.90$ , indicating that ingroup was perceived as less human than outgroup (Table 9). Ingroup was even dehumanized, namely more likened to animality than humanity,  $t(17) = 3.78$ ,  $p < .003$ ,  $d = 0.92$ . Outgroup was, instead, evaluated as more human than animal,  $t(17) = 2.02$ ,  $p < .06$ ,  $d = 0.49$ .

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2. Nosek and Banaji (2001) suggest that  $d'$  values of 0 or below indicate that participants did not perform correctly the task or, alternatively, that they were unable to discriminate signal from noise and, thus, they should be removed from the analyses.



Figure 12. The interaction Target Group × Target Categories. Study 1. Southern Participants.

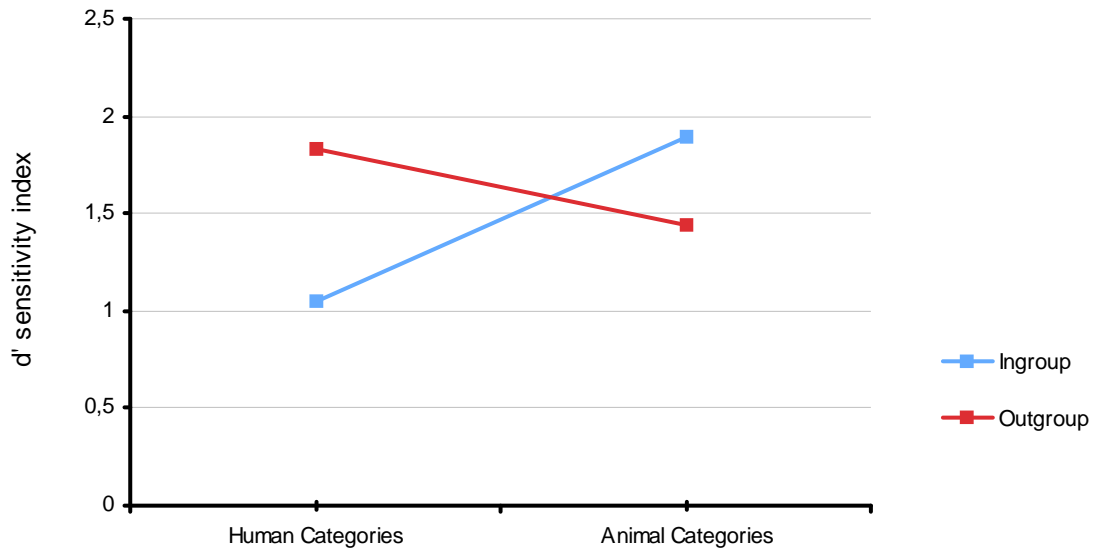


Table 9. Means and Standard Deviations of Sensitivity Measures ( $d'$ ) for Each of the Four Blocks in Study 1. Southern Italian Participants

Target categories	Target group	
	Ingroup (Southern names)	Outgroup (Northern names)
Human	1.05 (0.74) a	1.83 (0.75) c
	$d = 0.92$	$d = 0.49$
Animal	1.89 (0.71) b	1.44 (0.83) b

*Note.* Larger  $d'$  values indicate greater sensitivity to the target pairing. The different letter, in the same row or column, indicates that the two means are significantly different,  $p < .003$ . The difference between b and c in the “outgroup” column is marginally significant,  $p < .06$ . Standard deviations in parentheses;  $d$  = Cohen’s  $d$ .

#### 4.4.3 Discussion

Differently from what found by Leyens and colleagues (e.g., Cortes et al., 2005; Leyens et al., 2001; Paladino et al., 2002), in this study the lower status ingroup is evaluated – implicitly – less human than outgroup and, even, closer to animality than humanity. This result is impressive. The animality to which participants assimilate the ingroup exemplars is, in fact, positive, but it is animality all the same, namely, instinct and irrationality.

The dehumanization of ingroup revealed in this study could uniquely

depend on the matching between the cultural stereotype of Southerners (Durante, 2008), defined in terms of greater warmth than competence, and the stereotype of the animal categories used as stimuli (see the stereotype content model; Fiske et al., 2002). To test this possibility, we performed a study where 78 participants (40 Northern, 38 Southern psychology students) rated the human or animal categories on items of warmth and competence (1 = *not at all*, 7 = *extremely*). Forty participants rated the 14 human categories and 38 the 14 animal categories. For the human categories, means were:  $M = 4.64$  ( $SD = 0.53$ ) for competence, and  $M = 4.47$  ( $SD = 0.65$ ) for warmth,  $t(39) = 2.28$ ,  $p < .03$ . For the animal categories, means were:  $M = 4.51$  ( $SD = 0.80$ ) for competence, and  $M = 3.10$  ( $SD = 0.83$ ) for warmth,  $t(37) = 12.20$ ,  $p < .001$  (see Table 10). The animal categories, like the human ones, were, therefore, rated as more competent than warm; this finding allows us to reject the interpretation of ingroup dehumanization as stemming from the correspondence between the ingroup stereotype and the stereotype of animal categories.

A possible explanation regarding the perception of ingroup as less human than outgroup could depend on the human categories used. Namely, these categories could be globally perceived more representatives of Northerners than Southerners. However, in pre-tests we found Southern and Northern students did not evaluate the human categories used as differently typical of North and South (e.g., workers), or differently similar to Northerners and Southerners (e.g., Poles).

Finally, another explanation of ingroup dehumanization was that Southern names used, although perceived as typical, evoked a South of the past, particularly devalued. In Study 2, person names were, therefore, replaced by names of cities and regions in the North and South of Italy.

Table 10. Means of the scores of competence and warmth for human and animal categories.

<b>Human categories</b>	<b>Competence</b>	<b>Warmth</b>
Volunteers	4.59***	5.65***
Doctors	5.24***	4.30
Studente	4.40**	4.77***
Democrats	4.34**	4.39**
Young people	4.26	4.72***
Nurses	4.88***	4.58**
Workers	5.05***	4.10
Swedes	4.82***	4.07
Italiano	4.54**	5.02***
Teachers	4.51**	3.78
Europeans	5.01***	4.86***
Actors	4.34	3.72
Poles	4.30	4.21
Whites	4.59***	4.42**
<b>Animal categories</b>	<b>Competence</b>	<b>Warmth</b>
Elephant	3.91	4.22
Heron	4.35***	2.85***
Seagull	4.72***	3.01***
Monkey	4.76***	4.44*
Camel	3.74	3.28***
Sheep	2.78***	3.59
Leopard	5.49***	2.31***
Zebra	4.11	3.26**
Lion	5.47***	2.63***
Tiger	5.51***	2.59***
Gazelle	4.60**	3.15***
Chimpanzee	4.99***	3.26**
Raven	4.22	1.85***
Crocodile	4.50	1.51***

*Note.* On the 7-step scale, 1 indicates *not at all*, 7 *extremely*. Asterisks indicate that the mean is different from the neutral point of the scale.  
 \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p \leq .001$ .

## 4.5 Study 2

The aims of Study 2 were (a) to replicate the ingroup dehumanization effect changing stimuli representing Northerners and Southerners; (b) to test our predictions relative to the Northerners, the higher status group; we hypothesized that Northerners would reserve a privileged human status to ingroup than outgroup;(c) to evaluate the relation between the humanity bias and evaluative automatic bias. In fact, some proofs of the independence between the two biases have been supplied by researchers who used the paradigm of primary/secondary emotions (e.g., Miroslawska & Kofta 2004/2005; Leyens et al., 2001; Paladino et al., 2002; see also Demoulin, Rodriguez et al., 2004). Thus, according to infrahumanization model, we should expect that tendency to consider ingroup more human than outgroup should not be correlated with an implicit ingroup

bias. Nevertheless, in our paradigm, a global concept of humanity is considered; consequently, underlying processes leading to evaluate positively ingroup and to consider more human one's own group might be correlated.

#### 4.5.1 Method

**4.5.1.1 Participants.** In Study 2, participants were 20 Northern and 19 Southern students. They were enrolled in psychology courses: the first at the University of Padova, the latter at the University of Catania. Participants were all female. Mean age was 22.11 ( $SD = 2.28$ ) for Northern participants, and 26.24 ( $SD = 2.59$ ) for Southern participants.

**4.5.1.2 Materials.** For the humanity Go/No-go, the same human and animal categories, as in Study 1, were used. Person names were instead replaced by geographic references: general concepts expressing the two groups (e.g., North vs. South); Northern and Southern towns; Northern and Southern regions; mountains for the North (Alps, Dolomites), and a sea (Ionian sea) and volcano (Etna) for the South (see Table 11). The two sets of stimuli were matched for word length.

Table 11. Stimulus words used in humanity GNAT. Study 2

<b>Critical stimuli</b>			
<b>Southern concepts</b>	<b>Northern concepts</b>	<b>Human categories</b>	<b>Animal categories</b>
Agrigento	Alpi (Alps)	Bianchi (Whites)	Airone (Heron)
Campania	Nord (North)	Democratic (Democrats)	Cammello (Camel)
Catania	Padova	Giovani (Young people)	Cocodrillo (Crocodile)
Enna	Piemonte	Infermieri (Nurses)	Elefante (Elephant)
Etna	Settentrionali (Northerners)	Insegnanti (Teachers)	Gazzella (Gazelle)
Meridione (South of Italy)	Settentrione (North of Italy)	Medici (Doctors)	Leopardo (Leopard)
Meridionali (Southerners)	Trento	Operai (Workers)	Scimmia (Monkey)
Sud (South)	Torino	Studenti (Studente)	Scimpanzè (Chimpanzee)
Sicilia (Sicily)	Veneto	Svedesi (Swedes)	Tigre (Tiger)
Taormina	Venezia	Volontari (Volunteers)	Zebra (Zebra)
<b>Practice stimuli</b>			
<b>Southern concepts</b>	<b>Northern concepts</b>	<b>Human categories</b>	<b>Animal categories</b>
Ionio (Sea Ionian)	Cortina	Attori (Actors)	Corvo (Raven)
Lecce	Dolomiti (Dolomites)	Europei (Europeans)	Leone (Lion)
Puglia (Apulia)	Lombardia (Lombardy)	Italiani (Italians)	Gabbiano (Seagull)
Salerno	Trieste	Polacchi (Poles)	Pecora (Sheep)

For the evaluative Go/No-go, the same Northern and Southern concepts were used, while human and animal categories were replaced by positive and

negative words, mostly taken from Greenwald et al. (1998). In a pilot-study, participants (40 psychology students) rated the 14 positive and 14 negative words on a 9-step scale (1 = *extremely positive*, 9 = *extremely negative*, 5 = *neither positive nor negative*). The mean for positive words was  $M = 2.28$  ( $SD = 0.74$ ), that for negative words was  $M = 8.05$  ( $SD = 0.47$ ),  $t(39) = 36.29$ ,  $p < .001$ . The two means were different from the neutral point of the scale,  $t_s(39) \geq 23.25$ ,  $ps < .001$ . We matched the two sets of stimuli for word length (see Table 12).

Table 12. Stimulus words used in evaluative GNAT. Study 2

<b>Critical stimuli</b>			
Southern concepts	Northern concepts	Human categories	Animal categories
Agrigento	Alpi (Alps)	Arte (Art)	Angoscia (Grief)
Campania	Nord (North)	Divertimento (Amusement)	Calamità (Disaster)
Catania	Padova	Felicità (Happiness)	Cancro (Cancer)
Enna	Piemonte	Fortuna (Luck)	Incidente (Accident)
Etna	Settentrionali (Northerners)	Genialità (Brilliance)	Malattia (Sickness)
Meridione (South of Italy)	Settentrione (North of Italy)	Gioia (Joy)	Morte (Death)
Meridionali (Southerners)	Trento	Pace (Peace)	Noia (Boredom)
Sud (South)	Torino	Piacere (Pleasure)	Omicidio (Homicide)
Sicilia (Sicily)	Veneto	Salute (Health)	Prigione (Prison)
Taormina	Venezia	Vita (Life)	Violenza (Violence)
<b>Practice stimuli</b>			
Southern concepts	Northern concepts	Human categories	Animal categories
Ionio (Sea Ionian)	Cortina	Attori (Actors)	Corvo (Raven)
Lecce	Dolomiti (Dolomites)	Europei (Europeans)	Leone (Lion)
Puglia (Apulia)	Lombardia (Lombardy)	Italiani (Italians)	Gabbiano (Seagull)
Salerno	Trieste	Polacchi (Poles)	Pecora (Sheep)

**4.5.1.3 Procedure.** The humanity GNAT was administered before the evaluative GNAT. For the humanity GNAT, the same procedure as in Study 1 was applied. For the evaluative GNAT, in the experimental blocks, target pairings were: Northern concepts + positive words; Northern concepts + negative words; Southern concepts + positive words; Southern concepts + negative words. The experimental blocks were preceded by the practice blocks.

#### 4.5.2 Results

**4.5.2.1 Attributions of humanity.** Data relative to one participant for the Northern and two participants for the Southern group were removed for excessive errors on one of the four blocks ( $d's \leq 0$ ). Sensitivity measures were submitted to a 2 (group belonging: North vs. South)  $\times$  2 (target group: ingroup

vs. outgroup)  $\times$  2 (target categories: human vs. animal) ANOVA with the last two variables serving as within-participant variables. ANOVA revealed a significant main effect of target categories,  $F(1,34) = 18.85, p < .001, \eta_p^2 = .34$ : participants were more sensitive in discriminating signal from noise, when animal rather than human categories were the target. ANOVA also revealed two two-way interactions: Group Belonging  $\times$  Target Categories,  $F(1,34) = 8.10, p = .008, \eta_p^2 = .19$ ; Target Group  $\times$  Target Categories,  $F(1,34) = 5.50, p < .03, \eta_p^2 = .14$ . Both were qualified by the Group Belonging  $\times$  Target Group  $\times$  Target Categories interaction,  $F(1,34) = 35.85, p < .001, \eta_p^2 = .51$  (the largest size effect). All other effects were nonsignificant,  $F_s(1,34) \leq 2.85, p_s > .10$ .

To test our hypotheses, we analyzed the sensitivity scores for the two groups separately. For Southerners, ANOVA revealed a significant main effect of target categories,  $F(1,16) = 26.26, p < .001, \eta_p^2 = .62$ . and the interaction Target Group  $\times$  Target Categories,  $F(1,16) = 6.96, p < .02, \eta_p^2 = .30$  (Figure 13). The main effect of target group was nonsignificant,  $F(1,16) = 2.69, p < .13$ . To explain the interaction, we compared the means for target pairings (Table 13). The difference between the ingroup + human and outgroup + human pairings was significant,  $t(16) = 2.49, p < .03, d = 0.62$ , as was the difference between the ingroup + human and ingroup + animal pairings,  $t(16) = 6.92, d = 1.73$ . The other comparisons – outgroup humanity versus outgroup animality, and ingroup animality versus outgroup animality – were nonsignificant,  $t_s(16) \leq 1.11, p_s > .28$ . As in Study 1, therefore, participants associated more outgroup than ingroup with humanity, and dehumanized the ingroup.

For Northern participants, ANOVA revealed the interaction Target Group  $\times$  Target Categories,  $F(1,18) = 33.84, p < .001, \eta_p^2 = .65$  (Figure 14). Main effects were instead nonsignificant,  $F_s < 1$ . Concerning comparisons (Table 14), ingroup was associated with humanity more than outgroup,  $t(18) = 4.26, p < .001, d = 1.00$ , and it was more associated with humanity than animality,  $t(18) = 4.10, p = .001, d = 0.97$ . Outgroup was more likened than ingroup to animality,  $t(18) = 5.51, p < .001, d = 1.30$ , and it was more associated with animality than humanity,  $t(18) = 4.72, p < .001, d = 1.11$ .

Figure 13. The interaction Target Group  $\times$  Target Categories. Study 2. Humanity Go/No-go. Southern Participants.

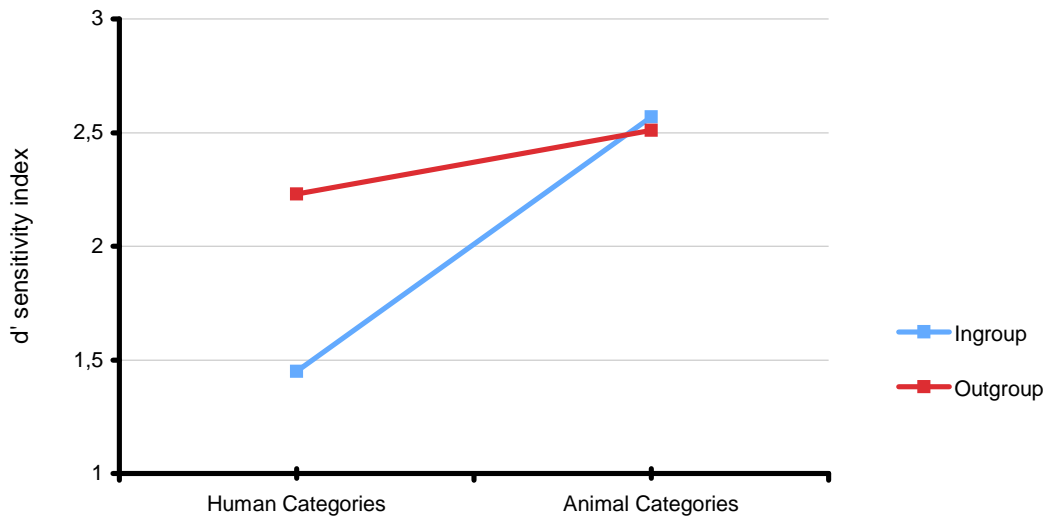


Table 13. Means and Standard Deviations of Sensitivity Measures ( $d'$ ) for Each of the Four Blocks in Study 2. Humanity Go/No-go. Southern Participants

Target categories	Target group		$d = 0.62$
	Ingroup (Southern concepts)	Outgroup (Northern concepts)	
Human	1.45 (0.60) a	2.23 (1.10) b	
	$d = 1.73$		
Animal	2.57 (0.72) b	2.51 (0.90) b	

*Note.* Larger  $d'$  values indicate greater sensitivity to the target pairing. The different letter, in the same row or column, indicates that the two means are significantly different,  $p < .03$ . Standard deviations in parentheses;  $d =$  Cohen's  $d$

Thus, ingroup is more human than outgroup, for the higher status group; outgroup is more human than ingroup, for the lower status group. Outgroup dehumanization and ingroup dehumanization, respectively, qualify the high status and low status group. Let's see the automatic evaluations for the two groups.

Figure 14. The interaction Target Group  $\times$  Target Categories. Study 2. Humanity Go/No-go. Northern Participants.

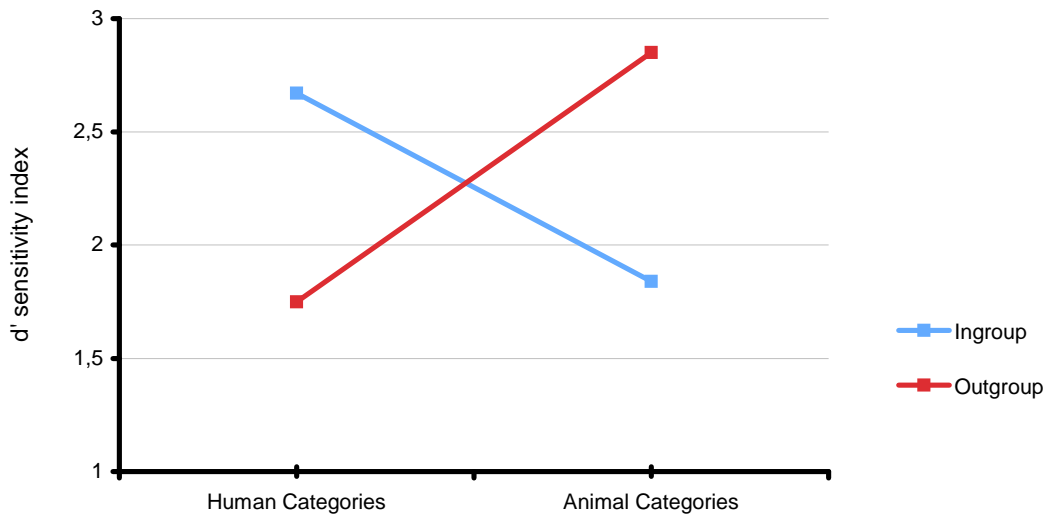


Table 14. Means and Standard Deviations of Sensitivity Measures ( $d'$ ) for Each of the Four Blocks in Study 2. Humanity Go/No-go. Northern Participants

Target categories	Target group	
	Ingroup (Northern concepts)	Outgroup (Southern concepts)
Human	2.67 (0.73) a	1.75 (0.59) b
	$d = 0.97$	$d = 1.11$
Animal	1.84 (0.62) b	2.85 (0.77) a

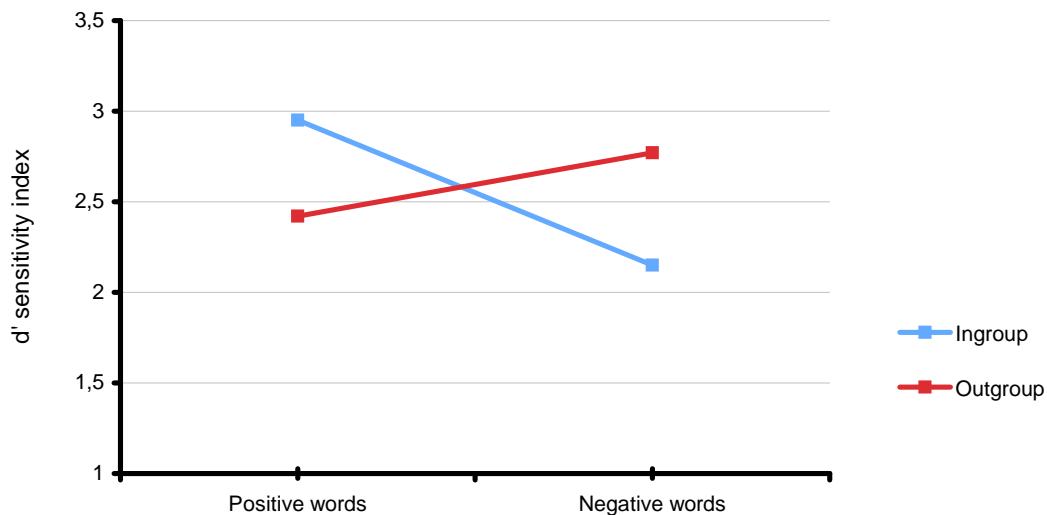
*Note.* Larger  $d'$  values indicate greater sensitivity to the target pairing. The different letter, in the same row or column, indicates that the two means are significantly different,  $p \leq .001$ . Standard deviations in parentheses;  $d$  = Cohen's  $d$

4.5.2.2 *Implicit evaluations.* Data relative to two participants, for the Northern group, and one for the Southern group, were removed for excessive errors on one or more critical blocks ( $d$ 's  $\leq 0$ ). A 2 (group belonging: North vs. South)  $\times$  2 (target group: ingroup vs. outgroup)  $\times$  2 (target attribute: positive vs. negative) ANOVA was applied. ANOVA evidenced a significant main effect of target group,  $F(1,34) = 4.97$ ,  $p < .04$ ,  $\eta_p^2 = .13$ . This effect was, however, qualified by the two-way interaction Target Group  $\times$  Target Attribute,  $F(1,34) = 16.20$ ,  $p < .001$ ,  $\eta_p^2 = .32$  (Figure 15). The other main effects and interactions



were nonsignificant,  $F_s(1,34) \leq 2.89$ ,  $p_s \geq .10$ . Comparison between target pairings (Table 15) showed that ingroup was evaluated as more positive than outgroup,  $t(35) = 4.81$ ,  $p < .001$ ,  $d = 0.81$ , and as more positive than negative,  $t(35) = 3.50$ ,  $p = .001$ ,  $d = 0.59$ , while outgroup was evaluated as more negative than positive,  $t(35) = 3.43$ ,  $p < .003$ ,  $d = 0.58$ . Outgroup, moreover, was more associated than ingroup with negative words,  $t(35) = 1.86$ ,  $p < .08$ ,  $d = 0.31$  (marginal effect). This pattern of results was valid both for Northern and Southern participants, but for Southerners the only significant difference concerned the comparison: ingroup + positive words ( $M = 2.74$ ,  $SD = 0.99$ ) versus outgroup + positive words ( $M = 2.10$ ,  $SD = 0.93$ ),  $t(17) = 2.62$ ,  $p < .02$ ,  $d = 0.64$ . Thus, for the lower status group, findings do not replicate those found with the humanity Go/No-go.

Figure 15. The interaction Target Group  $\times$  Target Attributes. Study 2. Evaluative Go/no-go. Northern and Southern Italian Participants



4.5.2.3 *Evaluations and humanity attributions.* To measure the relationship between implicit evaluations and implicit attributions of humanity, we computed an index of evaluative ingroup bias: for the  $d'$  measures, the difference between ingroup + positive and outgroup + positive pairings plus the difference between outgroup + negative and ingroup + negative pairings. We also computed an index of humanity ingroup bias: the difference between ingroup +

human and outgroup + human pairings plus the difference between outgroup + animal and ingroup + animal pairings.

Table 15. Means and Standard Deviations of Sensitivity Measures ( $d'$ ) for Each of the Four Blocks in Study 2. Evaluative Go/No-go: Northern and Southern Italian Participants

Target attribute	Target group		
	Ingroup		Outgroup
Positive	2.95 (0.80) a	$d = 0.81$	2.15 (0.83) b
	$d = 0.59$		$d = 0.58$
Negative	2.42 (0.89) b	$d = 0.31$	2.77 (0.90) a

*Note.* Larger  $d'$  values indicate greater sensitivity to the target pairing. The different letter, in the same row or column, indicates that the two means are significantly different,  $p \leq .001$ . The difference between b and a in the “negative” row is marginally significant,  $p < .08$ . Standard deviations in parentheses;  $d =$  Cohen’s  $d$ .

For Southern participants, the correlation between the two indexes was nonsignificant ( $r = .34$ ,  $p < .21$ ). Moreover, evaluative ingroup bias was not correlated with the difference between the ingroup + human and ingroup + animal pairings ( $r = .03$ ,  $ns$ ), and with the difference between the ingroup + human and outgroup + human pairings ( $r = .32$ ,  $p < .22$ ). Also for Northern participants, the correlation between the two measures of bias was nonsignificant ( $r = .15$ ,  $p < .58$ ).

#### 4.5.3 Discussion

The results of this study replicate those of Study 1: also when geographical references were used to express North and South Italy, it was found that Southerners associate humanity more with outgroup and dehumanize the ingroup considering it more animal than human. Northerners, instead, differentiate drastically between the two groups favoring the ingroup. The latter is perceived: more human and less animal than outgroup; more human than animal. The Southern outgroup is, instead, derogated, more assimilated to animality than humanity.

In contrast, ingroup status does not moderate implicit ingroup bias. Both low and status groups evaluated ingroup more positively than outgroup. Furthermore, implicit attributions of humanity did not correlate with evaluative bias both for Southerners and Northerners.

In conclusion, Study 2 confirmed the moderation effect of status on the attributions of humanity. However, the shared animalistic perception of the lower status group may depend on the Southern stereotype, not only defined in terms of greater warmth than competence, but also inclusive of traits of lack of control and impulsiveness (see Capozza et al., 1982). These traits, typical of the animal category, may be responsible for the assimilation of Southern group to animality. In other words, in low status group ingroup dehumanization could depend on the social context evaluated. Thus, it was important to confirm these results considering a different intergroup relation.

#### **4.6 Study 3**

In this study, we examined the implicit attributions of humanity within Italians Americans relations.

Recently, different studies (see e.g., Glick et al., 2006) have explored attitudes and beliefs held by the international community toward Americans. This issue is increasingly attracting the interest of social psychology researchers, especially after the 9/11 attacks and the subsequent military intervention in Afghanistan and Iraq.

In particular, some studies (Capozza, Vezzali, Andrighetto, & Trifiletti, in press; Glick et al., 2006; Volpato, Manganelli, Mucchi-Faina, Canova, Durante, in press) have explored Americans' image within the Italian context. Interestingly, findings revealed that Italians perceive Americans as a group competent, arrogant and not warm. Moreover, Italians perceive Americans defined by a higher political and military power and with a higher economic status. Nevertheless, Italians perceive themselves superior in the cultural heritage and social well-being.

Thus, we decided to manipulate the status perception of two groups: in higher status condition dimensions of Italian superiority were made accessible, in

lower status condition those of Americans. We predicted that implicit perceptions of humanity were different depending on condition. Namely, in high status condition, it was predicted that ingroup was considered more prototypical of humanity than outgroup. In contrast, in low status condition, it was predicted that humanity was more associated with outgroup than ingroup, or associated in equal measure to ingroup and outgroup.

A further aim of Study 3 was to replicate the result relative to the independence between evaluative and humanity bias.

#### *4.6.1 Method*

*4.6.1.1 Participants.* Forty Italian students, enrolled in psychology courses at the University of Padova, were examined. Twenty were assigned to the condition of higher status of ingroup, and 20 to the condition of lower status of ingroup. Participants were all female; mean age was 22.90 ( $SD = 3.31$ ), in the condition of ingroup superiority, and 23.16 ( $SD = 2.06$ ) in that of ingroup inferiority.

*4.6.1.2 Materials. Manipulation items.* To manipulate status, in the condition of ingroup superiority, attributes of Italian prevalence were made accessible. Respondents were required to answer the following items: “In your opinion, which group – Italians or Americans – has contributed more to the development of arts?” ; “..... to the development of literature?”; “Which group owns a richer cultural patrimony?”; ”Where, in the course of history, did sciences (e.g., philosophy or astronomy) develop before?” A 5-step scale was used: *much more Italians* (1), *much more Americans* (5), *Italians and Americans to the same extent* (3). For the last item, the scale was anchored by *definitely before in Italy* (1), *definitely before in the United States* (5); *in the two countries at the same time* (3) was the neutral point.

In the condition of ingroup inferiority, attributes of American prevalence were made accessible. Items were: “In your opinion, which group – Italians or Americans – has recently contributed more to the technology development?” ; “... has a greater economic power?” ; “.... a greater political power?” ; “Which

country – Italy or the United States – is a world power to a higher extent?”. One was assigned to *much more Americans*, and 5 to *much more Italians*.<sup>3</sup>

GNAT stimuli. As to GNAT, the same stimuli were used as in Study 2, but Northern and Southern concepts were replaced by Italian and American names: 10 Italian critical stimuli were *Andrea, Anna, Chiara, Giulia, Elena, Luca, Marco, Matteo, Paola, Simone*; 10 American critical stimuli were *Abbie, Bill, Bradley, Dolly, Helen, John, Kevin, Nancy, Rodger, Sally*. Italians are familiar with the selected American names, in particular through movies and soap operas. Outgroup names, moreover, were unambiguously identified, since, for each block, both instructions and target labels classified them as American (names could not, therefore, be associated with other groups, e.g., the English). The two sets of names were matched for length.

*4.6.1.3 Procedure.* Participants, individually examined, answered the manipulation items, first. Then the humanity and evaluative GNAT were applied, in this order. On completion of the experiment, respondents were debriefed and thanked for participation.

## 4.6.2 Results

*4.6.2.1 Superiority and inferiority attributes.* In the ingroup superiority condition, means, for the four items, were between 1.55 and 2.10 (*SDs* between 0.59 and 0.72); the four means were different from the neutral point of the scale,  $t_s \geq 6.28$ ,  $p_s < .001$ . In the ingroup inferiority condition, means were between 1.05 and 2.05 (*SDs* between 0.22 and 0.51), all significantly different from neutrality,  $t_s \geq 8.32$ ,  $p_s < .001$ . Thus, participants agreed Italians are higher in arts and literature, while Americans, besides having greater power, are higher in technology and competences regarding economy.

*4.6.2.2 Attributions of humanity.* Sensitivity measures were submitted to a 2 (ingroup's status: higher vs. lower)  $\times$  2 (target group: ingroup vs. outgroup)  $\times$  2 (target categories: human vs. animal) ANOVA, with repeated measures on the last two variables. ANOVA revealed a main effect for target categories  $F(1,38) = 4.11$ ,  $p = .05$ ,  $\eta_p^2 = .10$ , indicating that participants were more sensitive in

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3. In all the phases of the experiment, participants were told that with “Americans” we meant “U.S” citizens

discriminating signal from noise when animals ( $M = 2.75$ ,  $SD = 0.84$ ) rather than humans ( $M = 2.54$ ,  $SD = 0.94$ ) were the target. Also the main effect of ingroup's status was significant,  $F(1,38) = 8.46$ ,  $p < .03$ ,  $\eta_p^2 = .13$ , with higher sensitivity scores in the condition of ingroup inferiority ( $M = 2.87$ ,  $SD = 0.76$ ) than ingroup superiority ( $M = 2.42$ ,  $SD = 0.95$ ). These effects, however, were qualified by the Target Group  $\times$  Target Categories interaction  $F(1,38) = 15.32$ ,  $p < .001$ ,  $\eta_p^2 = .29$ , and by the three-way interaction,  $F(1,38) = 5.24$ ,  $p < .03$ ,  $\eta_p^2 = .12$ . To understand this last interaction, a 2 (target group)  $\times$  2 (target categories) ANOVA was applied to the two status conditions separately.

In the ingroup's superiority condition, only the interaction was significant,  $F(1,19) = 20.38$ ,  $p < .001$ ,  $\eta_p^2 = .52$  (see Figure 16); for the main effects,  $F_s(1,19) \leq 1.74$ ,  $p_s > .21$ . Comparisons between means (Table 16) showed the pattern of results found in Northern participants: ingroup more than outgroup was associated with humanity,  $t(19) = 3.17$ ,  $p < .006$ ,  $d = 0.73$ ; ingroup less than outgroup was linked to animality,  $t(19) = 2.73$ ,  $p = .013$ ,  $d = 0.63$ . Moreover, ingroup was perceived as more human than animal,  $t(19) = 2.19$ ,  $p < .05$ ,  $d = 0.50$ , while outgroup was perceived as more animal than human,  $t(19) = 3.70$ ,  $p < .003$ ,  $d = 0.85$ . Thus, in this study salience of outgroup inferiorities generated a dissociation of outgroup from humanity and its assimilation to animality.

In the ingroup inferiority condition, no effect was significant,  $F_s(1,19) \leq 2.70$ ,  $p_s > .11$ . Participants were not biased either in favor of ingroup or in favor of outgroup, and means were between 2.71 and 3.07 ( $SD$ s between 0.61 and 0.94).

*4.6.2.3 Implicit evaluations.* D-prime values were submitted to the three-way ANOVA: ingroup's status  $\times$  target group  $\times$  target attribute (positive vs. negative), with repeated measures on the last two factors. ANOVA revealed a significant main effect of target group,  $F(1,38) = 4.11$ ,  $p = .05$ ,  $\eta_p^2 = .10$ , indicating participants were more able to discriminate signal from noise when outgroup ( $M = 2.84$ ,  $SD = .66$ ) rather than ingroup ( $M = 2.66$ ,  $SD = .67$ ) was the target.

Figure 16. The interaction Target Group  $\times$  Target Categories. Study 3. Humanity Go/No-go. Condition of ingroup superiority.

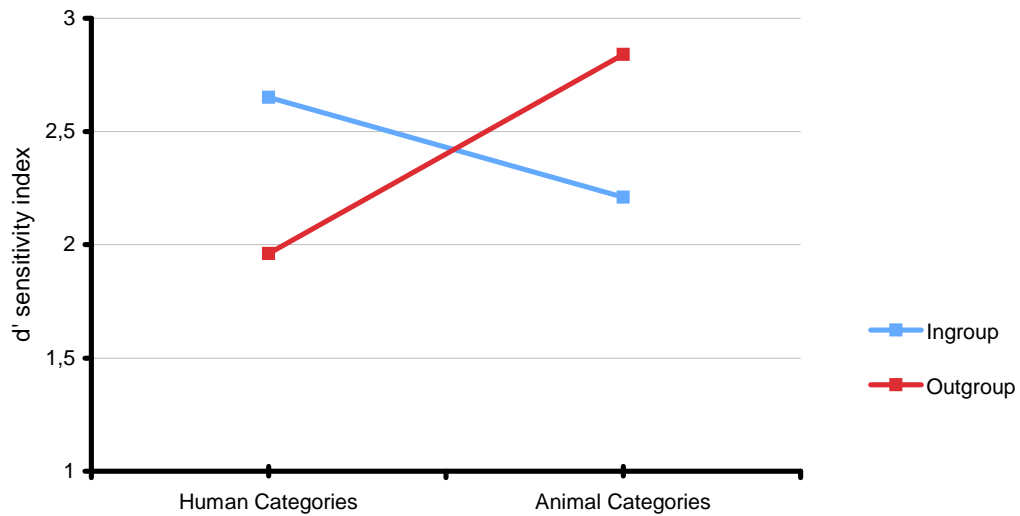


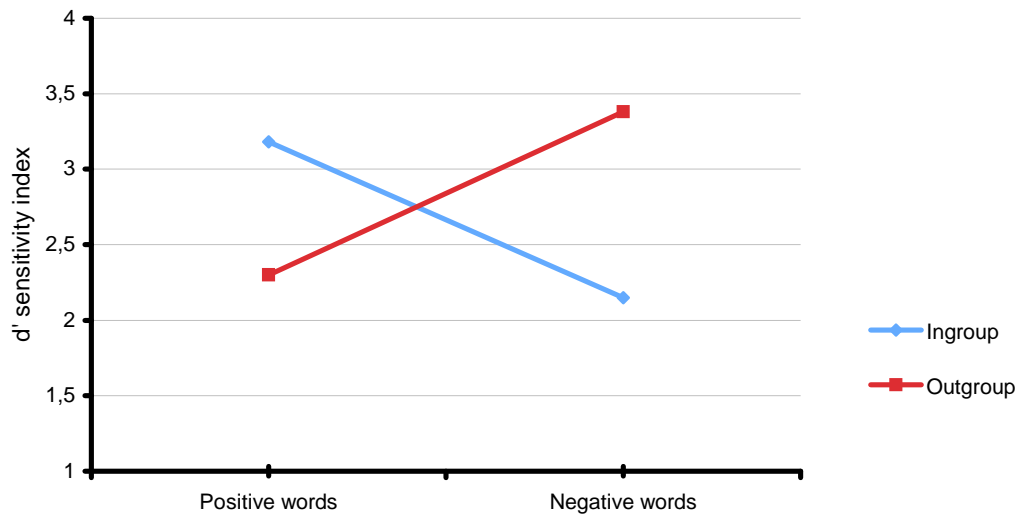
Table 16. Means and Standard Deviations of Sensitivity Measures ( $d'$ ) for Each of the Four Blocks in Study 3. Humanity Go/No-go. Condition of Ingroup superiority

Target categories	Target group	
	Ingroup (Italian names)	Outgroup (American names)
Human	2.65 (0.88) a	1.96 (1.13) b
	$d = 0.50$	$d = 0.85$
Animal	2.21 (0.56) b	2.84 (0.95) a

*Note.* Larger  $d'$  values indicate greater sensitivity to the target pairing. The different letter, in the same row or column, indicates that the two means are significantly different,  $p < .05$ . Standard deviations in parentheses;  $d$  = Cohen's  $d$ .

This effect, however, was strongly qualified by the Target Group  $\times$  Target Attribute interaction,  $F(1,38) = 90.09$ ,  $p < .001$ ,  $\eta_p^2 = .70$  (see Figure 17). A marginal effect of ingroup's status was also revealed,  $F(1,38) = 3.60$ ,  $p < .07$ ,  $\eta_p^2 = .09$ , with a higher mean for sensitivity measures in the ingroup inferiority ( $M = 2.93$ ,  $SD = .56$ ) than ingroup superiority ( $M = 2.58$ ,  $SD = .62$ ) condition. All other main effects and interactions were nonsignificant,  $F_s(1,38) \leq 1.01$ ,  $p_s > .33$ .

Figure 17. The interaction Target Group  $\times$  Target Attributes. Study 3. Evaluative Go/no-go. The two status conditions together.



Means for the four experimental blocks, combining the two status conditions, are presented in Table 17. Findings showed a strong ingroup favoritism effect: ingroup was more associated with positive than negative words,  $t(39) = 7.74$ ,  $p < .001$ ,  $d = 1.24$ ; it was more associated than outgroup with positive words,  $t(39) = 6.48$ ,  $p < .001$ ,  $d = 1.04$ , and less associated than outgroup with negative words,  $t(39) = 8.56$ ,  $p < .001$ ,  $d = 1.37$ ; finally, outgroup was more negative than positive,  $t(39) = 7.14$ ,  $p < .001$ ,  $d = 1.14$ . This pattern of results was present in both status conditions:  $ts(19) \geq 6.27$ ,  $ps < .001$ ,  $ds$  between 1.44 and 1.75, for the condition of ingroup superiority;  $ts(19) \geq 3.23$ ,  $ps < .004$ ,  $ds$  between 0.74 and 1.20, for that of ingroup inferiority. For the latter, therefore, ingroup bias concerned automatic evaluations, but not automatic attributions of humanity.

*4.6.2.4 Evaluations and humanity attributions.* Both in the condition of ingroup superiority and in that of ingroup inferiority, the two indexes of bias – evaluative and humanity bias – were not significantly correlated:  $r = .07$ ,  $ns$ , for the first, and  $r = .32$ ,  $p < .16$ , for the latter condition.



Table 17. Means and Standard Deviations of Sensitivity Measures ( $d'$ ) for Each of the Four Blocks in Study 3. Evaluative Go/No-go: the two status conditions together

Target attribute	Target group		
	Ingroup		Outgroup
Positive	3.18 (0.70) a	$d = 1.04$	2.30 (0.89) b
	$d = 1.24$		$d = 1.14$
Negative	2.15 (0.87) b	$d = 1.37$	3.38 (0.74) a

*Note.* Larger  $d'$  values indicate greater sensitivity to the target pairing. The different letter, in the same row or column, indicates that the two means are significantly different,  $p \leq .001$ . Standard deviations in parentheses;  $d =$  Cohen's  $d$ .

#### 4.6.3 Discussion

Findings showed that, when attributes of ingroup superiority are made salient (creativity in arts and literature), ingroup is perceived as more human than outgroup, and outgroup is even dehumanized. Animalization can not be a consequence of outgroup's stereotypic attributes: Americans are perceived by Italians as more competent than warm (Glick et al., 2006), and this differentiation was probably enhanced in the condition of outgroup superiority where American technological creativity and power were made salient. In this condition, effects of outgroup dehumanization were not found.

Our results seem to indicate that, when a trait of ingroup superiority (creativity in arts) is made salient, ingroup is associated with humanity and dissociated from animality. For outgroup, the perception it is not fully defined by a uniquely human feature leads to its animalization. When aspects of ingroup inferiority are made salient (less technological creativity, less capability of dominating), no differentiations on the humanity/animality dimension are observed. Thus, status moderates the automatic evaluations of humanness.

In contrast, status does not affect the implicit evaluative bias. Both in high and low status condition, Italians exhibit a strong implicit favoritism toward their own group. Moreover, implicit humanity and evaluative bias do not correlate.

These results were replicated in a similar study. In this case, aspects of Italians or Americans superiority were made salient requiring participants (68

Italian psychology students) to ask the same manipulation items, and, to list in which other aspects ingroup (higher status condition,  $N = 22$ ) or outgroup (lower status condition,  $N = 23$ ) were perceived superior. Moreover, a control condition ( $N = 23$ ) was added, in which no aspects of ingroup or outgroup superiority were made accessible. Similarly to the previous study, in higher status condition humanity was more associated with ingroup than outgroup, animality more with outgroup than ingroup; furthermore, ingroup was perceived more human than animal, outgroup more animal than human. In contrast, in lower status condition, no comparison was significant. Interestingly, when status was not manipulated (control condition), participants exhibited the same implicit evaluation of humanness of higher status condition: ingroup was perceived more human than animal and more human than outgroup; outgroup was derogated, associating it more to animals than to human categories and more to animals than ingroup. Once again, in all three conditions humanity and evaluative bias did not correlate.

#### **4.7 Study 4**

The aim of Study 4 was to generalize results obtained in previous studies, considering two groups with no history of interaction, using the minimal group paradigm (see, e.g., Tajfel et al., 1971).

Miroslawska and Kofta (2004/2005) have demonstrated that tendency to infracategorize arises even in a minimal group situation. However, within this context, no study has explored the tendency to perceive ingroup more human than outgroup considering a global concept of humanity.

In our study, two minimal groups were created (overestimators vs. underestimators) and status was manipulated. In the condition of ingroup superiority, ingroup was described as more capable than outgroup of performing higher status occupations; in that of ingroup inferiority, it was described as less capable than outgroup. In this study, therefore, differently from Study 3, the same dimension was used to manipulate ingroup superiority versus ingroup inferiority. In Study 4, moreover, only the humanity Go/No-go was applied, since the hypothesis of independence between the evaluative and humanity bias

was supported in the two previous studies, where different social contexts were analyzed and different experimental designs were employed.

#### *4.7.1 Method*

*4.7.1.1 Participants.* Thirty-eight students (University of Padova) were examined; the majority attended the Faculty of Psychology. Nineteen (15 females and 4 males) were assigned to the condition of ingroup superiority (mean age = 22.21,  $SD = 5.78$ ), and 19 (15 females and 4 males) to that of ingroup inferiority (mean age = 21.05,  $SD = 1.22$ ).

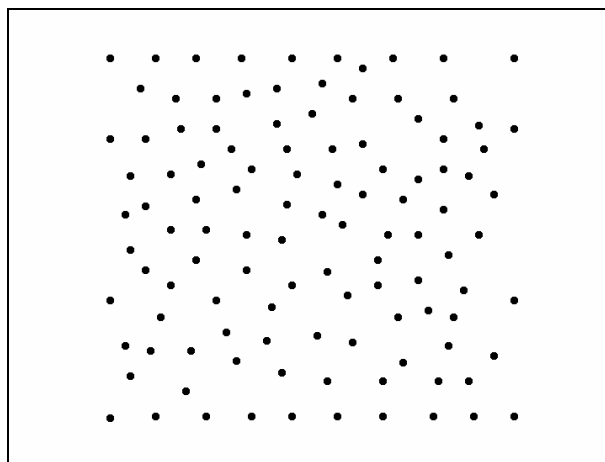
*4.7.1.2 Materials.* In applying the Go/No-go, to represent ingroup (overestimators) and outgroup (underestimators), words were used, such as: Overestimators, We, Our, for ingroup, and Underestimators, They, Other, for outgroup.<sup>4</sup> In each block, “Overestimators” and “Underestimators” were shown four times, within the 10 critical trials, in order to make accessible this specific ingroup and outgroup, when the we- and they-markers were presented. However, both the practice blocks, where participants learnt to discriminate ingroup from outgroup words, and the fact that target labels were showed on the upper left and upper right quadrants of the screen, during a whole experimental block – “Overestimators (ingroup),” when ingroup was the target; “Underestimators (outgroup),” when outgroup was the target – ensured participants associated the we- and they-words with the minimal ingroup and outgroup.

As regards humanity/animality, the same categories as in the previous studies were used. The experimental blocks were: ingroup words + human categories; ingroup words + animal categories; outgroup words + human categories; outgroup words + animal categories (for other aspects of the procedure used in applying GNAT, see Study 1).

*4.7.1.3 Procedure.* Participants, individually examined, sat in front of a computer, and read instructions concerning a new psychological test that classified people into one of two groups, according to their perceptual tendencies. The “fake” test was that of dots, typically used in minimal group research (e.g., Brewer, Manzi, & Shaw, 1993). Participants saw 10 images of numerous dots, organized in a way to create different shapes (see Figure 18). They were asked to

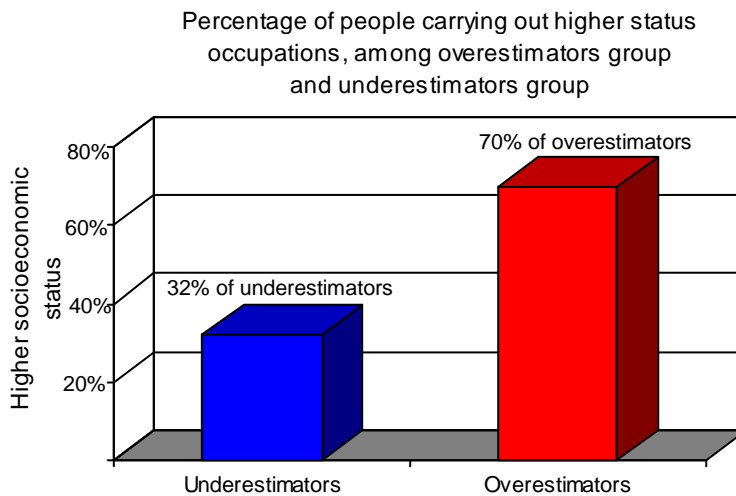
enter their estimate of number of dots, after the presentation of each image, which was showed for 4 seconds. Then, participants received a bogus feedback. They read the test designated them as overestimators, and people classified as overestimators were those providing an evaluation slightly exceeding the correct one. It was also mentioned that underestimators slightly underevaluated the number of dots.

Figure 18. Example of image used for creating minimal groups.



Participants then read that American and Italian researchers had showed how the tendency to overestimate or underestimate the number in patterns of dots is correlated with other abilities. Overestimators are actually capable of overall views of problems; moreover, they are qualified by attributes leading them to perform higher status occupations: the percentage of people carrying out these occupations was higher among overestimators than underestimators. A bar graph was showed where it appeared that 70% of employed overestimators versus 32% of employed underestimators carry out upper status jobs (condition of ingroup superiority, see Figure 19). In the ingroup inferiority condition, the ability of overall views of problems and the capabilities allowing the performance of higher status jobs were assigned to underestimators.

Figure 19. Bar graph showed at the end of manipulation. Condition of ingroup superiority.



Participants then answered three manipulation check items. One was: “On the basis of the dot test, what group do you belong to?” *Overestimators, underestimators, no group* were the choices. The other items were: “The percentage of people performing higher status occupations is higher within my group than within the other group” (1 = *definitely false*; 7 = *definitely true*; 4 = *neither false nor true*); “Compared to the other group, my group has a social status:” *lower, equal, higher*. On the completion of GNAT, participants were debriefed and thanked for their involvement. No participant knew the overestimators/underestimators paradigm.

#### 4.7.2 Results

4.7.2.1 *Manipulation check*. All participants were aware of belonging to the overestimator group. For the 7-step item, means were:  $M = 5.84$  ( $SD = 1.30$ ), for the condition of ingroup superiority, and  $M = 2.42$  ( $SD = 1.02$ ), for that of ingroup inferiority,  $t(36) = 9.02$ ,  $p < .001$ . In the first condition, therefore, participants knew people performing higher status jobs were more numerous among overestimators than underestimators (for the difference from neutral point,  $t(18) = 6.17$ ,  $p < .001$ ). In the condition of ingroup inferiority, they knew people performing higher status jobs were more frequent among underestimators (for difference from neutral point,  $t(18) = 6.76$ ,  $p < .001$ ). As to the last item,

when overestimators were presented as superior, 18 (94.7%) participants assigned ingroup a higher social status, while, when overestimators were presented as inferior, 15 (78.9%) participants assigned it a lower social status,  $\chi^2(2) = 30.46, p < .001$ . Thus, in both status conditions, participants were aware of their minimal membership and of the status of their group.

*4.7.2.2 Attributions of humanity.* In both status conditions, data relative to one participant were removed for excessive errors on one or more critical blocks ( $d$ 's  $\leq 0$ ). D-prime measures were then submitted to a three-way mixed ANOVA: ingroup's status  $\times$  target group  $\times$  target categories, with repeated measures on the last two factors. Only the interactions Ingroup's Status  $\times$  Target Group,  $F(1,34) = 6.07, p < .02, \eta_p^2 = .15$ , and Target Categories  $\times$  Target Group,  $F(1,34) = 9.96, p < .004, \eta_p^2 = .23$  were significant (for the main effects and the other interactions,  $F_s(1,34) \leq 2.33, p_s > .13$ ). Concerning the Target Categories  $\times$  Target Group interaction, sensitivity measures were higher when humanity was associated with ingroup ( $M = 2.39, SD = 0.78$ ) than with outgroup ( $M = 1.91, SD = 0.59$ ),  $t(35) = 3.33, p < .003, d = 0.56$ . Moreover, outgroup was more associated with animality ( $M = 2.33, SD = 0.76$ ) than with humanity,  $t(35) = 3.22, p < .004, d = 0.54$ . The difference between means was instead nonsignificant for the comparisons: ingroup + humanity vs. ingroup + animality and outgroup + animality vs. ingroup + animality,  $t_s(35) \leq 1.67, p_s > .10$ .

Although the three-way interaction was nonsignificant, given the strong moderation effects of status in the two previous studies, a 2 (target group)  $\times$  2 (target categories) ANOVA was separately applied to the two status conditions. For ingroup superiority, we found a significant main effect of target group,  $F(1,17) = 7.85, p < .02, \eta_p^2 = .32$ : sensitivity measures were higher when ingroup rather than outgroup words were the target ( $M = 2.43, SD = 0.63$ , for ingroup;  $M = 2.06, SD = 0.55$ , for outgroup). Also the interaction Target Group  $\times$  Target Categories was significant,  $F(1,17) = 9.48, p < .008, \eta_p^2 = .36$  (for the main effect of target categories,  $F(1,17) = 1.92, p < .19$ ). Comparisons between means (Table 18) show that humanity was more associated with ingroup than outgroup,  $t(17) = 4.49, p < .001, d = 1.09$ ; moreover, outgroup was dehumanized, namely perceived as more animal than human,  $t(17) = 3.86, p < .002, d = 0.94$  (for the

other comparisons,  $ts < 1$ ). For the ingroup inferiority condition, neither the main effects nor the interaction were significant,  $F_s(1,17) \leq 2.27$ ,  $ps > .14$ .

Table 18. Means and Standard Deviations of Sensitivity Measures ( $d'$ ) for Each of the Four Blocks in Study 4. Humanity Go/No-go. Condition of Ingroup superiority

Target categories	Target group	
	Ingroup (Overestimators)	Outgroup (Underestimators)
Human	2.54 (0.84) a	$d = 1.09$ 1.74 (0.56) b
		$d = 0.94$
Animal	2.32 (0.82) a	2.39 (0.77) a

*Note.* Larger  $d'$  values indicate greater sensitivity to the target pairing. The different letter, in the same row or column, indicates that the two means are significantly different,  $p < .05$ . Standard deviations in parentheses;  $d =$  Cohen's  $d$ .

#### 4.7.3 Discussion

Thus, this analysis, performed on minimal groups, replicates some of the results found in the previous studies. In the condition of superiority, as in Studies 2 and 3, ingroup was perceived as more human than outgroup, which was even dehumanized, namely more associated with animality than with humanity. In the inferiority condition, instead, as in Studies 1-3, ingroup was not perceived as more human than outgroup. Findings of Study 4 are particularly important, since they concern minimal groups, and, therefore, are not affected by stereotypes, independent of the status dimension manipulated.

Although our findings have been replicated in four different studies which have considered different contexts, our results could depend on the human and animal categories used. Other stimuli could be considered, such as the uniquely human (e.g., wife, husband) and uniquely animal words (pet, cub) used by Viki et al. (2006). For this reason, we conducted a last study in which new stimuli were used.

## 4.8 Study 5

### 4.8.1 Method

*4.8.1.1 Participants.* The relationship between Northerners and Southerners was once again considered. Participants were 29 Northern undergraduate students, enrolled in psychology courses at the University of Padova. Mean age was 22.12 ( $SD = 2.05$ ).

*4.8.1.2 Materials.* For the humanity GNAT, new stimuli were chosen. Concerning the two target groups, 5 Northern and 5 Southern concepts were selected (see Table 19). These concepts were selected on the basis of a pilot study, so that Northern and Southern concepts were perceived typical of two groups and did not differ on familiarity. Through a second pilot study, new human and animal concepts were chosen. Twenty two respondents rated 30 human and 30 animal concepts. The 5 human and 5 animal concepts chosen (see Table 19) were judged, respectively, uniquely human and uniquely animal. Moreover, the two sets of stimuli were perceived as no different on familiarity and were evaluated as positive to the same extent: the mean for human concepts was  $M = 5.19$  ( $SD = 0.87$ ), that for animal concepts was  $M = 4.95$  ( $SD = 0.70$ ),  $t(21) = 1.19$ ,  $p > .25$ . The two sets of stimuli were matched for word length.

*4.8.1.3 Procedure.* In the application of GNAT, each stimulus was shown twice, so that each block consisted of 40 trials. The three practice stimuli were taken from critical stimuli. Participants were examined individually.

### 4.8.2 Results

Data relative to three participants were removed for excessive errors on one or more critical blocks ( $d's < 0$ ). Sensitivity measures were submitted to a 2 (target group: ingroup vs. outgroup)  $\times$  2 (target concepts: human vs. animal) ANOVA with the two variables serving as within-participant variables. Neither the main effect of target group,  $F(1,25) = 1.70$ ,  $p < .21$ , nor that of target concepts,  $F(1,25) = 1.37$ ,  $p < .25$ , was significant. The analysis revealed instead an interaction between the two factors,  $F(1,25) = 21.09$ ,  $p < .001$ ,  $\eta_p^2 = .46$  (see Figure 20).



Table 19. Stimulus words used in the humanity GNAT. Study 5

<b>Critical stimuli</b>			
<u>Southern concepts</u>	<u>Northern concepts</u>	<u>Human concepts</u>	<u>Animal concepts</u>
Meridionale (Southerner)	Settentrione (North of Italy)	Celibe (Bachelor)	Animale (Animal)
Meridionali (Southerners)	Settentrionale (Northerner)	Cittadino (Citizen)	Animali (Animals)
Meridione (South of Italy)	Settentrionali (Northerners)	Fanciullo (Boy)	Cucciolo (Cub)
Siciliani (Sicilians)	Nord (North of Italy)	Umani (Humans)	Esemplare (Exemplar)
Sud (South)	Veneti (Inhabitants of Veneto region )	Umano (Human)	Fauna (Fauna)

<b>Practice stimuli</b>			
<u>Southern concepts</u>	<u>Northern concepts</u>	<u>Human concepts</u>	<u>Animal concepts</u>
Meridionale (Southerner)	Nord (North)	Fanciullo (Boy)	Animale (Animal)
Meridione (South of Italy)	Settentrionale (Northerner)	Umani (Humans)	Animali (Animals)
Sud (South)	Settentrione (North of Italy)	Umano (Human)	Fauna (Fauna)

Comparison between means showed the same pattern of results found in Study 2: ingroup more than outgroup was associated with humanity,  $t(25) = 4.64$ ,  $p < .001$ ,  $d = 0.93$ ; ingroup less than outgroup was associated with animality,  $t(25) = 2.57$ ,  $p < .02$ ,  $d = 0.51$ . Furthermore, ingroup was perceived as more human than animal,  $t(25) = 3.25$ ,  $p < .01$ ,  $d = 0.65$  and outgroup was perceived more animal than human,  $t(25) = 4.08$ ,  $p < .001$ ,  $d = 0.82$  (Table 20).

Thus, these findings fully confirmed the previous study: humanity and animality are differently associated to ingroup and outgroup, even when human and animal concepts, rather than human and animal categories, are considered.

Figure 20. The interaction Target Group × Target Concepts. Study 5. Northern participants

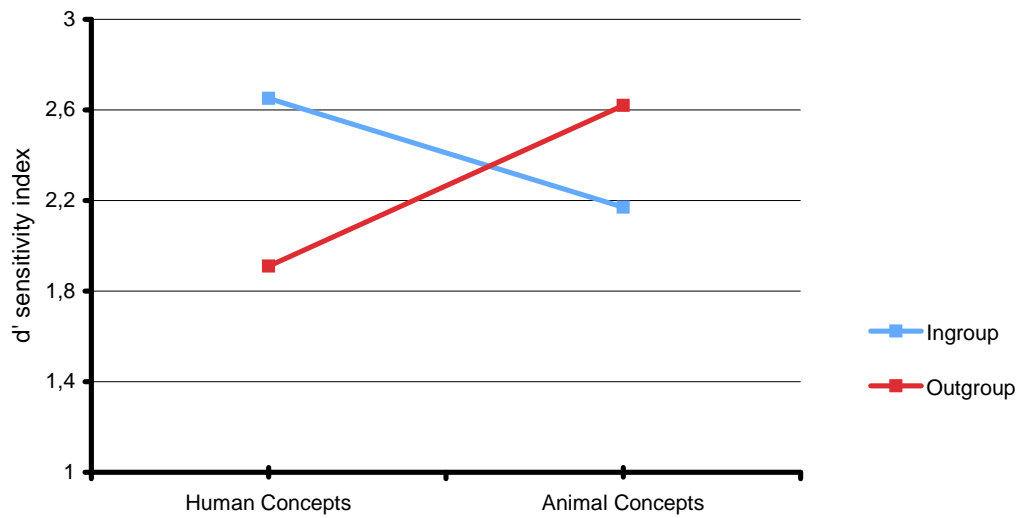


Table 20. Means and Standard Deviations of Sensitivity Measures ( $d'$ ) for Each of the Four Blocks in Study 5. Northern participants

Target concepts	Target group		$d$
	Ingroup (Northern concepts)	Outgroup (Southern concepts)	
Human	2.65 (0.79) a	1.91 (0.66) b	$d = 0.93$
	$d = 0.65$	$d = 0.82$	
Animal	2.17 (0.70) b	2.62 (0.81) a	$d = 0.51$

*Note.* Larger  $d'$  values indicate greater sensitivity to the target pairing. The different letter, in the same row or column, indicates that the two means are significantly different,  $p < .02$ . Standard deviations in parentheses;  $d$  = Cohen's  $d$ .

## Conclusions

In their studies, Leyens and colleagues (see, Cortes et al., 2005; Leyens et al., 2001; Paladino et al., 2002) found that socioeconomic status does not moderate the effect of infrahumanization: both higher and lower status groups assign more secondary emotions to ingroup than outgroup, namely they assign a uniquely human attribute more to ingroup. However, the tendency to infrahumanize the outgroup, revealed in lower status groups, seems to depend on the human attribute considered. If other uniquely human attributes are used, such as intelligence and talent, members of dominated groups assign these attributes in equal measure to ingroup and outgroup (e.g., Leyens et al., 2001) or even more to outgroup (see Sidanius & Pratto, 1999, for African-Americans' intellectual abilities). Moreover, some lower status groups endorse the cultural stereotype describing them as instinctive and impulsive, namely, little capable of rational control of their actions (see the case of Southern Italians; Capozza et al., 1982). We hypothesized that, given these different attributions, in lower status groups, the whole concept of humanity is associated in equal measure to ingroup and outgroup or – at least implicitly – more to outgroup than ingroup. In contrast, higher status groups should implicitly associate humanity more to ingroup than outgroup, since they assign ingroup more uniquely human attributes and with more strength. If to lower status outgroups uniquely human attributes are denied, such as rational control of one's actions, also implicit outgroup dehumanization can be found.

Five studies were performed; real groups with different socioeconomic status were examined (Studies 1, 2, 5), the status of real (Study 3) and minimal groups (Study 4) was manipulated. Humanity and evaluative biases were measured using, as an implicit technique, the Go/No-go Association Task (Nosek & Banaji, 2001). Findings were consistent with our hypotheses. In the lower status, ingroup was never perceived as more human than outgroup. Our data do not, therefore, support the assumption people tend to assign the human essence more to ingroup than outgroup (Leyens, Demoulin, Vaes, Gaunt, & Paladino,

2007), or to regard ingroup as more prototypical of humanity (Schwartz & Struch, 1989). The inferior status ingroup can even be dehumanized, namely felt as the missing link between monkey and humanity (Boccatto et al., 2008), more close to animality. To our knowledge, it is the first time that effects of ingroup dehumanization have been discovered.

In the higher status condition, ingroup evoked the concept of humanity more than outgroup, and outgroup was even dehumanized. Also this effect of dehumanization is new (for an exception, see Boccatto et al., 2008, Study 2). In fact, the Negro-ape association found by Goff et al. (2008) does not concern intergroup attributions of humanity, but the implicit representation of a dehumanizing historical stereotype. It is, however, worth noting the malleability of the automatic evaluations of humanity (for the concept of malleability of implicit evaluations see, e.g., Blair et al., 2001; Lane et al., 2007). When an attribute (uniquely human) of ingroup superiority is salient, ingroup evokes humanity more than outgroup; in contrast, when an attribute (uniquely human) of outgroup superiority is salient, the two groups are equally associated with humanity. It is possible that, in this latter condition, an unconscious process of compensation is working: salience of an attribute of outgroup superiority can lead to retrieving an attribute of ingroup superiority with the consequence that the two groups elicit in equal measure the concept of humanity. Our analysis is merely speculative. The fact remains that a privileged human status is not assigned to all ingroups and not in all social contexts.

Instead, implicit evaluation bias is not moderated by status: both high and low status groups tend to assign a positive valence to ingroup, a negative valence to outgroup. However, in Study 2, implicit evaluative bias of low status group concerns only one comparison, that is the association between positive words and the two groups; in high status group, instead, evaluative bias involved each comparison. When ingroup status is manipulated (Study 3), participants both in low status and high status condition exhibited a same magnitude of ingroup bias. Furthermore, both in Study 2 and 3, humanity and implicit evaluative bias are not correlated. This latter result confirms findings obtained by Leyens and colleagues (e.g., Demoulin, Rodriguez et al., 2004; Kofta & Miroslawska, in press; Leyens

et al., 2001; Paladino et al., 2002;). Thus, even when a global concept of humanity is considered, the two types of evaluation seem to have different psychological foundations and functions.

### *Consequences and practice implications*

Implicit evaluations and stereotypes influence behavior toward outgroup members. Indeed, unfavorable implicit attitudes allow us to predict, for instance: spontaneous tendencies to avoidance (Neumann, Hülsebeck, & Seibt, 2004); among doctors, less disposition to curing behaviors (see Lane et al., 2007). Moreover, negative implicit attitudes toward ingroup (Blacks) may predict the preference to cooperate with outgroup rather than ingroup members (Ashburn-Nardo, Knowles, & Monteith, 2003). The association of outgroup more than ingroup with the concept of humanity and ingroup dehumanization may, therefore, have damaging consequences for Southern Italians, as for other lower status groups; dehumanization can, in fact, lead to favoring outgroup in important social contexts, such as school, justice, and health. Namely, ingroup dehumanization can work reinforcing the existing social system, in line with the predictions of system justification theory (Jost et al., 2004).

For intergroup relations, findings of Study 3 are more promising. They indicate that, if a uniquely human attribute of outgroup superiority is salient, the differentiation relative to humanity disappears. To favor harmonious relations between groups, people could, therefore, be stimulated to recognize human attributes of outgroup superiority, such as: more ancient culture, greater creativity in science, greater creativity in the arts.

It is worth noting the independence between implicit evaluative and implicit humanity bias. Our findings replicate those obtained in infrahumanization research (e.g., Boccato et al., 2007; Paladino et al., 2002), and in the studies relative to the model of the two senses of humanness (Haslam, 2006; Haslam et al., 2005; O'Connor et al., 2007). Future research should analyze the psychological foundations of the two biases, and identify in what social settings behavior is affected by evaluative bias, and in what settings it is, in contrast, affected by the bias of humanity.

### *Future directions*

Haslam (2006) suggested two senses of humanity: the attributes which are uniquely human (e.g., secondary emotions, moral sensibility, cognitive sophistication), and those which are typical of human nature, but not necessarily different for humans and other species (interpersonal warmth, emotional responsiveness, openness). The denial of humanness to others may, therefore, generate two distinct forms of dehumanization. If uniquely human attributes are denied to people, they will be perceived as lacking morality and sophistication, and, therefore, assimilated to animals. However, if people are denied the features of human nature, they will be seen as lacking warmth and interpersonal responsiveness. In this case, people are mechanized, and associated to automata or robots. It is possible that the traits of warmth and emotional responsiveness are denied to some dominant or higher status groups, with the consequence of an intergroup competition on the humanity dimension: lower status outgroups are animalized, while higher status outgroups are likened to programmed machines.

## References

- Allport, G. W. (1954). *The nature of prejudice*. New York: Addison-Wesley.
- Amodio, D. M., & Frith, C. D. (2006). Meeting of minds: The medial frontal cortex and social cognition. *Nature Reviews Neuroscience*, 7, 268-277.
- Ashburn-Nardo, L., Knowles, M. L., & Monteith, M. J. (2003). Black Americans' implicit racial associations and their implications for intergroup judgment. *Social Cognition*, 21, 61-87.
- Banaji, M. R., Bazerman, M., & Chugh, D. (2003). How (un)ethical are you? *Harvard Business Review*, 81, 56-64.
- Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, 3, 193-209.
- Bandura, A. (2002). Selective moral disengagement in the exercise of moral agency. *Journal of Moral Education*, 31, 101-119.
- Bandura, A., Underwood, B., & Fromson, M. E. (1975). Disinhibition of aggression through diffusion of responsibility and dehumanization of victims. *Journal of Research in Personality*, 9, 253-269.
- Banfield, C. E. (1970). *The moral basis of a backward society*. New York: The Free Press.
- Bargh, J. A. (1989). Conditional automaticity: Varieties of automatic influence in social perception and cognition. In J. S. Uleman & J. A. Bargh (Eds.), *Unintended thought* (pp. 3-51). New York: Guilford Press.
- Bargh, J. A. (1994). The four horsemen of automaticity: Awareness, intention, efficiency, and control in social cognition. In R. S. Wyer & T. K. Srull (Eds.), *Handbook of social cognition* (Vol. 1, pp. 1-40). Hillsdale, NJ: Erlbaum Press.
- Bar-Tal, D. (1989). Delegitimization: The extreme case of stereotyping and prejudice. In D. Bar-Tal, C. F. Graumann, A. W. Kruglanski, & W. Stroebe (Eds.), *Stereotyping and prejudice: Changing conceptions* (pp. 169-182). New York: Springer-Verlag.
- Bar-Tal, D. (2000). *Shared beliefs in a society: Social psychological analysis*. Thousand Oaks, CA: Sage Publications.
- Battacchi, M. W. (1972). *Meridionali e Settentrionali nella struttura del pregiudizio etnico in Italia. [Southerners and Northerners within the structure of ethnic prejudice in Italy]*. Bologna, Italy: Il Mulino.

- Berry, J.W. (1997). Immigration, acculturation and adaptation. *Applied Psychology: An International Review*, 46, 5-34.
- Bettencourt, B. A., Charlton, K., Dorr, N., & Hume D. L. (2001). Status differences and in-group bias: A meta-analytic examination of the effects of status stability, status legitimacy, and group permeability. *Psychological Bulletin*, 127, 520-542.
- Billig M., & Tajfel H. (1973). Social categorization and similarity in intergroup behavior. *European Journal of Social Psychology*, 3, 27-52.
- Blair, I. V., Ma, J. E., & Lenton, A. P. (2001). Imagining stereotypes away: The moderation of automatic stereotypes through mental imagery. *Journal of Personality and Social Psychology*, 81, 828-841.
- Blanton, H., & Jaccard, J. (2006). Arbitrary metrics in psychology. *American Psychologist*, 61, 27-41.
- Boccatto, G., Capozza, D., Falvo, R., & Durante, F. (2008). The missing link: Ingroup, outgroup and the human species. *Social Cognition*, 26, 223-233.
- Boccatto, G., Cortes, B. P., Demoulin, S., & Leyens, J.-Ph. (2007). The automaticity of infra-humanization. *European Journal of Social Psychology*, 37, 987-999.
- Boyle, R. (1972). *The flower of the dragon: The breakdown of the U.S. Army in Vietnam*. San Francisco: Rampart Press.
- Brewer, M. B., & Campbell, D. T. (1976). *Ethnocentrism and intergroup attitudes: East African evidence*. New York: Halstead-Sage.
- Brewer, M. B., Manzi, J. M., & Shaw, J. S. (1993). In-group identification as a function of depersonalization, distinctiveness, and status. *Psychological Science*, 4, 88-92.
- Brigham, J. C. (1974). Views of Black and White children concerning the distribution of personality characteristics. *Journal of Personality*, 42, 144-158.
- Brigham, J. C. (1993). College students' racial attitudes. *Journal of Applied Social Psychology*, 23, 1933-1967.
- Cairns, E., Tam, T., Hewstone, M., & Niens, U. (2005). Intergroup forgiveness and intergroup conflict: Northern Ireland, a case study. In J. Everett & L. Worthington (Eds.), *Handbook of forgiveness*. New York: Brunner-Routledge.
- Campbell, A. (1971). *White attitudes toward Black people*. Ann Arbor: University of Michigan Institute for Social Research.
- Campbell, D. T. (1958). Common fate, similarity and other indices of the status aggregates of persons as social entities. *Behavioral Science*, 3, 14-25.



- Capozza, D., Andrighetto, L., Falvo, R., & Trifiletti, E. (2006). The use of GNAT for studying intergroup dehumanization. *TPM, Testing, Psychometrics, and Methodology, 13*, 295-304.
- Capozza, D., Bonaldo, E., & Di Maggio, A. (1982). Problems of identity and social conflict: Research on ethnic groups in Italy. In H. Tajfel (Ed.), *Social identity and intergroup relations* (pp. 299-334). Cambridge, UK: Cambridge University Press.
- Capozza, D., Trifiletti, E., Vezzali, L., & Andrighetto, L. (in press). Americans are barbarians or allies? Images of Americans in the Italian social context. *Basic and Applied Social Psychology*.
- Carella, S., & Vaes, J. (2006). Lost SMS: Comportamenti di aiuto indotti dalle emozioni tipicamente umane nelle relazioni intergruppo [Lost SMS: Helping behaviours induced by uniquely human emotions in intergroup relations]. *Bolletino di Psicologia Applicata, 250*, 5-12.
- Castano, E., & Giner-Sorolla, R. (2006). Not quite human: Infrahumanization in response to collective responsibility for intergroup killing. *Journal of Personality and Social Psychology, 90*, 804-818.
- Castelli F., Happé F., Frith U., & Frith C. D. (2000). Movement and mind: A functional imaging study of perception and interpretation of complex intentional movement patterns. *NeuroImage, 12*, 314-325.
- Castelli, L., & Paladino, M. P. (2002, June). *Spontaneous behavioral tendencies in intergroup perceptions*. Poster session presented at the 13th General meeting of the European Association of Experimental Social Psychology, San Sebastian, Spain.
- Castelli, L., Zogmaister, C., & Arcuri, L. (2001). Exemplar activation and interpersonal behavior. *Current Research in Social Psychology, 6*, 33-44.
- Chen, M., & Bargh, J. A. (1999). Consequences of automatic evaluation: Immediate behavioural predispositions to approach or avoid the stimulus. *Personality and Social Psychology Bulletin, 25*, 215-224.
- Cortes, B. P., Demoulin, S., Rodriguez, R. T., Rodriguez, A. P., & Leyens, J.-Ph. (2005). Infra-humanization or familiarity? Attribution of uniquely human emotions to the self, the ingroup, and the outgroup. *Personality and Social Psychology Bulletin, 31*, 243-253.
- Cooper, J. (1974). Population control and the psychology of forced compliance. *Journal of Social Issues, 30*, 265-277.

- Crocker, J. & Major, B. (1989). Social stigma and self-esteem: The self-protective properties of stigma. *Psychological review*, 96, 608-630.
- Crocker, J., Major, B. & Steele, C. M. (1998). Social stigma. In D. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of Social Psychology*, (pp. 504-553). Boston, MA: McGraw Hill.
- Czopp, A. M. & Monteith, M. J. (2003). Confronting prejudice (literally): Reactions to confrontations of racial and gender bias. *Personality and Social Psychology Bulletin*, 29, 532-544.
- Dasgupta, N. (2004). Implicit ingroup favoritism, outgroup favoritism, and their behavioral manifestations. *Social Justice Research*, 17, 143-169.
- Dasgupta, N., McGhee, D. E., Greenwald, A. G., & Banaji. M. R. (2000). Automatic preference for White Americans: Eliminating the familiarity explanation. *Journal of Experimental Social Psychology*, 36, 316-328.
- De Houwer, J. (2003). The extrinsic affective Simon task. *Experimental Psychology*, 50, 77-85.
- Delgado, N., Rodriguez, P. A., Leyens J.-Ph., Vaes, J., Rodriguez, R. T., & Betancourt, V. (2007). *All out-groups are not equally humanized: The role of similarity, friendship, knowledge, and status*. Manuscript submitted for publication.
- Delgado, N., Rodriguez, P. A., & Rodriguez, R. T. (2006). [Infra-humanization and contexts of inter-group comparison]. Unpublished raw data.
- Demoulin, S., Leyens, J.-Ph., Paladino, M. P., Rodriguez, R. T., Rodriguez, A. P., & Dovidio, J. F. (2004). Dimensions of uniquely and non-uniquely human emotions. *Cognition and Emotion*, 18, 71-96.
- Demoulin, S., Rodriguez, R. T., Rodriguez, A. P., Vaes, J., Paladino, M. P., Gaunt, R., et al. (2004). Emotional prejudice can lead to infra-humanisation. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 15, pp. 259-296). Hove, UK: Psychology Press.
- Des Forges, A. (1999). *Leave none to tell the story: Genocide in Rwanda*. New York: Human rights watch.
- Deutsch, M. (1973). *The resolution of conflict: Constructive and destructive processes*. New Haven, CT: Yale University Press.
- Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology*, 56, 5-18.

- Dihel, M. (1990). The minimal group paradigm: Theoretical explanations and empirical findings. In W. Stroebe & M. Hewstone (Eds.), *European Review of Social Psychology* (Vol. 1, pp.236-292), New York: Wiley.
- Dovidio, J. F., Evans, N., & Tyler, R. B. (1986). Racial stereotypes: The contents of their cognitive representations. *Journal of Experimental Social Psychology*, 22, 22-37.
- Dovidio, J. F., Pearson, A. R., & Orr, P. (2008). Social psychology and neuroscience: Strange bedfellows or a healthy marriage?. *Group Processes & Intergroup Relations*, 11, 247-263.
- Drinnon, R. (1990). *Facing west: The metaphysics of indian-hating and empire-building*. New York: Schocken.
- Duncan, B. L. (1976). Differential social perception and attribution of intergroup violence: Testing the lower limits of stereotyping of blacks. *Journal of Personality and Social Psychology*, 34, 590-598.
- Durante, F. (2008). *Testing and extending the stereotype content model*. Unpublished doctoral dissertation, University of Padova, Italy.
- Eberhardt, J. L., Goff, P. A., Purdie, V. J., & Davies, P. G. (2004). Seeing Black: Race, crime, and visual processing. *Journal of Personality and Social Psychology*, 87, 876-893.
- Ekman, P. (1992). An argument for basic emotions. *Cognition and Emotion*, 6, 169-200.
- Ellemers, N., Wilke, H., & van Knippenberg, A. (1993). Effects of the legitimacy of low group or individual status on individual and collective status-enhancement strategies. *Journal of Personality and Social Psychology*, 64, 766-778.
- Epstein, S. (1984). Controversial issues in emotion theory. *Review of Personality and Social Psychology*, 5, 64-88.
- Fazio, R. H., Jackson, J. R., Dunton, B. C., & Williams, C. J. (1995). Variability in automatic activation as an unobtrusive measure of racial attitudes: A bona fide pipeline? *Journal of Personality and Social Psychology*, 69, 1013-1027.
- Fein, S., & Spencer, S. J. (1997). Prejudice and self-image maintenance: Affirming the self through derogating the others. *Journal of Personality and Social Psychology*, 73, 31-44.
- Fiske, S. T., Cuddy, A. J. C., & Glick, P. (2007). Universal dimensions of social perception: Warmth and competence. *Trends in Cognitive Science*, 11, 77-83.

- Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, *82*, 878-902.
- Fletcher P. C., Happé F., Frith U., Baker S. C., Dolan R. J., Frackowiak R. S. J., et al. (1995). Other minds in the brain: A functional imaging study of “theory of mind” in story comprehension. *Cognition*, *57*, 109-128.
- Gaertner, S. L., & Dovidio, J. F. (1977). The subtlety of white racism, arousal, and helping behavior. *Journal of Personality and Social Psychology*, *35*, 691-707.
- Gaertner, S. L., & Dovidio, J. F. (1986). The aversive form of racism. In J. F. Dovidio & S. L. Gaertner (Eds.), *Prejudice, discrimination, and racism* (pp. 61-89). Orlando, FL: Academic Press.
- Gaertner, S. L., & McLaughlin, J. P. (1983). Racial stereotypes: Associations and ascriptions of positive and negative characteristics. *Social Psychological Quarterly*, *46*, 23-30.
- Gaunt, R., Leyens, J-Ph., & Demoulin, S. (2002). Intergroup relations and the attribution of emotions: Controllability of memory for secondary emotions associated to ingroup versus outgroup. *Journal of Experimental Social Psychology*, *38*, 508-514.
- Gawronski, B. (in press). Ten frequently asked questions about implicit measures and their frequently supposed, but not entirely correct answers. *Canadian Psychology*.
- Gawronski, B., Ehrenberg, K., & Banse, R. (2003). It’s in the mind of the beholder: The impact of stereotypic associations on category-based and individuating impression formation. *Journal of Experimental Social Psychology*, *39*, 16-30.
- Giles, H., & Coupland, N. (1991). *Language: Contexts and consequences*. Oxford, U.K.: University Press.
- Giles, H., Taylor, D. M., & Bourhis, R. Y. (1977). Dimensions of Welsh identity. *European Journal of Social Psychology*, *7*, 165-174.
- Glick, P., Fiske, S. T., Abrams, D., Dardenne, B., Ferreira, M. C., Gonzalez, R., et al. (2006). Anti-American sentiment and America’s perceived intent to dominate: An 11-nation study. *Basic and Applied Social Psychology*, *28*, 363-373.
- Goff, P. A., Eberhardt, J. L., Williams, M. J., & Jackson, M. C. (2008). Not yet human: Implicit knowledge, historical dehumanization, and contemporary consequences. *Journal of Personality and Social Psychology*, *94*, 292-306.

- Gourevitch, P. (1998). *We wish to inform you that tomorrow we will be killed with our families*. New York: Picador.
- Green, D. M., & Swets, J. A. (1966). *Signal detection theory and psychophysics*. New York: Wiley.
- Greenwald, A. G. (1980). The totalitarian ego: Fabrication and revision of personal history. *American Psychologist*, *35*, 603-618.
- Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review*, *102*, 4-27.
- Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology*, *74*, 1464-1480.
- Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: I. An improved scoring algorithm. *Journal of Personality and Social Psychology*, *85*, 197-216
- Harris, L. T., & Fiske, S. T. (2006). Dehumanizing the lowest of the low: Neuroimaging responses to extreme outgroups. *Psychological Science*, *17*, 847-853.
- Harris, L. T., & Fiske, S. T. (in press). Perceiving humanity: Dehumanized perception demonstrates social neuroscience approach. In A. Todorov, S. T. Fiske, & D. Prentice (Eds.), *Social Neuroscience: Toward Understanding the Underpinnings of the Social Mind*. New York: Oxford University Press.
- Harris, L. T., McClure, S., Van den Bos, W., Cohen, J. D., & Fiske, S. T. (2007). Regions of MPFC differentially tuned to social and nonsocial affective stimuli. *Cognitive and Behavioral Neuroscience*, *7*, 309-316.
- Harris, L. T., Todorov, A., & Fiske, S. T. (2005). Attributions on the brain: Neuroimaging dispositional inferences, beyond theory of mind. *NeuroImage*, *28*, 763-769.
- Haslam, N. (2006). Dehumanization: An integrative review. *Personality and Social Psychology Review*, *10*, 252-264.
- Haslam, N., Bain, P., Douge, L., Lee, M., & Bastian, B. (2005). More human than you: Attributing humanness to self and others. *Journal of Personality and Social Psychology*, *89*, 937-950.
- Haslam, N., Loughnan, S., Reynolds, C., & Wilson, S. (2007). Dehumanization: A new perspective. *Social and Personality Compass*, *1*, 409-422.
- Haslam, N., Rothschild, L., & Ernst, D. (2002). Are essentialist beliefs associated with prejudice? *British Journal of Social Psychology*, *41*, 87-100.

- Hatzfeld, J. (2004). *Machete season: The killers in Rwanda speak*. New York: Farrar, Straus, and Giroux.
- Hogg, M. A., & Abrams, D. (1988) *Social identifications: A social psychology of intergroup relations and group processes*. London: Routledge.
- Inquisit 2.0. [Computer software] (2006).Seattle, WA: Millisecond Software.
- Izard, C. E. (1977). *Human emotions*. New York: Plenum.
- Jacoby, L. (1991). A process dissociation framework: Separating automatic from intentional uses of memory. *Journal of Memory and Language, 30*, 513-541.
- Jahoda, G. (1999). *Images of savages: Ancient roots of modern prejudice in Western culture*. New York: Routledge.
- Jost, J. T. (1997). An experimental replication of the depressed entitlement effect among women. *Psychology of Women Quarterly, 21*, 387-393.
- Jost, J. T. (2001). Outgroup favoritism and the theory of system justification: An experimental paradigm for investigating the effects of socio-economic success on stereotype content. In G. Moskowitz (Ed.), *Cognitive social psychology: The Princeton symposium on the legacy and future of social cognition* (pp. 89-102). Mahwah, NJ: Erlbaum Press.
- Jost, J. T., & Banaji, M. R. (1994). The role of stereotyping in system-justification and the production of false consciousness. *British Journal of Social Psychology, 33*, 1-27.
- Jost, J. T., Banaji, M. R., & Nosek, B. A. (2004). A decade of system justification theory: Accumulated evidence of conscious and unconscious bolstering of the status quo. *Political Psychology, 25*, 881-919.
- Jost, J. T., & Burgess, D. (2000). Attitudinal ambivalence and the conflict between group and system justification motives in low status groups. *Personality and Social Psychology Bulletin, 26*, 293-305.
- Jost, J. T., Burgess, D., & Mosso, C. (2001). Conflicts of legitimation among self, group, and system: The integrative potential of system justification theory. In J. T. Jost & B. Major (Eds.), *The psychology of legitimacy: Emerging perspectives on ideology, justice, and intergroup relations* (pp. 363-388). New York: Cambridge University Press.
- Jost, J. T., Kruglanski, A. W., & Simon, L. (1999). Effects of epistemic motivation on conservatism, intolerance, and other system justifying attitudes. In L. Thompson, D. M. Messick, & J. M. Levine (Eds.), *Shared cognition in organizations: The management of knowledge* (pp. 91-116). Mahwah, NJ: Erlbaum Press.

- Jost, J. T., Mosso, C., Rubini, M., & Guermandi, C. (2000). Unpublished raw data.
- Jost, J. T., Pelham, B. W., & Carvallo, M. (2002). Non-conscious forms of system justification: Cognitive, affective, and behavioral preferences for higher status groups. *Journal of Experimental Social Psychology*, *38*, 586-602.
- Judd, C. M., James-Hawkins, L., Yzerbyt, V., & Kashima, Y. (2005). Fundamental dimensions of social judgment: Understanding the relations between judgments of competence and warmth. *Journal of Personality and Social Psychology*, *89*, 899-913.
- Karpinski, A., & Steinman, R. B. (2006). The Single Category Implicit Association Test as a measure of implicit social cognition. *Journal of Personality and Social Psychology*, *91*, 16-32.
- Kawakami, K., Dion, K. L., & Dovidio, J. F. (1999). The Stroop task and preconscious activation of racial stereotypes. *Swiss Journal of Psychology*, *58*, 241-250.
- Kawakami, K., & Dovidio, J. F. (2001). The reliability of implicit stereotyping. *Personality and Social Psychology Bulletin*, *27*, 212-225.
- Keen, S. (1986). *Faces of the enemy*. New York: Harper & Row.
- Kelman, H. C. (1973). Violence without moral restraint: Reflections on the dehumanization of victims and victimizers. *Journal of Social Issues*, *29*, 25-61.
- Lane, K., Banaji, M. R., Nosek, B. A., & Greenwald, A. G. (2007). Understanding and using the Implicit Association Test: IV. What we know (so far) about the method. In N. Schwarz & B. Wittenbrink (Eds.), *Implicit measures of attitudes* (pp. 59-102). New York: Guilford Press.
- Lane, R. E. (1962). *Political ideology: Why the American common man believes what he does*. New York: Free Press.
- Lemaine, J. M., Kastarsztejn, J., & Personnaz, B. (1978). Social differentiation. In H. Tajfel (Ed.), *Differentiation between social groups: Studies in the social psychology of intergroup relations* (pp. 269-300). London: Academic Press.
- Lerner, M. J. (1980). *The belief in a just world: A fundamental delusion*. New York: Plenum.
- LeVine, R. A., & Campbell, D. T. (1972). *Ethnocentrism: Theories of conflict, ethnic attitudes and group behaviour*. New York: Wiley.
- Lévi-Strauss, C. (1952). *Race et histoire [Race and history]*. Paris: Denoël.
- Levy, P. B. (1992). *Let Freedom Ring: A Documentary History of the Modern Civil Rights Movement*. New York: Praeger.

- Leyens, J.-Ph., Cortes, B. P., Demoulin, S., Dovidio, J. F., Fiske, S. T., Gaunt, R., et al. (2003). Emotional prejudice, essentialism, and nationalism. *European Journal of Social Psychology, 33*, 703-717.
- Leyens, J.-Ph., Demoulin, S., Vaes, J., Gaunt, R., & Paladino, M. P. (2007). Infrahumanization: The wall of group differences. *Social Issues and Policy Review, 1*, 139-172.
- Leyens J-Ph., Paladino, M. P., Rodriguez, R. T., Vaes, J., Demoulin, S., Rodriguez, A. P., et al. (2000). The emotional side of prejudice: The role of secondary emotions. *Personality and Social Psychology Review, 4*, 186-197.
- Leyens, J.-Ph., Rodriguez, A. P., Rodriguez, R. T., Gaunt, R., Paladino, M. P., Vaes, J., et al. (2001). Psychological essentialism and the differential attribution of uniquely human emotions to ingroups and outgroups. *European Journal of Social Psychology, 31*, 395-411.
- Leyens, J-Ph., Rodriguez, A. P., Rodriguez, R. T., Paladino, P. M., & Vaes, J. (1999). *Psychological essentialism and the differential attribution of typically human emotions to ingroup and outgroup*. Unpublished manuscript.
- Levine, R. A., & Campbell, D. T. (1972). *Ethnocentrism: Theories of conflict, attitudes and group behavior*. New York: Wiley.
- Lindqvist, S. (1998). *Exterminate all the brutes*. New York: Granta Books.
- Livingston, R. W. (2002). The role of perceived negativity in the moderation of African Americans' implicit and explicit racial attitudes. *Journal of Experimental Social Psychology, 38*, 405-413.
- Locke, V., MacLeod, C., & Walker, I. (1994). Automatic and controlled activation of stereotypes: Individual differences associated with prejudice. *British Journal of Social Psychology, 33*, 29-46.
- Lott, T. L. (1999). *The invention of race: Black culture and the politics of representation*. Malden, MA: Blackwell Publishers.
- Loughnan, S., & Haslam, N. (2007). Animals and androids: Implicit associations between social categories and nonhumans. *Psychological Science, 18*, 116-121.
- Maison, D., Greenwald, A. G., & Bruin, R. H. (2004). Predictive validity of the Implicit Association Test in studies of brands, consumer attitudes, and behavior. *Journal of Consumer Psychology, 14*, 405-415.
- McConahay, B. J. (1983). Modern racism and modern discrimination. *Personality and Social Psychology Bulletin, 9*, 551-558.



- Medin, D. (1989). Concepts and conceptual structure. *American Psychologist*, *44*, 1469-1481.
- Medin, D., & Ortony, A. (1989). Psychological essentialism. In S. Vosniadou & A. Ortony (Eds.), *Similarity and analogical reasoning* (pp.179-195). Cambridge, UK: Cambridge University Press.
- Meyer, D. E., & Schvaneveldt, R. W. (1976). Meaning, memory structure, and mental processes. *Science*, *192*, 27-33.
- Mikulincer, M., & Shaver, P. R. (2005). Attachment theory and emotions in close relationships: Exploring the attachment-related dynamics of emotional reactions to relational events. *Personal Relationships*, *12*, 149-168.
- Milgram, S. (1977). *The individual in a social world*. New York: McGraw-Hill.
- Miranda, M. & Gouveia-Pereira, M. (2006). *Identidade Pessoal, Identidade Social e Essencialismo Psicológico em Adolescentes Ciganos e Não-Ciganos*. Unpublished graduate thesis, Lisboa: Instituto Superior de Psicologia Aplicada.
- Mirowska, M. & Kofta, M. (2004/2005). *Infra-humanization of outgroup members emerges in the minimal group paradigm*. Unpublished manuscript.
- Mitchell, J. P., Banaji, M. R., & Macrae, C. N. (2005). The link between social cognition and self-referential thought in the medial pre-frontal cortex. *Journal of Cognitive Neuroscience*, *17*, 1306-1315.
- Mitchell, J. P., Heatherton, T. F., & Macrae, C. N. (2004). Distinct neural systems subserve person and object knowledge. In J. Cacioppo, & G. Berntson (Eds.) *Essays in Social Neuroscience*. Cambridge, MA: MIT Press.
- Montaruli, E., Andrighetto, L., & Capozza, D. (2008). *Measuring implicit preferences in acculturation orientations*. Unpublished manuscript.
- Mullen, B., Brown, R., & Smith, C. (1992). Ingroup bias as a function of salience, relevance and status: An integration. *European Journal of Social Psychology*, *22*, 103-122.
- Neely, J. H. (1977). Semantic priming and retrieval from lexical memory: Roles of inhibitionless spreading activation and limited-capacity attention. *Journal of Experimental Psychology:General*, *106*, 226-254.
- Neumann, R., Hülsenbeck, K., & Seibt, B. (2004). Attitudes towards people with AIDS and avoidance behavior: Automatic and reflective bases of behavior. *Journal of Experimental Social Psychology*, *40*, 543-550.
- Nosek, B. A., & Banaji, M. R. (2001). The Go/No-go Association Task. *Social Cognition*, *19*, 625-666.

- Nosek, B. A., Banaji, M. R., & Greenwald, A. G. (2002). Harvesting implicit group attitudes and beliefs from a demonstration web site. *Groups dynamics theory. Research and practice*, 6, 101-115.
- Nosek, B. A., Greenwald, A. G., & Banaji, M. R. (2005). Understanding and using the Implicit Association Test: II. Method variables and construct validity. *Personality and Social Psychology Bulletin*, 31, 166-180.
- O' Connor, M., Loughnan, S., & Haslam, N. (2007). *The self is implicitly seen as more human than others*. Unpublished manuscript.
- Olson, M. A., & Fazio, R. H. (2002). Implicit acquisition and manifestation of classically conditioned attitudes. *Social Cognition*, 20, 89-103.
- Opatow, S. (1990). Moral exclusion and injustice: An introduction. *Journal of Social Issues*, 46, 173-182.
- Ottaway, S. A., Hayden, D. C., & Oakes, M. A. (2001). Implicit attitudes and racism: Effects of word familiarity and frequency on the Implicit Association Test. *Social Cognition*, 19, 97-144.
- Paladino, M. P., Leyens, J.-Ph., Rodriguez, R. T., Rodriguez, A. P., Gaunt, R., & Demoulin, S. (2002). Differential association of uniquely and non uniquely human emotions with the ingroup and the outgroup. *Group Processes and Intergroup Relations*, 5, 105-117.
- Paladino, M. P., Vaes, J., Castano, E., Demoulin, S., & Leyens, J.-Ph. (2004). Emotional infra-humanization in intergroup relations: The role of national identification in the attribution of primary and secondary emotions to Italians and Germans. *Cahiers de Psychologie Cognitive/Current Psychology of Cognition*, 22, 519-536.
- Payne, B. K., Chen, S. M., Govorun, O., & Stewart, B. D. (2005). An inkblot for attitudes: Affect misattribution as implicit measurement. *Journal of Personality and Social Psychology*, 89, 277-293.
- Pettigrew T. F., & Meertens R. W. (1995). Subtle and blatant prejudice in Western Europe. *European Journal of Social Psychology*, 25, 57-75.
- Posner, M. I., & Snyder, C. R. (1975). Attention and cognitive control. In R. L. Solso (Ed.), *Information Processing and Cognition* (pp. 55-85). Hillsdale, NJ: Erlbaum Press.
- Ridgeway, C. L. (1997). Interaction and the conservation of gender inequality: Considering employment. *American Sociological Review*, 62, 218-235.
- Rokeach, M. (1973). *The nature of human values*. New York: Free Press.

- Rosch, E. H. (1978). Principles of categorization. In E. H. Rosch & B. Lloyd (Eds.), *Cognition and Categorization* (pp. 27-48). Hillsdale, N.J.: Erlbaum Press.
- Rothbart, M., & Taylor, M. (1992). Category labels and social reality: Do we view social categories as natural kinds? In G. Semin & F. Fiedler (Eds.), *Language, interaction and social cognition* (pp. 11-36). London: Sage Ltd.
- Rothermund, K., & Wentura, D. (2004). Underlying processes in the Implicit Association Test: Dissociating salience from associations. *Journal of Experimental Psychology: General*, *133*, 139-165.
- Rubin, M., & Hewstone, M. (2004). Social identity, system justification, and social dominance: Commentary on Reicher, Jost et al., and Sidanius et al. *Political Psychology*, *25*, 823-844.
- Rudman, L. A., Feinberg, J., & Fairchild, K. (2002). Minority members' implicit attitudes: Automatic ingroup bias as a function of group status. *Social Cognition*, *20*, 294-320.
- Schacter, D. L. (1987). Implicit memory: History and current status. *Journal of Experimental Psychology: Learning, memory and cognition*, *13*, 501-518.
- Schwartz, S. H., & Struch, N. (1989). Values, stereotypes, and intergroup antagonism. In D. Bar-Tal, C. F. Graumann, A. W. Kruglanski, & W. Stroebe (Eds.), *Stereotyping and prejudice: Changing conceptions* (pp. 151-167). New York: Springer-Verlag.
- Shaver, P. R., Wu, S., & Schwarz, J. C. (1992). Cross-cultural similarities and differences in emotion and its representation: A prototypical approach. In M. S. Clark (Ed.), *Emotion: Review of personality and social psychology* (pp. 175-212). Newbury Park, CA: Sage.
- Sherif, M. (1966). *Group conflict and cooperation*. London: Routledge & Kegan Paul.
- Sidanius, J., & Pratto, F. (1999). *Social Dominance: An intergroup theory of social hierarchy and oppression*. New York: Cambridge University Press.
- Son Hing, L. S., Li, W., & Zanna, M. P. (2002). Inducing hypocrisy to reduce prejudicial responses among aversive racists. *Journal of Experimental Social Psychology*, *38*, 71-78.
- Spence, A., & Townsend, E. (2006). Implicit attitudes towards genetically modified (GM) foods: A comparison of context-free and context-dependent evaluations. *Appetite*, *46*, 67-74.
- Sroufe, A. L. (1979). Socio-emotional development. In J. D. Osofsky (Ed.), *Handbook of infant development* (pp. 462-516). New York: Wiley.

- Staub, E. (1990). Moral exclusion, personal goal theory and extreme destructiveness. *Journal of Social Issues, 46*, 47-65.
- Staub, E. (2006). Reconciliation after genocide, mass killing, or intractable conflict: Understanding the roots of violence, psychological recovery, and steps toward a general theory. *Political Psychology, 27*, 867-895.
- Staub, E., & Pearlman, L. A. (2001). Healing, reconciliation, and forgiving after genocide and other collective violence. In R. G. Helmick & R. L. Petersen (Eds.), *Forgiveness and reconciliation: Religion, public policy, and conflict transformation* (pp. 195-217). Radnor, PA: Templeton Foundation Press.
- Sumner, W. G. (1906). *Folkways*. New York: Ginn.
- Tajfel, H. (1981). *Human groups and social categories*. Cambridge, UK: Cambridge University Press.
- Tajfel, H., Billig, M. G., Bundy, R. P., & Flament, C. (1971). Social categorization and intergroup behaviour. *European Journal of Social Psychology, 1*, 149-178.
- Tajfel, H., & Turner, J. C. (1979a). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33-47). Monterey, CA: Brooks/Cole.
- Tajfel, H., & Turner, J. C. (1979b). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (2nd ed., pp. 7-24). Chicago: Nelson-Hall.
- Tajfel, H. and Turner, J. C. (1986). The social identity theory of inter-group behavior. In S. Worchel and L. W. Austin (Eds.), *Psychology of Intergroup Relations* (pp. 7-24). Chigago: Nelson-Hall.
- Tam, T., Hewstone, M., Cairns, E., Tausch, N., Maio, G., & Kenworthy, J. (2007). The impact of intergroup emotions on forgiveness in Northern Ireland. *Group Processes and Intergroup Relations, 10*, 119-136.
- Teachman, B. A. (2007). Evaluating implicit spider fear associations using the Go/No-go Association Task. *Journal of Behavior Therapy and Experimental Psychiatry, 38*, 156-167.
- Teige-Mocigemba, S., Klauer, K. C., & Rothermund, K. (in press). Minimizing method-specific variance in the IAT: The Single Block IAT. *European Journal of Psychological Assessment*.
- Trifiletti, E. (2008). *Intergroup trust in the investment game: The role of status*. Unpublished doctoral dissertation, University of Padova, Italy.

- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Oxford, UK: Blackwell Publishers.
- Twenge, J. M., & Campbell, K. W. (2002). Self-esteem and socioeconomic status: A meta-analytic review. *Personality and Social Psychology Review*, 6, 59-71.
- Tyler, T. R., & McGraw, K. M. (1986). Ideology and the interpretation of personal experience: Procedural justice and political quiescence. *Journal of Social Issues*, 42, 115-128.
- Vaes, J., Paladino, M. P., Castelli, L., Leyens, J.-Ph., & Giovanazzi, A. (2003). On the behavioral consequences of infrahumanization: The implicit role of uniquely human emotions in intergroup relations. *Journal of Personality and Social Psychology*, 85, 1016-1034.
- Vaes, J., Paladino, M. P., & Leyens, J.-Ph. (2006). Priming uniquely human emotions and the in-group (but not the out-group) activates humanity concepts. *European Journal of Social Psychology*, 36, 169-181.
- Viki, G.T. & Calitri, R. (2008). Infrahuman outgroup or suprahuman ingroup: The role of nationalism and patriotism in the infrahumanization of outgroups. *European Journal of Social Psychology*, 38, 1054-1061.
- Viki, G. T., Winchester, L., Titshall, L., Chisango, T., Pina, A., & Russell, R. (2006). Beyond secondary emotions: The infrahumanization of outgroups using human-related and animal-related words. *Social Cognition*, 24, 753-775.
- Volpato, C., Manganelli, A. M., Mucchi-Faina, A., Canova, L., & Durante, F. (in press). Arroganza, Competenza, Calore? L'immagine degli Stati Uniti nel contesto italiano [Arrogance, Competence, Warmth? The image of United States within the Italian context]. *Psicologia Sociale*.
- Wentura, D., Rothermund, K., & Bak, P. (2000). Automatic vigilance: The attention-grabbing power of approach- and avoidance-related social information. *Journal of Personality and Social Psychology*, 78, 1024-1037.
- Williams, J. (1987). *Eyes on the prize: America's civil rights years 1954-1965*. New York: Penguin.
- Wittenbrink, B., & Schwarz, N. (2007). *Implicit measures of attitudes*. New York: Guilford Press.
- Wittenbrink, B., Judd, C. M., & Park, B. (1997). Evidence for racial prejudice at the implicit level and its relationship with questionnaire measures. *Journal of Personality and Social Psychology*, 72, 262-274.

- Yzerbyt, V., Rocher, S., & Schadron, G. (1997). Stereotypes as explanations: A subjective essentialistic view of group perception. In N. Ellemers, S. A. Haslam, & R. Spears (Eds.), *The social psychology of stereotyping and group life* (pp. 20-50). Malden, MA: Blackwell Publishers.
- Zebel, S., Zimmermann, A., Viki, G. T., & Doosje, B. (2008). Dehumanization and guilt as distinct but related predictors of reparation policies. *Political Psychology, 29*, 193-219.

