PRINT: ISSN 0971-8923 ONLINE: ISSN 2456-6756
J Soc Sci, 30(1): 71-81 (2012)
DOI: 10.31901/24566756.2012/30.01.08

# Investigating the Role of Denial of Cognition, Capacity for Morality and Perception of Child-likeness in Infrahumanization

**Tadios Chisango**

*Psychology, School of Community and Human Development, Umthombo Building, East Campus, Pvt Bag 3, Wits 2050, Wits University, Johannesburg, South Africa*
*Telephone: 0027 11 717-4546, Mobile: 0027 83 459 9379, Fax: 0027 21 650-4104*
*E-mail: Tadios.Chisango@gmail.com*

**KEYWORDS** Infrahumanization. Down Syndrome. Physical Disability. Emotions. Cognition. Morality. Child-like

**ABSTRACT** Secondary emotions (for example, guilt, shame, and tenderness) are uniquely human, indicate higher cognition, moral capacity, and develop with age, compared with primary emotions (for example, pain, fear, happiness), which humans also share with animals. According to Leyers and colleagues people designate outgroups as less human, that is, infrahumanize them through ascribing them less uniquely human emotions. This paper reports two studies that examined the role of denial of cognition, capacity for morality and perception of child-likeness in denial of secondary emotions to outgroups. In Study 1, it was hypothesized that a sample of psychology students would deny secondary emotions to people with a learning disability, Down syndrome, as a function of denying them cognitive capacities, compared with people with physical disabilities and the ingroup. Study 2 tested denial of secondary emotions to the three target groups as a function of not only denial of cognition, but also of moral capacities, and a tendency to liken the mental capacities of adults to children's. Both studies showed that only people with Down syndrome are denied secondary emotions. In Study 1, denial of secondary emotions to people with Down syndrome was mediated by denial of cognitive capacities. In Study 2, denial of secondary emotions was mediated by an average index of denial of cognitive and moral capacities, and likening mental capacities of the target groups to children's. Both studies also showed greater denial of positive than negative secondary emotions to people with Down syndrome. Results are discussed in terms of infrahumanization theory and romanticization of learning disabilities. Implications of results to people with Down syndrome are also discussed.

## INTRODUCTION

When Caribs were asked whence the came, they answered, "We alone are people". The meaning of the name Kiowa is "real or principal people". The Lapps call themselves "men", or "human beings". The Greenland Eskimo think that Europeans have been sent to Greenland to learn virtue and good manners from the Greenlanders. Their highest form of praise for a European is that he is, or soon will be, as good as a Greenlander. The Tunguses call themselves "men". As a rule it is found that nature people call themselves "men". Others are something else, perhaps not defined, but not real men. In myths the origin of their own tribe is that of the real human race. They do not account for the others (Sumner 1906).

The above epigraph from Sumner's (1906) classical work "Folkways" gives us a privileged snapshot into the type of intergroup cognition that existed just more than a century ago. It suggests that there was a time when tribal groups thought that only they and perhaps a few other proximal groups of their likeness were the only human occupants of the whole universe. Therefore, upon first contact with "strange-looking" humans from distant regions of the world, the first reaction of the tribal groups was perhaps to question the outsiders' difference from their own "prototypical" humanity. The others were perhaps animals which somehow mimicked their own human physical appearance. Strange as it may seem in modern times, the Indians of the Caribbean Islands are known to have let the bodies of the Conquistadores to putrefy in order to see whether they were human like them (Levi-Strauss 1952/1987). A more light-hearted example is provided by the inhabitants of Zimbabwe, who called the Whites "the ones without knees" upon first encountering them because they could not see their knees covered in long pairs of trousers. If these outsiders "lacked knees", they could perhaps not be real human beings; they could be aliens or something else, "perhaps not defined, but not real men", to borrow Sumner's (1906) words. Indeed, it is still typical to overhear Zimbabweans in a conversation casually asking whether a person who is subject of the talk is a "*munhu*", meaning "person", or a "*murungu*", meaning "White person". The examples on Zimbabwe help to demonstrate that the tendency of ascribing full

humanity only to the ingroup has not yet ceased in the modern era, at least in some cultures.

On the basis of their reading of the anthropological literature referred to above (for example, Levi-Strauss 1952/1987; Sumner 1906), Leyens et al. (2000) postulated that, in trying to explain differences between groups, people ascribe a fully human essence to the ingroup, and a less uniquely human one to outgroups. They referred to this tendency as infrahumanization, and further surmised that it occurs outside people's awareness. Similar concepts had been proposed before, but only in reference to more extreme cases usually associated with explicit intergroup aggression, which fall under the general category of dehumanization. For example, delegitimization (Bar Tal 1989) refers to the attachment of extremely negative stereotypes to specific outgroups. Targets of such extreme stereotypes are viewed as violating basic human norms and values, and are therefore excluded from moral sensibilities that normally shield fellow humans from otherwise callous, inhuman forms of aggression. In the same vein, Opotow (1990) and Staub (1989) spoke of moral exclusion, which defines the lack of humanity ascribed to outgroup members who act "outside the boundaries in which moral values, rules, and considerations of fairness apply" (Opotow 1990: 173). The welfare or even lives of those who are morally excluded, like those who are delegitimized, become inconsequential.

Infrahumanization is distinct from other dehumanization processes in that its occurrence is rather tacit. It is this tacitness which makes the study of infrahumanization uniquely relevant to modern times. The metropolitan cities of the present world are not littered by marauding groups who go about declaring that they are the only humans, and brutally murdering those who do not look like them. Instead, they are populated by rather "cultured" people belonging to many different social groups in an atmosphere of apparent quiet and harmony. It is within such seemingly innocuous environments that some people may routinely get implicit cues that they are not as human as others. The covert nature of this type of dehumanization carries a number of important characteristics and implications. First, both the "infrahumanizer" and the "infrahumanizee" may not be aware of, or ready to admit, the mere presence of the prejudice. Second, the rather elusive nature of infrahumanization makes it less amenable to policy interventions. Both of these factors imply that infrahumanization is particularly damaging to victims.

Leyens et al. (2000, 2001) reasoned that infrahumanization occurs partly because of the tendency to ascribe distinct underlying essences to social groups, a process called essentialization (cf. Medin 1989). Such essences are seen as the fundamental units that connect ingroup members at a deep level, and ostensibly account for surface characteristics that differentiate them from outgroups (for example, Yzerbyt et al. 2001). When essentialization is coupled with the tendency to favour the ingroup (for example, Brewer and Silver 1978), the implication is that ingroups are ascribed a superior essence, especially on a dimension as fundamental and contested as humanity.

This line of thinking leads to the question of what are the "things" perceived as unique to ingroup members that presumably make them uniquely human, and are perceived as lacking in (some) outgroups, making them to be perceived as less human. In other words, what is the human essence? The related question is whether or not there is cross-cultural consensus about what the human essence consists of. To empirically capture what the human essence consists of, Leyens et al. (2000) conducted large surveys among students in France which involved listing uniquely human characteristics. The results indicated that three characteristics: intelligence, language and sentiments were invariably the most frequently mentioned. In Leyens et al.'s (2000, 2001) formulation, all uniquely human characteristics (intelligence, uniquely human emotions, and language) are necessary to be considered a full human being. If people are perceived to lack any one of these characteristics, then they are perceived as if they are not quite human. Therefore, to infrahumanize outgroups, it suffices to favour the ingroup on the basis of just one sub-essence of humanity.

In this light, and for a couple of reasons, Leyens and colleagues decided to concentrate on the emotional facet of the human essence. First, previous research had already shown that intergroup bias occurs on intelligence (Crocker et al. 1998) and language (Giles and Coupland 1991), whereas the discriminatory role of emotions had hardly been investigated "except for investigations of emotional reactions in the presence of stigmatized outgroupers" (Leyens et al. 2000:

188). Second, emotions make good stimuli because they are relevant in a wide array of contexts, and are not strongly tied to norms of equity and equality that evoke social desirability concerns (Gaertner and Insko 2001). Important to note, infrahumanization means secondary emotions are ascribed more to the ingroup than to the outgroup, regardless of valence. This differentiates infrahumanization from classic forms of ingroup bias, which are usually characterized by ascription of more positive attributes to the ingroup than to the outgroup (for example, Brewer and Silver 1978).

Further research by Demoulin et al. (2004) confirmed that sentiments are uniquely human emotions, and equate to what are called secondary emotions by emotion scientists (for example, shame, guilt, disappointment, elation, love, tenderness), in contrast to primary/basic emotions (anger, sadness, joy, pain, fear and disgust), which are shared by humans and animals (Ekman 1992; Epstein 1984). Especially relevant to the present research, Demoulin et al. (2004) showed that secondary emotions are differentiated from primary emotions on a number of dimensions, including that they imply higher cognitive and moral capacities, and develop with age.

To date, a lot of different methods have been used to test the notion of infrahumanization. Using the Implicit Association Task, Paladino et al. (2002) showed that ingroup members implicitly associate secondary emotions more strongly with ingroup names, than with outgroup names, regardless of valence. In addition, infrahumanization has been demonstrated through spontaneous attributions of more secondary emotions to the ingroup than to the outgroup, again regardless of valence (for example, Leyens et al. 2001).These authors also demonstrated a bias in favour of the ingroup in a task involving ascription of "sentiments" (that is, secondary emotions), but not of "emotions" or "calcium". In the same vein, Vaes et al. (2006) showed that priming individuals with secondary emotions and the ingroup (but not the outgroup) activates human concepts. Furthermore, using the Wason Selection Task Paradigm (cf. Scaillet and Leyens 2000), Leyens et al. (1999) showed that people deny secondary emotions to outgroups. Perhaps most important in social psychological terms are the behavioural implications of infrahumanization. For instance, Vaes et al. (2003) used a lost-email paradigm to show that expression of secondary emotions elicits "nicer" replies when the sender is an ingroup member than an outgroup member.

However, one potentially fruitful thread of research that has not been considered in previous research on infrahumanization involves the characteristics of secondary emotions versus primary emotions (cf. Demoulin et al. 2004), including being indicative or at least suggestive of higher cognitive and moral capacities, and developing with age. Demoulin et al.'s (2004) findings dovetail with the socio-constructivist perspective on emotions, which holds that the elaborate (that is, secondary) emotions are learnt from the local cultural environment as a function of the development of cognitive capacities and through the accompanying moral development (Averill 1980). Additionally, the biological perspective suggests that secondary emotions appear later in life than primary emotions, as a function partly of cognitive development (Izard 1992). A lingering question is what role, if any, do these intrinsic properties of emotions play in the infrahumanization of (some) outgroups? Inferable from Demoulin et al.'s (2004) findings is that all of the three characteristics referred to above (being considered fully functional in cognitive and moral capacities, and of some age above childhood) are necessary for an individual or group to be fully ascribed secondary emotions. This logically leads to the postulation that denying certain outgroups cognitive and moral capacities, and (thus) perceiving them as childlike, predicts denial of secondary emotions to them. Suffice to say, this postulation shifts focus to those particular outgroups that are denied cognitive and moral capacities, and perceived as childlike. They include people with learning disabilities such as Down syndrome, Williams's syndrome and autism (for example, Vlachou 1993). Learning disabilities are problems that affect the brain and the nervous system at large to receive, process or store information. They are not to be confused with a person's intelligence although they can have a deleterious effect on it (Learning Disabilities 1995).

This research focuses on Down syndrome, because it is one of the most well known developmental disabilities ( for example, Stanton and Coetzee 2004). Also known as Trisomy 21, Down syndrome is a genetic condition in which an extra chromosome leads to delays and problems in physical, cognitive and moral development, such

that adults with the condition are routinely treated as if they were children. Just to make a timely clarification, the issue of whether or not the perception of the above-mentioned deficits in people with Down syndrome is rooted in some objective reality was not a major one in designing this research. Instead, the issue was whether or not the perception of such deficits might predict their infrahumanization. Prejudice and discrimination against people living with Down syndrome including sexual, verbal and physical assaults, and neglect are age old and well-documented phenomena but have not been previously conceived in terms of infrahumanization (cf. Vlachou 1993).

For comparison purposes, the research reported in this article used three target groups: two outgroups (people with Down syndrome, and physical disabilities) and the ingroup (psychology students) to test the hypothesis that denying cognitive and moral capacities to members of a social group, and perceiving them as child-like, predicts their infrahumanization at least through denial of secondary emotions to them. The aim of including people with physical disabilities was to determine whether denial of secondary emotions would be limited to people with Down syndrome as a function of perception of them as being defective in cognitive and moral capacities, and as child-like, or would occur as a function of disability per se (thus also affecting people with physical disabilities). Psychology students were added to the target groups because they constitute the ingroup, and are relatively free of disability. In line with infrahumanization theory, as the ingroup, they would be expected to be denied neither cognitive nor moral capacities and by implication, secondary emotions[1].

To investigate denial of emotions to people with Down syndrome, I devised a new method. I am cognizant of a method of testing emotion denial to outgroups devised by Leyens et al. (1999), which involved adaptation of the Wason Selection task paradigm (cf. Scaillet and Leyens 2000). The researchers asked participants to pick cards that linked group (ingroup vs. outgroup) with emotion (secondary vs. primary) emotions: "if ingroup, primary emotion", "if ingroup, then secondary emotion", "if outgroup, then primary emotion", and "if outgroup, then secondary emotion". In this case, a card that is picked the most reflects the strongest association between group type (ingroup vs outgroup) and emotion type (secondary vs primary). By the same token, a card picked the least reflects the weakest association between group type and emotion type. Results indicated that the "ingroup-secondary emotion" pair of cards was among the most popular choices whereas the "outgroup-secondary emotion" pair was one of the least popular choices. Somewhat complex and rather difficult to understand, denial in this sense means that although the choice of the "outgroup-secondary emotion"-- association was as equally probable as any other choice, including the "ingroup-secondary emotion" association, it was the one least preferred, apparently reflecting a motive to deny secondary emotions to outgroup members.

I hasten to say that I do not question the validity of Leyens et al.'s (1999) method of testing emotion denial, although the present one can provide a viable alternative, if only because it is simpler to use and understand. The method used in this research is an adaptation of the attribution method (cf. Leyens et al. 2001) and involves asking participants to select (zero, one, two, three, four, up to all) emotions they consider not typical of different social groups. "Not typical" is the catchphrase here, embodying the denial, and setting the present method apart from the attribution approach. This method carries a particular strength of explicitly giving the participant the chance to deny (that is, by selecting some emotions) or not to deny any emotions (that is, by not selecting any emotions) to the respective groups. Not denying any emotions to a group is the easy option because it gives the participant the chance of doing almost nothing (that is, not selecting any of the emotions), and be rewarded (for example, with course credit) as much as somebody who goes through assiduously through the process of selection, which equates to denial. Importantly, not denying any emotions to a group in simple terms equates to lack of motive to infrahumanize its members. Given this easy option, a participant who goes all the way to deny a certain group certain emotions would be showing a particularly strong motive. Furthermore, denying only uniquely human emotions, of all emotions, to a group suggests a particularly strong motive to infrahumanize its members, given that there is an explicitly given option not to deny them any emotions.

**Overview of the Studies and Hypotheses**

Two studies were designed to test infrahumanization of people with Down syndrome

through denial of secondary emotions, as a function of denial of cognitive and moral capacities to them, and perceiving them as child-like. Study 1 involved testing denial of primary and secondary emotions to people with Down syndrome, vs people with physical disabilities, and psychology students as a function of denial of cognitive capacities in a mixed design. It was expected that only people with Down syndrome would be denied secondary emotions and that the denial would be mediated by denial of cognitive capacities.

Study 2 tested denial of a different set of primary and secondary emotions to the three groups as a function of not only denial of cognition, but also of moral capacity, and being perceived as child-like, also in a mixed design. It was expected that only people with Down syndrome would be denied secondary emotions and that the denial would be mediated by denial of cognitive and moral capacities, and being considered as possessing child-like mental capacities.

## STUDY 1

### Method

#### *Participants*

A total of 111 (43 females, 68 males) undergraduate Psychology students at the University of Cape Town, South Africa, answered an online questionnaire for course credit. They reported ages ranging from 18 to 27 ($M$ = 20.46, $SD$ = 1.57). The sample was quite diverse, racially, comprising 64 White, 20 Black, and 17 Mixed Race and 10 Indian students.

### MATERIALS AND PROCEDURE

The questionnaire was introduced as a study of characteristics of different social groups. In a third of the cases, the target group was people with Down syndrome. In another third, the target group was people with physical disabilities. For the remaining participants, the target group was psychology students, who constituted the ingroup.

In the Down syndrome version of the questionnaire, participants were first asked to list three things that easily come to their minds when they think of people with Down syndrome. One aim of this task was to gauge participants' understanding of Down syndrome. The next task involved participants selecting either zero or one or more emotions which they considered *not* typical of the target group. The list of emotions contained four positive secondary emotions (tenderness, love, hope, and compassion) and four positive primary emotions (happiness, pleasure, affection, and surprise) that did not differ on valence ($Ms$ = 5.57 and 5.53), $t(11) = 0.76$, $p = .465$. The list also included four negative secondary (guilt, shame, humiliation, and regret) and four negative primary emotions (fear, anger, pain, and rage) with equal valence ($Ms$ = 3.04 and 2.83), $t(11) = 0.90$, $p = .387$. Furthermore, all secondary emotions were rated as more uniquely human than primary emotions ($Ms$ = 4.60 and 3.49), $t(11) = 3.57$, $p < .01$.

The last task involved answering three items that measured denial of cognitive capacities to the target groups. The first, measuring denial of "general thinking capacities" was phrased as "they (people with Down syndrome/physical disabilities or psychology students) lack general thinking skills typical of normal people". The second, measuring denial of memory capacities, was phrased as "they lack memory capacities typical of normal people". The third, measuring denial of perceptual capacities, was phrased as "they lack perceptual skills typical of normal people". All of these items were anchored by a 7-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbalch's alpha for the three items was .92, indicating that the three items were highly reliable as measures of denial of cognition.

### RESULTS

A look at participants' responses pertaining to what first comes to their minds when they think of people with Down syndrome suggested that they understood the aetiology and symptoms of the disability. Responses included "trisomy 21", "mothers over 40 having babies", "almond shaped eyes", "younger intelligence then what age looks like (sic.)", "big round shaped head", "weird eyes", "tongue sticking out", "can't talk properly", "developmentally challenged", "slow to learn", "will never be able to function at full capacity". Although in many cases suggesting prejudices participants held about individuals with Down syndrome, the responses showed that participants had a good lay understanding of the disability.

A 3(target: Down syndrome vs physical disability vs psychology students) X 2(valence: positive vs negative) ANOVA showed all the significant main effects and interactions were qualified by a three-way interaction, $F(2,108) = 20.79$, $p < .001$, partial $\eta^2 = .278^2$. The triple interaction was decomposed for secondary and primary emotions because it was the variable of most relevance.

***Secondary Emotions:*** As expected, there was a main effect of target, $F(2, 108) = 140.66$, $p < .001$. Greatest denial of secondary emotions was to people with Down syndrome ($M = .500$), and the least secondary emotions were denied to the ingroup ($M = .007$). Denial of secondary emotions to people with physical disabilities fell between the two extremes (.014).Tests of a priori contrasts showed that more secondary emotions were denied to people with Down syndrome than to disabled people and psychology students as a combined group, $t(36.98) = 12.09$, $p < .001$. They also showed that more secondary emotions were denied to people with Down syndrome than to people with disability, $t(38.90) = 11.86$, $p < .001$. This finding indicates that denial of secondary emotions is not simply a matter of perceiving any form of disability per se, but of perception of some forms of cognitive deficits in some groups with mental disabilities such as Down syndrome. As expected, there was no difference in denial of secondary emotions between psychology students (the ingroup) and people with physical disabilities, $t(57.93) = 0.72$, $p = .473$.

The main effect for valence of secondary emotions was also significant, $F(1, 108) = 11.83$, $p < .01$, partial $\eta^2 = .099$. More negative secondary emotions ($M = .649$, $SD = .31$) were denied than positive secondary emotions ($M = .351$, $SD = .38$). Interestingly, the valence X target interaction was also significant, $F(2, 108) = 13.76$, $p < .001$, $\eta^2 = .203$. More negative ($M = .649$) than positive secondary emotions ($M = .351$) were denied to people with Down syndrome, $t(36) = 3.70$, $p < .01$. However, there was no difference in denial of positive vs negative secondary emotions to psychology students and people with Down syndrome, $p > .1$.

Denial of more negative than positive secondary emotions to people with Down syndrome could be understood as a form of romanticization of the mental disability. If this were indeed the case, this would reflect in attitudes participants held/hold about Down syndrome, as captured in their spontaneous responses to the question that asked them to list three things that easily come to mind when they think of people with Down syndrome. In this light, themes were coded from the responses. The main themes/variables that emerged were affectionateness, dependency, cognitive impairment, physical inferiority, and chromosomal problem. Mention of each of the above themes by a participant was coded as 1 and lack of mention as 0. A MANOVA was run with the five variables as the IVs and denial of negative secondary emotions versus positive secondary emotions as the DVs. Only the main effect of the perception of people with Down syndrome as affectionate was significant, $F(2, 22) = 4.89$, $p < .05$, $\eta^2 = .308$. Univariate tests showed that the effect of affectionateness was significant only for denial of negative secondary emotions to people with Down syndrome, $F(1, 36) = 8.05$, $p < .05$, partial $\eta^2 = .259$. This finding suggests that certain groups with mental disabilities like Down syndrome are perceived in too romantic a light to be associated with undesirable actions that would potentially result in them feeling humiliation, guilt, shame, embarrassment or any other such negative secondary emotions, besides being perceived as infrahuman.

***Primary:*** Neither the main affect of target, nor the main effect of valence, nor the interaction between the two variables were significant, $p < 1$. Therefore, no further analyses was done on primary emotions.

***Does Denial of Cognition Mediate the Effect of Target on Denial of Secondary Emotions?*** The last analysis in Study 1 focused on whether or not the effect of target on denial of secondary emotions to people with Down syndrome could be accounted for by denial of cognition. Therefore, a mediational analysis (cf. Baron and Kenny 1986) was conducted to examine the role of denial of cognition as a mediator of the target-denial of secondary emotions relationship. The first three criteria for mediation were met; target had significant bivariate relationships with denial of secondary emotions ($\beta = -.74$, $p < .001$), and with denial of cognition ($\beta = -.83$, $p < .001$), and denial of cognition predicted denial of secondary emotions independently of target ($\beta = .50$, $p < .001$). The Sobel test statistic was significant, -4.54. $P < .001$, which suggested that denial of cognition fully mediates the target-denial of secondary emotions relationship.

## DISCUSSION

Results of this study suggest that denial of secondary emotions is limited to groups that are denied cognition, in this case people with Down syndrome. The finding fits well with previous research which showed that secondary emotions indicate higher capacity for cognition than primary emotions (cf. Averill 1980; Demoulin et al. 2004; Izard 1977; Sroufe 1979). It appears that people with Down syndrome are considered too cognitively impaired to be attributed the cognitively complex (secondary) emotions. In contrast, they are not denied the cognitively simple primary emotions, which humans share with animals. These results imply that the age-old, almost universal, prejudice and discrimination against people with Down syndrome and similar disabilities such as Williams's syndrome and autism may be underlain by a tendency to perceive them as if they are not proper humans, that is, a tendency to infrahumanize them. If we consider that the disabilities themselves present their own actual impediments to a satisfying life to individuals with the disabilities, additional tendencies from caregivers and other people in their social environments to infrahumanize them can make their lives insufferable.

The denial of more negative than positive secondary emotions to people with Down syndrome suggests an additional tendency to romanticize the learning disability. It appears to paint the picture of an overly happy, "affectionate" people who cannot be drawn into situations that would see them experiencing negative secondary emotions like humiliation, guilt, regret, disappointment or shame. Alternatively, it suggests that people with Down syndrome would be unaffected emotionally if they go through situations and ordeals that would cause "normal people" to experience disappointment, dismay, guilt, among other negative secondary emotions. This implies that people with Down syndrome apparently cannot feel what "normal humans" uniquely feel when abused or in any other such undesirable situations. Suffice to say, this may legitimate their abuse or failure to provide them with help when they need it. In short, this infrahumanizes them.

One major challenge is how to situate the present findings within the existing infrahumanization literature, which has documented the infrahumanization of cognitively normal groups. One way to reconcile the present findings with previous findings is to see the denial of secondary emotions and cognition as a schema people have about Down syndrome, not as an intergroup bias in the mould postulated by Leyens et al. (2000, 2001). In other words, perception of deficits in cognitive capacities of people with Down syndrome and the related dissociation of secondary emotions with the mental disability may be part of a cluster of ideas people hold about the disability. These ideas may be largely cognitive in their formation and maintenance. This suggests that people may sincerely believe that people with Down syndrome are incapable of experiencing secondary emotions, as a function of cognitive deficists. This postulation further suggests that denial of secondary emotions as a function of denial of cognitive capacities may not be predicted by social identification, thus setting it apart from the type of infrahumanization which targets cognitively normal groups (cf. Leyens et al. 2002).

## STUDY 2

Study 2 was similar to Study 1 in every respect except for two changes. The first change was the use of a different set of emotions, for generalizability purposes. The second change was the testing of denial of secondary emotions to people with Down syndrome (vs people with physical disabilities, and psychology students) as a function of not only denial of cognition, but also of moral capacities, and of the belief that they have child-like mental capacities. Therefore, two more items were added to the design to measure denial of moral capacity and the perception of each target group as childlike. To reiterate, it was expected that only people with Down syndrome would be denied secondary emotions and that the denial would be mediated by denial of cognitive and moral capacities, and being considered child-like in mental capacities.

## METHOD

### *Participants*

A total of 96 (27 males, 69 females) undergraduate Psychology students at the University of Cape Town, South Africa, answered an online questionnaire for course credit. They reported ages ranging from 19 to 27 ($M$ = 20.86, $SD$ = 1.39). The sample consisted of 55 White, 13 Black, 15 Indian and 13 Mixed-Race students.

## PROCEDURE AND MATERIALS

Because the procedure was identical to the one used in Study 1, it is redundant to describe it again. The (different) list of emotions contained four positive secondary emotions (optimism, love, admiration, and sympathy) and four positive primary emotions (attraction, excitement, calmness, and desire) that did not differ on valence (*Ms* = 4.79 and 4.88), $t(14) = .33$, $p = .747$. The list also included four negative secondary (embarrassment, resentment, gloomy, and disappointment) and four negative primary emotions (panic, fright, suffering, and scariness) with equal valence (*Ms* = 2.75 and 2.90), $t(14) = .63$, $p = .542$. Furthermore, all secondary emotions were rated as more uniquely human than primary emotions (*Ms* = 4.75 and 3.20), $t(16) = 3.93$, $p < .01$.

In this study, only a single item was used to measure denial of cognitive capacities to each of the target groups, which was phrased as "they (people with Down syndrome/physical disabilities or psychology students) lack cognitive skills that is, general thinking, reasoning, memory, and perception that are typical of normal people". This item summarized the three items that measured denial of cognition in Study 1 in terms denial of general thinking, memory, and perception. The second, measuring denial of moral capacities, was phrased as "they lack the capacities to tell right from wrong typical of normal people". The third, measuring the likening of adult social groups' mental capacities to children's, was phrased as "adult individuals with Down syndrome/physical disabilities/ adult students of psychology have mental capacities typical of children. All of these items, as in Study 1, were anchored by a 7-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Denial of cognitive capacities (including general thinking, reasoning, memory and perception and moral capacities), moral capacities, and likening mental capacities of target groups to target groups could be parsimoniously represented as measuring denial of the mind. Therefore an averaged index of the three items will be referred to in the analysis as "denial of the mind". Cronbalch's alpha for the three items was .90, indicating that the three items formed a reliable scale measuring denial of the mind.

## RESULTS

A 3(target: Down syndrome vs physical disability vs psychology students) X 2(valence: positive vs negative) X 2 (Emotion: secondary vs primary) ANOVA showed that all the significant main effects and interactions were qualified by a three-way interaction, $F(2, 93) = 13.63$, $p < .001$, partial $\eta^2 = .227$. Like in Study 1, the triple interaction was decomposed for secondary and primary emotions because it was the variable of most relevance.

**Secondary Emotions:** As expected, there was a main effect of target, $F(2, 93) = 39.27$, $p < .001$. Greatest denial of secondary emotions was to people with Down syndrome (*M* = .293), and the least was to the ingroup (*M* = .023). Denial of secondary emotions to people with physical disabilities fell between the two extremes (.035). Tests of a priori contrasts showed that more secondary emotions were denied to people with Down syndrome than to physically disabled people and psychology students as a combined group, $t(36.56) = 6.98$, $p < .001$. They also showed that more secondary emotions were denied to people with Down syndrome than to people with physical disability, $t(342.80) = 6.51$, $p < .001$. As expected, there was no difference in denial of secondary emotions between psychology students (the ingroup) and people with physical disabilities, $t(61.08) = 0.55$, $p = .588$.

The main effect for valence of secondary emotions was also significant, $F(1, 93) = 36.64$, $p < .001$, partial $\eta^2 = .283$. More negative secondary emotions (*M* = .130, *SD* = .22) were denied than positive secondary emotions (*M* = .016, *SD* = .08). Interestingly, the valence X target interaction was also significant, $F(2, 93) = 27.84$, $p < .001$, $\eta^2 = .374$. More negative (*M* =.352) than positive secondary emotions (*M* = .039) were denied to people with Down syndrome, $t(31) = 5.94$, $p < .01$. There was no difference in denial of positive vs negative secondary emotions to psychology students and people with Down syndrome, $p < .05$.

Like in Study 1, it was important to determine the variables that predict denial of more negative than positive secondary emotions to people with Down syndrome. The effect has been explained in Study 1 as a way of romanticizing the mental disability. This claim received evidence in the form of prediction of denial of negative secondary emotions to people with Down syndrome by affectionate attitudes. To see if the effect would be replicated in Study 2, participants' attitudes towards people with Down syndrome were coded from the responses they gave when asked to list three things that easily come to mind

when they think of people with Down syndrome. Like in Study 1, the main themes/variables that emerged were affectionateness, dependency, cognitive impairment, physical inferiority, and chromosomal abnormality. Mention of each of the above themes by a participant was coded as 1 and lack of mention as 0. A MANOVA was run with the five variables as the IVs and denial of negative secondary emotions versus positive secondary emotions as the DVs.

Only the main effect of dependency was significant, $F(2, 16) = 3.71$, $p < .05$, $\eta^2 = 317$. Univariate tests showed that the effect of dependency was significant only for denial of negative secondary emotions to people with Down syndrome, $F(1, 31) = 6.66$, $p < .05$, partial $\eta^2 = .281$. This finding is similar to the one reported in Study 1. It seems to suggest that, "dependent" as they are, people with mental disabilities like Down syndrome do not have the capacity or privilege to be associated with undesirable actions that would potentially result in them feeling humiliation, guilt, shame, embarrassment or any other such negative secondary emotions.

***Primary:*** Neither the main effect of target nor of valence nor their interaction was significant, $p < 1$. Therefore, no further analyses were done on primary emotions.

***Does Denial of "The Mind" Mediate the Effect of Target on Denial of Secondary Emotions?*** The last analysis in Study 2 focused on whether or not the effect of target on denial of secondary emotions to people with Down syndrome could be accounted for by denial of "the mind". First, the three items that measured denial of cognitive capacities, moral capacities, and the likening of the target groups' mental capacities were averaged to form an index of denial of the mind. A mediational analysis was then conducted to examine the role of denial of the mind as a mediator of the target-denial of secondary emotions relationship. The first three criteria for mediation were met; target had significant bivariate relationships with denial of secondary emotions ($\beta = -.60$, $p < .001$), and with denial of the mind ($\beta = -.76$, $p < .001$), and denial of the mind predicted denial of secondary emotions independently of target ($\beta = .75$, $p < .001$). The Sobel test statistic was significant, 6.23, $p < .001$, which suggested that denial of the mind fully mediated the target-denial of secondary emotions relationship.

## DISCUSSION

Study 2 corroborates Study 1 in showing that denial of secondary emotions is limited to people with Down syndrome. Importantly, this effect does not extend to people with physical disability. Study 1 showed that the effect is mediated by denial of cognitive capacities to people with Down syndrome, suggesting that the denial is not a matter of disability per se, but of perception of deficits associated with Down syndrome. The finding is hardly surprising, given that research by Demoulin et al. (2004) showed that secondary emotions indicate higher cognition than primary emotions. It should therefore follow that people with known cognitive disabilities or believed to have cognitive disabilities are denied secondary emotions, which both studies demonstrated. In Study 2, an index formed as a result of averaging denial of cognitive and moral capacities, and perception of target groups as possessing child-like mental capacities, accounted for the effect of target on denial of secondary emotions only to people with Down syndrome. The denial of all such aspects of the human mind, together with denial of secondary emotions, was conceptualized as denial of the mind.

The effect could be a peculiar form of infrahumanization limited to people with developmental disabilities like Down syndrome. That is, it may be different to infrahumanization effects that target members of cognitively normal outgroups, who may not be denied cognition or other aspects of the mind to the same extent. As suggested in Study 1, it could be a reflection of a cluster of pre-conceived ideas people hold about Down syndrome. It could even be dehumanization (cf. Bar-Tal 1989), which involves perceiving people with developmental disabilities like Down syndrome as not human at all, rather than only as less human than the ingroup.

Taken together, results of Studies 1 and 2 are seminal in showing the role of some dimensions that distinguish secondary emotions from primary emotions cognition, capacity to indicate moral capacity, and being indicative of age in the infrahumanization of (some) outgroups. Viewed from the socio-constructivist and biological perspectives (cf. Averill 1980; Izard 1977), these results suggest that people with Down syndrome and any group of people considered to be child-like and thus have low cognitive and moral capacities would be denied

elaborate (that is, secondary emotions) like love, nostalgia, agony and disappointment. However, results of this research should by no means be taken to suggest that individuals with Down syndrome are incapable of experiencing secondary emotions. Rather, it suggests that members of the general population may hold the perception that elaborate emotions may not be typical of the experience of individuals with Down syndrome and perhaps similar disabilities. In line with infrahumanization theory (Leyens et al. 2000, 2001), this equates to designating people with Down syndrome as less human than other people.

If denial of secondary emotions to people with Down syndrome reflects preconceived ideas about the learning disability, it may fuel prejudices and discrimination against individuals with the syndrome as if they were less human. Indeed, a Google search of "Down syndrome...human" shows that some people do not think of those with Down syndrome as fully human, as shown by the following questions and statements: "Are people with Down syndrome human?, "philosophically speaking too, their (individuals with Down syndrome's) predisposition contradicts the meaning of the word 'human', which means 'wise human', or 'knowing human' as defined on most of the records in civilization" (Convince me 2008; BodyBuilding.com 2011). Importantly, this research has suggested how this may happen, which may potentially help in attempts to stem the tendency. For example, care workers could be taught specifically about their preconceived ideas about the humanity of people with Down syndrome, about infrahumanization, how they may wittingly or unwittingly infrahumanize individuals with the learning disability, as well as how to avoid infrahumanizing them.

Denial of more negative than positive secondary emotions to people with Down syndrome was an unexpected, post-hoc effect. However, it was meaningfully explained in terms of the perception of people with Down syndrome as an affectionate group in Study 1. In Study 2, it was the (perceived) dependency of people with Down syndrome that predicted the effect. Taken together, results of both studies suggest that attitudes towards people with Down syndrome as a "dependent" group are generally positive. It would seem paradoxical, though, that people with Down syndrome are perceived in a positive light and viewed as affectionate (that is, denied more negative than positive secondary emotions), but at the same time infrahumanized. In both studies, the positive attitudes towards people with Down syndrome seem to reflect what Coles 1987 called romanticization of learning disabilities. This idealizes people with developmental disabilities through ascribing them some uniquely positive attributes, which somehow obfuscates prejudice against them. Interestingly, this has previously captured the attention of some authors, as reflected in the following statement: "One of the most difficult misconceptions to live down for anyone with Down Syndrome is that they are always loveable and affectionate" (Down Syndrome 2005, 6). The prejudice is otherwise referred to as parternalistic prejudice, characterized by stereotyping the target groups as "sweet" and "harmless", but at the same time disrespecting them (cf. Fiske et al. 2002). To the abuser, "harmless" may actually mean "defenceless", thus pepertuating, not preventing abuse. Therefore, another way in which this research could be useful is to screen out care workers with strong tendencies to infrahumanize clients with learning disabilities.

It needs to be pointed out that the method devised in this research to test infrahumanization through denial of secondary emotions worked exceptionally well. Of all methods that have been used to test infrahumanization, it is the only one that gives participants an explicit choice to not select any emotions typical/not typical of the target groups. If no secondary emotionas are selected as "not typical" of a group, it suggests lack of motive to infrahumanize its members. Not surprisingly, the mean selection of secondary emotions "not typical" of the ingroup across the two studies was a lowly .0015[3]. This mean was not high also for people with physical disabilities, 0.025. These lowly figures, very close to zero, are indicative of the fact that many participants in fact selected zero emotions "not typical" of the two groups. On the other hand, mean denial of the secondary emotions to people with Down syndrome across the two studies was a high .40, indicating a strong motive to deny secondary emotions to this particular group.

## NOTES

[1] Attempts were initially made to involve the participation of carers of people with Down syndrome so that a more accurate perspective could be provided and to protect the dignity of individuals with Down syndrome but problems of access prevented this. I hope to involve them in future studies.

[2] All effect sizes are reported to 3 significant figures. Exact p values are also reported to 3 significant figures, so are the means, some of which were too small to be any meaningful if reported to 2 significant figures.

[3] The average denial scores ranged from 0 = no selection of emotions at all "not typical" of a group to 1 = selection of all emotions "not typical" of a group.

## REFERENCES


Averill JR 1980. A constructivist view of emotion. In: R Plutchik, H Kellerman (Eds.): *Theories of Emotion*. New York: Academic Press, pp. 305-340.

Bar-Tal D 1989. Delegitimisation: The extreme case of stereotyping and prejudice. In: D Bar-Tal, C Graumann, AW, Kruglanski, W Stroebe (Eds.): *Stereotyping and Prejudice: Changing Conceptions.* New York: Springer-Verlag, pp. 169-188.

BodyBuilding.com 2011. From <http://forum.bodybuilding.com/showthread.php?t=132584783> (Retrieved 06 June, 2011).

Brewer MB, Silver M 1978. Ingroup bias as a function of task characteristics. *European Journal of Social Psychology,* 8: 393-400.

Coles G 1987. *The Learning Mystique. A Critical Look at Learning Disabilities.* New York: Pantheon.

Convince me 2008. From <http://www.convinceme.net/opendebate/4340/Are-People-With-Down-Syndrome-Human.html >(Retrieved 06 June, 2011).

Crocker J, Major B Steele C. Social Stigma. In: S Fiske, D Gilbert, G Lindzey (Eds.): *Handbook of Social Psychology.* Vol. 2, Boston, MA: McGraw Hill, pp. 504-553.

Demoulin S, Leyens JP, Paladino PM, Rodriguez AP, Rodriguez RT, Dovidio J 2004. Dimensions of uniquely and non-uniquely human emotions. *Cognition and Emotion*, 18: 71-96.

Down Syndrome 2005. From <http://www.scoutbase.org.uk/library/hqdocs/facts/pdfs/fs250030.pdf> (Retrieved 06 June 2011)

Ekman P 1992. An argument for basic emotions. *Cognition and Emotion,* 6: 169-200.

Epstein S 1984. Controversial issues in emotion theory. *Review of Personality and Social Psychology,* 5: 64-88.

Fiske ST, Cuddy AJ, 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.

Gaertner L, Insko CA 2001. On the measurement of social orientations in the minimal group paradigm: Norms as moderators of the expression of intergroup bias. *European Journal of Social Psychology,* 31: 143-154.

Giles H, Coupland N 1991. *Language: Contexts and Consequences*. Keynes: Open University Press.

Izard C E 1992. Basic emotions, relations among emotions, and emotion-cognition relations. *Psychological Review*, 99: 561-565.

Learning Disabilities 1995. From<http://kidshealth.org/teen/diseases_conditions/learning/learning_disabilities.html> (Retrieved 06 June, 2011).

Levi-Strauss C 1952/1987. *Race et histoire (Race and History).* Paris: Denoel.

Leyens JP, Cortes B, Demoulin S, Gaunt R, Paladino MP, Rodriguez R, Rodriguez A, Vaes J 2003. Emotional prejudice, essentialism and nationalism: The Tajfel Lecture. *European Journal of Social Psychology*: 33 (6): 703-717.

Leyens JP, Paladino, MP, Rodriguez RT, Vaes J, Demoulin S, Rodriguez AP, Gaunt R 2000. The emotional side of prejudice: The attribution of secondary emotions to ingroups and outgroups. *Personality and Social Psychology Review*, 4: 186-197.

Leyens JP, Rodriguez AP, Rodriguez RT, Gaunt R, Paladino MP, Vaes, J, Demoulin S 2001. Psychological essentialism and the differential attribution of uniquely human emotions to ingroups and outgroups. *European Journal of Social Psychology*, 31: 395-411.

Leyens JP, Rodriguez RT, Demoulin S, Paladino PM, Rodriguez AP 1999. *Disliked Outgroups Lack Some Kind of Emotions.* Unpublished Manuscript.

Medin DL 1989. Concepts and conceptual structure. *American Psychologist,* 44: 1469-1481.

Opotow S 1990. Moral exclusion and injustice: An introduction. *Journal of Social Issues,* 46: 1-20.

Paladino MP, Leyens JP, Rodriguez RT, Rodriguez AP, Gaunt R, Demoulin S 2002. Differential associations of uniquely and non-uniquely human emotions to the ingroup and the outgroups. *Group Processes and Intergroup Relations,* 5: 105-117.

Scaillet N, Leyens JP 2000. From incorrect deductive reasoning to ingroup favouritism. In: D Capozza, R Brown (Eds.): *Social Identity Processes: Trends in Theory and Research*, London: Sage, pp. 49–61.

Stanton LR, Coetzee RH 2004. Down syndrome and dementia. *Advances in Psychiatric Treatment,* 10: 50-58.

Staub E 1989. *The Roots of Evil: The Origins of Genocide and Other Group Violence*. New York: Cambridge University Press.

Sumner WG 1906. *Folkways: The Sociological Importance of Usages, Manners, Customs, Mores, and Morals*. New York: Ginn and Co.

Vaes J, Paladino MP, Castelli L, Leyens JP, Giovanazzi A 2003. On the behavioural consequences of infrahumanisation: 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 P 2006. Priming uniquely human emotions and the in-group (but not the outgroup) activates humanity concepts. *European Journal of Social Psychology,* 36: 169-181.

Vlachou A 1993. Integration does make a difference. *The Down Syndrome Educational Trust Research and Practice,* 1(3): 95-100.

Yzerbyt VY, Corneille O, Estrada C 2001. The interplay of subjective essentialism and entitativity in the formation of stereotypes. *Personality and Social Psychology Review*, 5: 141-155.