IS SUFFERING LESS HUMAN? DISTRESSING SITUATIONS' EFFECTS ON DEHUMANIZING THE SELF AND OTHERS

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Abstract: The present investigation aimed to explore whether distressing situations that inflict suffering can induce denial of humanness to the self and others. The first study ($N = 73$) explored whether positive situations are perceived as more human than negative ones. Study 2 ($N = 158$) examined the association between self-dehumanization and dispositional variables that reduce psychological well-being. Study 3 ($N = 96$) investigated experimentally the tendency of observers to dehumanize a woman subject to various degrees of familial and economic difficulties. Study 4 ($N = 191$) examined experimentally the association between the deprivation of unemployed people and the propensity of observers to dehumanize them. Finally, Study 5 ($N = 203$) explored whether individuals who have serious or moderate mental disorders are more dehumanized than people with no disorder, under low or high social status. Confirming our hypotheses, the main results showed that: a) positive situations are judged to be more human than negative ones; b) self-dehumanization is positively correlated with ill-being variables like negative affect, anxiety and somatization (with dispositional variables that increase suffering), but negatively correlated with positive affect, vitality and self-actualization (variables well known to increase well-being); c) the more a woman suffers from difficult familial and economic conditions, the more the observers tend to dehumanize her; d) the dehumanization of victims of unemployment is greater than the dehumanization of those who have a job; and e) individuals with low status and moderate or severe mental disorder are more dehumanized than those who have no mental disorder, or have a mental disorder but are of high status.

Key words: Dehumanization, Experience/Agency, Mind perception, Psychological well-being, Self-dehumanization, Social suffering

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INTRODUCTION

The denial of humanness or of uniquely human characteristics to others has been associated in many studies with intergroup or interpersonal contexts. It has been described as a more-or-less implicit and subtle process that allows discriminatory and prejudicial attitudes and behavior not only towards ethnic, racial or occupational outgroups (Demoulin et al., 2004; Haslam, 2006; Haslam & Loughnan, 2014; Leyens et al., 2000; Leyens et al., 2001), but also towards individuals and even, under certain conditions, towards one's own self (Bastian & Crimston, 2014; Haslam & Loughnan, 2014; Paladino & Vaes, 2009). Although Haslam, Bain, Douge, Lee, and Bastian (2005) showed that privileged treatment is reserved for the self, because individuals attribute more human nature characteristics to themselves than to others, Bastian and Haslam (2010) and Bastian et al. (2013) found that social ostracism has a self-dehumanizing effect: that is, ostracized individuals attribute less human characteristics to the self.

With respect to its functions, dehumanization –defined as the attribution of less human nature or human uniqueness traits to the self or others has been regarded as a process that permits delegitimizing beliefs about others (Bar-Tal, 2000) and justifies moral disengagement (Bandura, 1999, 2002; McAlister, Bandura, & Owen, 2006) and moral exclusion (Opotow, 1990) towards outgroups. As shown by Vaes and Muratore (2013), dehumanization of others can also function as an instrument of detachment from distressing experiences. They showed that professional health care workers have more symptoms of burnout when they attribute uniquely human emotions to their suffering patients, that is, when they tend to humanize them. Harris and Fiske's (2006) model shows neural evidence in support of the prediction that extreme (low-low) outgroups meaning outgroups that, according to Fiske, Cuddy, Glick, and Xu's (2002) Stereotype Content Model (SCM), are represented as both less competent and less warm are the only ones that activate insula, that is, a pattern consistent with disgust. Consequently, these groups are perceived as less than human.

In the recent literature on dehumanization, dehumanized groups and individuals often endure difficult life conditions, such as illness (Vaes & Muratore, 2013), social distress and ostracism (Bastian & Haslam, 2010), low-low status (Harris & Fiske, 2006), mental disability (O'Brien, 2003), mental illness (Martinez, Piff, Mendoza-Denton, & Hinshaw, 2011) and lower social class (Loughnan, Haslam, Sutton, & Spencer, 2014). Each one of these studies focuses on a specific condition such as low-low status, social ostracism, illness. As far as we are aware, there has been no study of the impact of suffering on dehumanization of the self and others in general. Therefore, an interesting question arises concerning the role played in the activation

of dehumanization by social suffering and distressing situational or dispositional variables in general. Do variables well known to reduce, for the target, experiences of well-being and increase experiences of social suffering and ill-being, lead the observer to perceive the target, including the self, as less human? This question has not yet been investigated.

Our hypothesis is consistent with the theoretical background provided both by Haslam's (2006) dehumanization model and by models of mind perception (Gray, Gray, & Wegner, 2007; Waytz, Gray, Epley, & Wegner, 2010). Based on various empirical and theoretical studies on lay perception of humanness (Demoulin et al., 2004; Haslam et al., 2005; Leyens et al., 2001), Haslam (2006) distinguishes between two senses of humanness that refer to distinct kinds of characteristics. Two corresponding forms of dehumanization arise according to which kind of characteristics are denied to others: a) *animalistic dehumanization* operates through the denial to others of uniquely human (UH) characteristics, including civility as opposed to lack of culture, refinement as opposed to coarseness, moral sensibility versus amorality and lack of self-restraint, rationality and logic versus irrationality and instinct, and maturity versus childlikeness; and b) *mechanistic dehumanization* proceeds through the denial of human nature (HN) characteristics to others, including inertness vs. emotional responsiveness; coldness vs. interpersonal warmth; rigidity vs. cognitive openness; passivity, fungibility vs. agency, individuality; and superficiality vs. depth.

Models of mind perception show that mind perception (entities to which mind is attributed) - and hence the distinction between humans and non-human animals and lifeless objects - has two dimensions: *experience* (e.g., feeling hungry, fear, joy, etc.) and *agency* (self-control, memory, morality, thinking, programming, etc.) in the Aristotelian sense of the word, that is, the presumption that human action is motivated by thoughtful, voluntary, autonomous processes. Whereas agency in Haslam's model and theory is a characteristic of human nature, in Gray et al.'s Mind Perception Theory (2007), agency is the basic characteristic of humanness which distinguishes humans not only from machines, as argued by Haslam (2006), but also from animals.

Gray, Knobe, Sheskin, Bloom, and Barrett (2011) also found that body focus reduces perceptions of both agency and moral responsibility and increases attribution of experience, that is, sensation and emotion as well as sensitivity to harm and vulnerability. These authors suggest that this link can function in reverse: focusing on someone's experience could lead to perceiving him or her more as a body and therefore should reduce perceptions of agency and morality. Based on this suggestion, it can be hypothesized that when people focus on another's or one's own experience of suffering, this should lead to the perception of the other or the self as having less moral responsibility and agency and hence less humanness (Bastian & Haslam, 2010;

Bastian et al., 2013; Gray et al., 2007; Haslam, 2006; Sakalaki, Richardson, & Fousiani, 2016). As moral responsibility and agency in Gray et al.'s model refer to both human nature and human uniqueness, these categories constitute a focal point of the construct of humanness in this model.

We argue that when people focus on persons who experience suffering, including the self, they should attribute less humanness to them. Therefore, it can be expected that dehumanization can be activated when attention is focused on the other's or one's own experiences of suffering and ill-being. Distressing situations which destabilize people and inflict degrading or harmful experiences upon them will favour representations in terms of less humanness.

Is there evidence in everyday language to attest a tendency in lay thinking to regard distressing variables as less compatible with humanness? European languages are quite eloquent in this regard, since in many of them including English, French, Italian and Greek, detrimental situations of extreme suffering, illness, poverty or deprivation, are very often described as inhuman. This suggests that, in lay thinking, humanness is incompatible with or does not deserve such experiences. If the association of distressing variables with dehumanization of the self and others is confirmed, a wider range of individuals who are enduring detrimental situations should be perceived as less human. Thus, many categories of suffering groups, including victims of economic crises and war, refugees, migrants, victims of social and psychological suffering such as bullying, child abuse, sexual abuse and psychological ill-being, should encounter severe prejudice with harmful repercussions for them. Previous studies (Sakalaki & Fousiani, 2012b; Fousiani & Sakalaki, 2016) showed, for example, that victims of the economic crisis are perceived as less human (in this regard, the acronym PIGS to refer to the European countries that are victims of the economic crisis is quite significant).

Aims and research hypotheses

Our main general hypothesis was that suffering is an experience that reduces perceptions of humanness that is attributions of UH Or HN characteristics to others or the self.

Five studies were conducted in this investigation, with the following aims. Study 1 examined the propensity to perceive negative situations that commonly inflict suffering as less human than positive ones. Study 2 investigated the relationship between variables that measure one's own psychological ill-being that causes suffering and self-dehumanizing. Study 3 focused on how the dehumanization of women was related to the degree to which their life conditions were distressing and therefore

presumed to be associated with greater suffering. Study 4 explored experimentally whether attributing less human nature and human uniqueness characteristics to a person increases with the degree of deprivation and the severity of perceived suffering of the target. Finally, Study 5 further explored experimentally the dehumanization of individuals in relation to the presence or absence of serious or moderate mental disorders and low or high social status.

Bastian and Haslam (2010) observe that negative experiences such as ostracism, which could refer to cognitive deconstructive states (Twenge, Catanese, & Baumeister, 2003), correspond to experiences of loss of Human Nature (HN) (agency, emotionality, warmth, etc.) rather than loss of Human Uniqueness (HU) (civility, morality, rationality, etc.). Following this reasoning and given the focus of our studies on distressing experiences we expected HN scales to be more relevant to measuring dehumanization than HU scales. We decided, however, to include measures of both HU and HN in all our studies, except Study 3 where an emotions scale was used to measure human uniqueness.

It should be noted that "agency", in mind perception theory, has a different meaning from agency in Haslam's theoretical framework. In Haslam's model, agency is synonymous with individuality versus fungibility (interchangeability), whereas in mind perception theory agency includes high cognitive abilities such as memory, moral responsibility, thought, communication, reasoning, and planning. As noted by Li, Leidner, and Castano (2014), Gray and colleagues' use of agency corresponds more to HU than to HN, even in terms of the characteristics included in Haslam's model, since rationality, intelligence and morality are UH characteristics in Haslam's (2006) model. However, agency seems to be a central category of humanness perception in both Haslam's and Gray et al.'s models.

Given the aims of the study and the above theoretical rationale, we hypothesized that suffering would reduce perceptions of humanness. The main specific hypotheses of this research were as follows:

1) Negative situations that are well known to provoke suffering should be perceived as less human than positive situations (Hypothesis 1).

2) Self-dehumanization should increase as variables such as negative affect, anxiety and somatization that reduce one's own psychological well-being and therefore increase one's own suffering increase (Hypothesis 2).

3) Dehumanization of women should increase as their economic and familial situation is perceived to be more severe and less satisfactory. That is, the more a woman is perceived as suffering from a difficult socioeconomic situation, the more she will be dehumanized by observers (Hypothesis 3).

4) Dehumanization of both ingroup and outgroup others should increase as their

economic situation is perceived to be severer and more intense, and consequently their suffering is perceived as greater. It is expected that focusing on experiences of suffering should be a quite strong variable (Snyder & Ickes, 1985) that overrides group membership in the determination of dehumanization (Hypothesis 4).

5) Individuals who are burdened by both low status and moderate or severe mental disorder, both of which are variables liable to cause suffering, should be more dehumanized than individuals who either have no mental disorder or have a mental disorder but are of high status (Hypothesis 5).

Each one of the following studies explored one of the five hypotheses.

STUDY 1

Sample

To test Hypothesis 1, a study with 73 participants (33 males, 40 females; age 18-60 years) was conducted in Athens, Greece. Participation was voluntary and anonymous, and participants responded individually to a questionnaire.

Tasks

Participants were asked to evaluate 22 situations as to the extent they were human. Eleven situations were positive (e.g., eudemonia, satisfaction, comfort, fulfillment, wealth, independence, health, capacity, energy, etc.) and 11 negative (e.g., misfortune, poverty, illness, dependence, plight, privation, incapacity, frustration, etc.). Participants were asked to rate on a 9-point scale (1 = *not human at all*, 9 = *very human*) to what degree they assessed these situations as human.

Results

The scree plot associated with a principal components analysis of the 22 items indicated that two dimensions were present, accounting for 50.4% of the total variance. The quartimax rotation of the two-dimensional solution separated the items into positive and negative.

There was a significant effect of the valence of situations on their association with humanness, $t(71) = 3.34$, $p < .001$. Confirming Hypothesis 1, negative situations were judged to be less human ($M = 5.01$, $SD = 1.15$) than positive ones ($M = 5.46$, $SD = 1.00$).

STUDY 2

Study 2 was preceded by two pilot studies. They were conducted to test whether Greek-speaking individuals consider 35 emotions and 16 traits as non-uniquely human or uniquely human (see Appendix B). The items comprising the Emotions scales employed in Studies 2 and 3 were selected based on these pilot studies.

Sample

Data were obtained in Athens, Greece. The sample comprised 158 participants (40.5% males), aged 18 to 60 years old, from various social and educational backgrounds.

Measures

Mechanistic Self-dehumanization Scale (MSDS)

The MSDS was developed to measure attribution of human nature (HN) characteristics to the self. Inspired by Haslam's (2006) model of dehumanization, this 14-item scale (given in Appendix Aa) included both self-dehumanizing (e.g., *"I try not to function in an emotional way")* and self-humanization items (e.g., "*I am open to new experiences"*). Each item was rated on a 9-point Likert scale from 1 = *disagree absolutely* to 9 = *agree absolutely* (1 = *never* to 9 = *often* for the last item of the scale). The scoring of self-humanization items was reversed. Internal consistency (Cronbach's alpha) in the present study was .78. A separate pilot study ($N = 46$) had shown a strong test-retest correlation of the scale over an interval of one week, $r = .79$, $p < .001$. A second study ($N = 227$), confirming the convergent/divergent validity of the MSDS, showed that the scale was negatively associated with a high HN adjectives scale, inspired by Haslam's model (2006) and measuring HN, $r = -.221$, $p < .001$. Cronbach's alpha for the HN adjectives scale was .75.

Animalistic self-dehumanization scale
To assess self-dehumanization, participants were asked to choose the three emotions that they experience most in their everyday lives out of a list of twelve. Six unique human (UH) emotions (three negative embarrassment, pessimism, anxiety and three positive admiration, optimism, hope) and six non-UH emotions (three negative sorrow, anger, fear and three positive pleasure, joy, calmness) were included in the list. These emotions were selected from the list of emotions tested in the two pilot studies (see Appendix B).

Psychological well-being

Ryan and Deci (2001) have argued that self-actualization, vitality, and mental health produce psychological well-being. Accordingly, we assessed psychological well-being, using two indicators of well-being (self-actualization and vitality) and two indicators of ill-being (anxiety and somatization), all of which had been found to have satisfactory psychometric characteristics after translation into Greek in an earlier study (Sakalaki & Fousiani, 2012a).

Self-actualization

To measure self-actualization, we used Jones and Crandall's (1986) 15-item scale. Self-actualization constitutes a very strong well-being indicator. The items were rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The total score for the 15 items (reversing the direction of scoring for the non-self-actualization items) indicates greater self-actualization. Cronbach's alpha for the scale was marginally acceptable, .63.

Vitality

For the assessment of vitality, we used Ryan and Frederick's (1997) seven-item Subjective Vitality scale. Vitality is an aspect of eudemonia, full functioning and psychological well-being (Ryan & Deci, 2001). The items were rated on a 5-point scale ranging from 1 (*not at all*) to 5 (*extremely*). The direction of scoring for one non-vitality item was reversed so that higher scores indicate greater experienced vitality. After removing one item that was not consistent with the rest, the internal consistency was alpha = .87.

Anxiety and somatization

Anxiety and somatization constitute strong ill-being indicators. They were measured using separate seven-item scales, both of which form part of the General Health Questionnaire (Goldberg & Hillier, 1979). The items were rated on a 5-point scale ranging from 1 (*not at all*) to 5 (*extremely*). Higher scale scores indicated greater experienced degrees of anxiety and somatization, after reversing the direction of scoring for one non-somatization item. The internal consistency was .79 for the anxiety scale and .80 for somatization.

Positive and negative affect

Affect was assessed by the 20-item, Positive Affect – Negative Affect Schedule (PANAS: Watson, Clark, & Tellegen, 1988). Each item was answered on a 5-point scale (1 = *very slightly or not at all*, 5 = *extremely*). Values of Cronbach's alpha were .84 for the Negative Affect and .81 for the Positive Affect subscales.

Results

Mechanistic self-dehumanization, as measured by the MSDS, had statistically significant quite strong negative correlations with positive affect, $r = -.52$, $p < .001$, and with both well-being scales, namely, vitality, $r = -.42$, $p < .001$, and self-actualization, $r = -.63$, $p < .001$. Furthermore, MSDS was positively correlated with negative affect, $r = .40$, $p < .001$, and both ill-being scales, that is, somatization, $r = .41$, $p < .001$, and anxiety, $r = .47$, $p < .001$.

Self-humanizing, measured by UH emotions, was positively correlated with positive affect, $r = .16$, $p < .05$, and self-actualization, $r = .19$, $p < .05$. Correlations of UH emotions with other scales, as well as the correlations of non-UH emotions with all well-being scales, were all very small (below $r = .09$ in absolute value) and were not statistically significant ($p = .26$ or greater).

Conclusion

The findings of Study 2 attest that mechanistic self-dehumanizing is quite strongly positively associated with variables of ill-being such as negative affect, somatization and anxiety, and negatively associated with scales of well-being such as vitality and self-actualization. This confirms that increased ill-being, and hence one's own suffering, increases dehumanizing representations of the self. UH emotions correlated positively with positive affect and self-actualization. Interestingly, self-actualization, the variable of well-being which is closest to the dimension of agency, was the one that had the strongest negative correlation with mechanistic self-dehumanization, thus confirming previous studies that consider agency to be a fundamental dimension of humanness and humanization (Haslam 2006; Gray et al. 2007).

STUDY 3

The third study explored whether the dehumanization of women increases as their economic and familial situation is perceived to be more severe and less satisfactory.

Sample

Ninety-six individuals (35.8% males), aged 18-60 years old, from Athens, Greece, participated in the study. Participation was voluntary and anonymous.

Measures and procedure

The study had of a single-factor experimental design with three conditions. Each participant read a scenario describing the situation of a Greek woman, named Mrs. Alexiou (a typical Greek name), who had in all conditions a university degree in English literature and worked or worked as a teacher of English. She was married or divorced, depending on the condition, and had one child. Mrs. Alexiou's familial and economic condition varied from very good/satisfying *(Mrs. Alexiou is totally satisfied with her familial and economic situation),* or moderate *(Mrs. Alexiou faces some familial and economic difficulties, however, she deals well with them),* to serious *(Mrs. Alexiou is divorced with one child and faces severe family and economic difficulties which she finds very difficult to cope with, since she recently lost her job as a teacher).*

As a manipulation check of the suffering condition, a separate study with 45 individuals (15 in each of the three scenarios; 15 males and 30 females, aged 18-60 years old) tested the participants' perception of the suffering of a woman as described in the three scenarios presented in the main experiment.

Participants were asked to rate the extent to which Mrs. Alexiou experienced six non-UH and six UH negative and positive emotions on a 9-point scale (1 = *not at all*, 9 = *a lot*). The negative non-UH emotions were fear, sadness and anger, forming a scale with Cronbach's alpha = .78. The positive non-UH emotions were pleasure, affection-tenderness and calmness (alpha = .62). The negative UH emotions were anxiety, pessimism and embarrassment (alpha = .50) and the positive UH emotions were admiration, hope and optimism (alpha = .83).

Results

In the manipulation check, participants were asked to evaluate to what degree the woman described in the scenario suffered, on a 7-point scale (1 = *very much*, 7 = *not at all*). A one-way ANOVA showed significant differences between the three conditions, $F(2, 42) = 9.54$, $p < .001$. Participants perceived the woman as more suffering in the third scenario ($M = 2.87$, $SD = 2.23$) than in the second ($M = 5.27$, $SD = 1.98$) and first ($M = 6.60$, $SD = 2.82$).

A repeated measures ANOVA was conducted with dehumanization (non-UH vs. UH emotions) and valence (positive vs. negative emotions) as the within-subjects factors and familial and economic situation of the actor (satisfactory, moderate, serious) as the between-subjects factor. The analysis revealed statistically significant interactions between infrahumanization and the actor's situation, $F(2, 91) = 4.57$, $p = .013$, as well as between valence and the situation of the actor, $F(2, 91) = 47.1$, p

< .001. To describe these interactions in detail, we carried out one-way ANOVA for each scale. There was a decreasing attribution of positive UH emotions from the satisfactory ($M = 5.92$, $SD = 1.38$) to the moderate ($M = 4.92$, $SD = 1.44$) and severe ($M = 3.55$, $SD = 1.36$) conditions, $F(2, 91) = 23.2$, $p < .001$. In parallel, there was an increasing attribution of negative UH emotions to the actor from the satisfactory ($M = 5.02$, $SD = 1.26$) and moderate ($M = 6.03$, $SD = 1.05$) to serious ($M = 7.00$, $SD = 1.19$) conditions, $F(2, 92) = 21.1$, $p < .001$. Positive non-UH emotions were attributed to the actor decreasingly from the satisfactory condition ($M = 5.57$, $SD = 1.52$) to the moderate ($M = 4.95$, $SD = 1.16$) and serious ($M = 3.90$, $SD = 1.24$) conditions, $F(2, 92) = 14.0$, $p < .001$. Correspondingly, there was an increasing attribution of negative non-UH emotions from the satisfactory ($M = 4.74$, $SD = 1.68$) to the moderate ($M = 6.06$, $SD = 1.24$) and serious ($M = 7.52$, $SD = .87$) conditions, $F(2, 92) = 36.9$, $p < .001$. In each analysis, a post hoc Ryan-Einot-Gabriel-Welsch F (REGWF) test showed significant differences between each pair of means.

Conclusion
The results of Study 3 indicated increasing animalistic dehumanization of the actor from the satisfying and moderate conditions to serious. Therefore, confirming our third hypothesis, the results showed that the more a woman suffers from difficult life conditions the less humanness is attributed to her.

STUDY 4

The fourth study examined whether dehumanization of both ingroup and outgroup others increases as their economic situation is perceived to be severer and more intense, and consequently their suffering is perceived as greater.

Sample
One hundred and ninety-one individuals from Athens, Greece (47.6% males, 18-60 years old) participated in this study. Participation was voluntary and anonymous.

Measures and procedure

A 2 (socio-economic condition: serious / control) x 2 (group membership of the actor: ingroup / outgroup) between-subjects experiment was carried out. Participants first read a short vignette presenting the socio-economic condition of either an ingroup individual named Mr. Vasiliou (a typically Greek surname) or an outgroup individual

named Mr. Ihmet (a typically foreign surname within the Greek culture). The degree of severity of the actor's socio-economic situation was operationalized by adding elements seriously aggravating his objective situation in one condition. Specifically, participants were randomly presented with either the situation *"Mr. Vasiliou (Mr. Ihmet) is 35 years old, married and has two children. He is unemployed and unable to repay his housing loan to the bank"* (experimental condition) or the control condition *"Mr. Vasiliou (Mr. Ihmet) is 35 years old, married and has two children. He works at a company which produces plastic materials".*

Then they answered the questions measuring the dependent variables of the experiment.

Manipulation checks. Participants were asked to rate the extent to which they believed, depending on the scenario that they had read, that the actor suffered because of his socio-economic circumstances as a result of the economic crisis (from 1 *"Not at all"* to 9 *"Very much").*

Dehumanization vs. humanization of the victim

For the assessment of dehumanization vs. humanization of the suffering victim, human nature and human uniqueness scales, inspired by Haslam's model of dehumanization and tested for validity in the Greek culture (Appendix B, Pilot study 2), were used. Participants rated *human uniqueness* (UH) and *human nature* (HN) traits, including the related forms of humanness denial (cf. Bastian & Haslam, 2010; Haslam, 2006). The items were preceded by the tag "*Mr. Vasiliou (Mr. Ihmet) can be described as...*". *Human uniqueness* items were: ambitious (humanization item), irrational (dehumanization), civilized (humanization) and childlike (dehumanization). *Human nature* items were open-minded (humanization), superficial (dehumanization) and warm (humanization). Responses were from 1 = *very unlikely* to 9 =*very likely*. Both humanization and dehumanization scales had satisfactory internal consistency, Cronbach's alpha = .64 and .74, respectively.

Results

The manipulation check was analyzed with a two-way ANOVA which showed a significant main effect of the victim's socio-economic condition on the respondent's evaluation of the victim's suffering, $F(1, 187) = 48.7$ $p < .001$: suffering was perceived as much lower in the control ($M = 6.35$, $SD = 1.64$) than in the serious condition ($M = 7.92$, $SD = 1.40$). The victim's group membership did not significantly affect evaluation of suffering, $F(1, 187) = 2.33$, $p > .05$. The interaction between group membership and socio-economic condition of the victim was not significant, $F(1, 187) = .20$, $p > .05$.

There was a significant main effect of socio-economic condition on humanization attributed to the victim, $F(1, 185) = 11.8$, $p = .001$, revealing an increased attribution of humanizing traits (including both human nature and uniquely human traits) to the actor in the control condition ($M = 5.78$, $SD = 1.33$), compared to the suffering condition ($M = 5.13$, $SD = 1.29$). Group membership of the victim did not significantly affect humanization, $F(1, 185) = .36$, $p > .05$, nor was there a significant interaction between group membership and socio-economic condition of the victim, $F(1, 185) = .16$, $p > .05$. There was also a significant main effect of socio-economic condition on dehumanization of the victim, $F(1, 185) = 7.20$, $p < .05$. ($M_{suffering} = 3.89$, $SD = 1.84$, $M_{control} = 3.25$, $SD = 1.39$). Group membership did not significantly affect dehumanization of the victim, $F(1, 185) = .05$, $p > .05$, nor was there any interaction between group membership and socio-economic condition of the victim, $F(1, 185) = .23$, $p > .05$.

Conclusion

The findings of Study 4 showed that individuals tend to attribute less humanness to an unemployed person, victim of the economic crisis, whom they perceive as more suffering, than to someone who has a job, independently of the ingroup or outgroup status of the target person. Therefore, Hypothesis 4 was confirmed.

STUDY 5

This study aimed to investigate whether individuals who are burdened by both low status and moderate or severe mental disorder both of which are variables liable to cause suffering are more dehumanized than individuals who either have no mental disorder or have a mental disorder but are of high status.

Participants

Two hundred and three participants from Athens, Greece, including 128 females and 75 males aged 18-60 years old, participated in this study which took place over the internet. As in Study 4, respondents were asked to read a vignette and then complete a questionnaire.

Experimental design

This study differed from Study 4 only with respect to the causes of suffering. A 2(status: high vs. low) x 3(mental disorder: severe, non-severe, control) between-subjects design was implemented. The independent variables were manipulated in a vignette that presented a 30-year old man, Mr. K., as either a business executive in a company (high status condition) or an office cleaner working in the public sector (low status condition). Mr. K.'s mental condition varied from severe disorder, where psychiatric treatment was deemed necessary, to non-severe, neurotic disorder, where a short-term treatment was recommended. In the control condition for mental disorder, no information about Mr. K.'s mental health was provided.

Measures

Mechanistic dehumanization scale (MDS)
Participants completed a 10-item scale that measured the extent to which they mechanistically dehumanized Mr. K. The scale included both dehumanizing (e.g., *Mr. K. has no depth and is superficial*) and humanizing items (e.g., *Mr. K. is open to new experiences*). Participants rated their agreement on a 9-point Likert scale (1 = *absolutely disagree*, 9 = *absolutely agree*). The MDS used in this study (see Appendix Ab) was derived from the respective scale employed in Study 2 after changing the wording so that the items applied to another person, not to oneself. Four items for which this could not be done were omitted. After reversing the humanizing items, the value of Cronbach's alpha was .76. A separate pilot study with 40 participants showed a quite strong negative correlation, $r = -.574$, $p < .001$, between MDS and the humanizing items of a HN scale inspired by Haslam's model (warm, open-minded, emotionally responsive).

An emotions scale was also included but the results indicated that participants distinguished the valence rather than the humanness of emotions.

Results

A two-way ANOVA for MDS score revealed a statistically significant interaction between status and mental disorder, $F(2, 197) = 3.95$, $p = .021$, which indicates a different pattern of relationship between MDS and mental disorder depending on the status level. The difference was explored by carrying out separate one-way ANOVAs by mental disorder at each status level. At low status, MDS was strongly related to mental disorder, $F(2, 96) = 12.7$, $p < .001$: a post hoc REGWF test showed

that MDS scores in the severe ($M = 5.84$, $SD = 1.16$) and moderate conditions ($M = 5.45$, $SD = 1.17$) were significantly higher at $p = .001$ than in the control condition of no disorder ($M = 4.47$, $SD = .93$), but MDS scores were not differentiated between severe and moderate disorder even at $p = .05$. In contrast, at high status, MDS differed significantly between levels of mental disorder, $F(2, 101) = 3.31$, $p = .041$. The REGWF test at $p = .05$ distinguished severe disorder ($M = 5.50$, $SD = 1.08$) from moderate ($M = 4.92$, $SD = 1.01$) and no disorder ($M = 4.94$, $SD = 1.08$), with no difference between the latter pair.

The effect of status was only marginally statistically significant. In separate analyses for each level of mental disorder the results were, $t(64) = 1.85$, $p = .07$ for no mental disorder, $t(65) = 1.98$, $p = .05$ for moderate disorder and $t(68) = 1.25$, $p = .22$ for severe disorder.

Conclusion

Study 5 showed that individuals with low status and moderate or severe mental disorder are more dehumanized than those who do not suffer from a mental disorder or have a mental disorder but are of high status. Therefore, the observers perceive disadvantaged people who accumulate low status and a mental disorder as less human. These findings are in line with Hypothesis 5.

GENERAL DISCUSSION

The research reported in this article investigated aspects of dehumanization of the self and others, when individuals are confronted with their own and others' suffering. The first study, confirming Hypothesis 1, showed that positive situations are judged to be more human than negative ones. Study 2 showed that mechanistic self-dehumanization increases when dispositional variables that reduce well-being, such as negative affect, anxiety and somatization increase, whereas it is negatively related with variables of well-being such as positive affect, vitality and self-actualization. Moreover, uniquely human and therefore humanizing emotions are positively related with positive affect and self-actualization. Therefore, confirming Hypothesis 2, dispositional or situational factors that increase suffering and reduce well-being predict an effect of self-dehumanization. Study 3 showed experimentally that women who are victims of difficult familial and economic conditions are perceived as suffering more and are dehumanized compared to those who have good life conditions, thus confirming Hypothesis 3. Confirming Hypothesis 4, Study 4 showed that, independently of their

ingroup or outgroup status, men who are victims of unemployment are perceived as suffering more and are attributed less human characteristics than persons who have a job. Therefore, focusing on experiences of suffering seems to be a quite strong variable, overriding the classical group membership variable which has effects on dehumanization demonstrated by many previous research studies. Finally, confirming Hypothesis 5, Study 5 showed that individuals with low status and moderate or severe mental disorder are more dehumanized than those who do not suffer from a mental disorder, or have a mental disorder but are of high status.

All these studies underline the detrimental, deleterious effects of suffering and reduced well-being on how individuals apprehend their own selves and others in terms of humanness. There is evidence that, in lay thinking, humanization of the self and others requires the absence of high levels of suffering and deprivation which represent situations that seem to be regarded as less compatible with humanness. The findings confirm that the link demonstrated by Gray et al. (2011) –namely, that focusing on someone's body reduces perceptions of both agency and moral responsibility (attributes that most scholars in the domain of dehumanization consider to be central to the representations of humanness) and increases attribution of experience and emotion can operate in reverse. In fact, focusing on someone's experience of suffering and pain can lead to perceiving him or her as having less humanness.

Many researchers have shown that, far from being an exceptional phenomenon, dehumanization is in fact quite a common discriminating process. The findings of the present investigation suggest that it can be a deep-rooted cognitive *habitus* within societies, which applies to distressing situations implying suffering of others or one's self. Prejudice and discrimination cause suffering to those who are subjected to them, and this suffering can be a factor that further increases discriminating attitudes, thus aggravating the suffering and initiating a vicious circle.

In the case of denial of human nature characteristics to the self, Bastian and Haslam (2010) suggested that self-dehumanizing consequent upon social ostracism aligns with work on cognitive deconstructive states that people enter to avoid aversive self-awareness (Twenge et al., 2003). This could apply to a wider spectrum of distressing situations other than social ostracism, including psychological ill-being or forms of social suffering other than ostracism, as examined in this paper. It is important to explore whether the dehumanization of suffering entities generalizes to a wider range of distressing experiences and emotional states, and to identify the variables responsible for this phenomenon.

Finally, the association between human suffering and dehumanization can be analyzed in the light of individuals' need to justify the social system and maintain the illusion of controlling their social environment. According to the system justification

theory, when people perceive the system as being under threat they tend to rationalize the status quo (Jost & Hunyady, 2002). This means that they accept or even legitimize the powerlessness, misfortune and suffering of disadvantaged members or themselves (Haines & Jost, 2000), even in the absence of personal responsibility. The dehumanization of suffering victims could be seen as the provision of explanations (or pseudo-explanations) for differences in status, power, economic condition or well-being, increasing the "tolerance of injustice" (e.g., Martin, 1986).

Dehumanization, in the present paper, is the consequence of a cognitive focus on painful experiences which seem to be critical to perception of humanness. The fact that these tragic or detrimental dimensions that remind humans of their fragile and perishable condition– are denied humanness can be assimilated to a defensive mechanism leading to a socio-cognitive error ascribed to lay perception of humanness. Denying humanness to the most unacceptable and traumatic reality of the human condition, which consists of the fact that humans are, just like animals, fragile, suffering and mortal entities, may protect individuals from undesirable traumatic experiences. In any case, the effects of this kind of denial on psychological and societal well-being and mental health should be explored. This paradoxical and unsettling phenomenon must be understood better to prevent its possibly disastrous consequences for humans.

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APPENDIX A

Mechanistic Self-Dehumanization Scale (MSDS)

Each item was rated on a 9-point Likert scale from 1= *absolutely disagree* to 9 = *absolutely agree* (1= *never* to 9 = *often* for the last item of the scale).

1) I try not to function in an emotional way.
2) When I make choices I trust my own values and convictions (R*).
3) I feel that my acts don't come from me, but are prescribed by others.
4) My actions stem from my own personal motives, from what I want to do and what interests me (R).
5) I am not receptive to outside influences that are unfamiliar or unknown to me.
6) I like to express my feelings to other people (R).
7) I often lack depth. I am rather superficial.
8) I feel warmth in relations with other people (R).
9) I am open to new knowledge. It makes me curious (R).
10) I think that most of the acts and choices in my life come from my own autonomous preferences and intentions (R).
11) I usually respond to other people's feelings (R).
12) I am open to new experiences (R).
13) I sometimes behave like a machine: without thinking about it, I do some things automatically.
14) Sometimes, people have to function like machines. In some circumstances, part of their mind works mechanically and they act automatically. How often do you think you had this kind of experience?

* R = scoring reversed for analysis

Mechanistic dehumanization scale (MDS)

1. They take decisions objectively, without taking into consideration their personal preferences, desires and motives.
2. Their reactions to things are often superficial
3. They don't act from personal motives; they respond automatically
4. They are not open to outside influences that are unfamiliar or unknown to them
5. They like to express their feelings to other people (R)
6. They lack depth, they are somewhat superficial
7. They feel warmth in their relationship with other people (R)

8. They respond to each other's feelings (R)
9. They are open to new experiences (R)
10. Sometimes people have to function like machines. In some circumstances, part of their mind works mechanically and they act automatically. How often you think that " the target'" has this kind of experience?

APPENDIX B: PILOT STUDIES

Pilot study 1

A first pilot study (*N* = 78, Greek undergraduate students aged 20-25 years) was conducted to test whether Greek-speaking individuals consider certain emotions as non-uniquely human (i.e., primary) (non-UH) or uniquely human (i.e., secondary) (UH). Respondents were asked to rate on a 9-point scale (from 1 = *non-UH*, to 9 = *UH*) each one of 29 positive and negative emotions (Demoulin et al., 2004). They were also asked to rate on a 9-point scale the extent to which they considered each of the emotions to be innate or acquired (1 = *acquired*, 9 = *innate*). Mean ratings on both scales are shown in Table 1. Consistent with Demoulin et al.'s findings (2004), there was a strong negative correlation between the two sets of ratings (Pearson correlation between the means in Table 1: *r* = -.73): the higher an emotion was rated as uniquely human, the lower it was rated as innate.

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***Table 1. Ratings on 9-point scales of 29 positive and negative emotions
as uniquely human (versus in common with the animals) and as innate
(versus acquired) in pilot study***

Emotion	Rating as uniquely human*	Rating as innate vs. acquired**
	Mean (*SD*)	Mean (*SD*)
Embarrassment	7.37 (2.12)	2.80 (2.15)
Optimism	7.29 (2.28)	4.40 (3.08)
Shame	6.88 (2.47)	3.20 (2.29)
Regret	6.86 (2.58)	2.78 (1.94)
Admiration	6.72 (2.14)	3.40 (2.38)
Hope	6.66 (2.73)	4.60 (2.87)
Despair	6.66 (2.51)	2.60 (1.87)
Disgust	6.61 (2.35)	3.36 (2.54)
Anxiety	6.55 (2.53)	3.25 (2.54)
Guilt	6.43 (2.58)	3.21 (2.57)
Nostalgia	5.68 (2.96)	2.90 (2.08)
Passion	5.61 (2.90)	3.81 (2.74)
Surprise	5.45 (2.71)	3.91 (2.61)
Humiliation	5.25 (2.94)	2.88 (2.26)
Anger	4.44 (2.82)	3.92 (2.49)
Uneasiness	4.25 (2.67)	3.88 (2.64)
Sympathy	4.05 (2.68)	4.22 (2.82)
Panic	3.90 (2.59)	3.62 (2.58)
Pleasure	3.78 (2.67)	5.22 (2.68)
Calmness	3.53 (2.31)	5.90 (2.81)
Sorrow	3.22 (2.16)	3.82 (2.42)
Sadness	3.07 (2.35)	3.85 (2.56)
Fear	2.86 (2.33)	4.83 (2.87)
Enjoyment	2.80 (2.34)	4.67 (2.98)
Affection-tenderness	2.80 (2.51)	5.51 (2.78)
Attraction	2.78 (2.27)	5.09 (3.13)
Terror	2.64 (2.11)	4.50 (3.10)
Joy	2.36 (1.93)	5.31 (3.12)
Pain	1.88 (1.79)	5.63 (3.44)

* 9-point scale from 1 = *in common with the animals* to 9 = *uniquely human*
** 9-point scale from 1 = *acquired* to 9 = *innate*

Pilot study 2

A second pilot study comprising 167 Greek participants, aged 18-60 years, 66 male
and 91 female, of various educational levels (18 below high school, 70 high-school
and 79 higher and university education) was conducted in order to test whether
Greek-speaking individuals consider certain emotions as non-uniquely human (i.e.,
primary) (non-UH) or uniquely human (i.e., secondary) (UH). Respondents were
asked to rate on a 9-point scale (from 1 = *in common with the animals*, to 9 =
uniquely human) each of six positive and negative emotions: pessimism, indignation,
jealousy, pity, enthusiasm, and compassion (Demoulin et al., 2004). Similarly,
participants rated eight positive and negative characteristics including ambitious,
civilized, instinctive, childish, moral, mature, boorish, and sophisticated on a 9-point
scale (from 1 = *in common with the animals*, to 9 = *uniquely human*) in order to test
whether they considered them as high or low uniquely human. Finally, individuals
were presented with a further eight positive and negative characteristics including
open-minded, warm, frivolous, autonomous (as modern Greek lacks a word to
designate agency, we adopted the Aristotelian concept of autonomy which is the
closest concept to agency), cold, profound, emotional, and passive (see Haslam, 2006)
and were asked to rate the extent to which they considered each as *in common with
machines* (1) or *uniquely human* (9). The mean ratings of the emotions and
characteristics are shown in Table 2.

Table 2. Ratings on 9-point scales* of positive and negative emotions and characteristics as uniquely human versus in common with the animals or machines

		Mean (*SD*)
Emotions	Pessimism	6.96 (2.26)
	Pity	5.53 (2.63)
	Indignation	5.16 (2.68)
	Compassion	4.25 (2.73)
	Jealousy	3.53 (2.43)
	Enthusiasm	3.25 (2.24)
Characteristics	Ambitious	7.49 (2.04)
	Moral	7.41 (1.93)
	Sophisticated	7.23 (1.91)
	Civilized	7.22 (1.87)
	Mature	6.34 (2.32)
	Childish	4.45 (2.45)
	Coarse	4.23 (2.55)
Characteristics	Instinctive	2.33 (1.70)
	Open minded	8.19 (1.59)
	Warm	7.76 (2.09)
	Emotional	7.74 (2.17)
	Profound	7.21 (1.99)
	Frivolous	7.19 (2.51)
	Autonomous	6.32 (2.82)
	Cold	4.39 (3.28)
	Passive	3.78 (2.89)

*Ratings ranged from 1 = common with animals/machines to 9 = uniquely human