Does Valuing Extrinsic Goals Lead to the Animalizing and Inanimatizing of Others?

by

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Abstract

The objective of the study was to determine whether individuals' values are associated with their tendency to deny others' humanity. We also examined the effect of social status; predicting that participants would attribute the most humanity to members of their group, while perceiving members of low status groups as animalistic, and members of high status groups as mechanistic. We measured humanity denial by asking participants (N = 202) to rate how typical high- and low- humanity emotions and traits were of soccer players from five national teams. Participants' values were measured by asking how much they endorsed goals that were socially rewarding (e.g., wealth) vs. inherently rewarding (e.g., affiliation). Results indicated that, the higher participants valued social rewards, the more they denied others' humanity. Additionally, members of the participants' group were perceived as less animalistic than members of other groups, but more mechanistic. Results provided mixed support for the association between group status and humanity denial, but did not indicate that the latter was associated with participants' overall values. We interpret these results by examining individuals' tendency to protect their group, and their ability to reframe humanity denial as a positive aspect of their identity. We also discuss how individuals' rationales for identifying with groups could influence their perceptions of others, and discuss implications for subsequent studies.

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Acknowledgements

This Master's thesis is based on ongoing research led by Dr. Frederick Grouzet and is part of a larger multi-study project on the interrelation between intrinsic/extrinsic goals and dehumanization. Only partial data has been used to test hypotheses proposed in the current thesis. Additional data and findings will be reported in a manuscript that includes other studies. Results of this thesis should not be cited or disseminated without written permission of the principle investigator, Dr. Frederick Grouzet (fgrouzet@uvic.ca).

Special thanks are given to Elliott Lee, Myles Maillet, and Tyler Carey; whose support was invaluable to the production of this thesis. Further thanks are given to the research assistants Nova Garside and Jessica Tegart, whose diligence made data collection possible.

Dedication

This thesis is dedicated to Debbie Gibson and Violet Lawrence. Thank you for inspiring me to try and make the world a better place.

Does Valuing Extrinsic Goals Lead to the Animalizing and Inanimatizing of Others?

The current paper examines whether individuals deny soccer players' humanity. It was inspired by observations made during the previous Fédération Internationale de Football Association (FIFA) World Cups. For example, how in FIFA 2014, Germans were stereotyped as cold and mechanical; unflinching juggernauts that systematically destroyed opposition (e.g., Leach, 2014). Or how the news portrayed Argentinians as loud and primal (e.g., "Penalties are luck", 2014) and Nigerians as undisciplined and impulsive (e.g., "Tactical Discipline Lets African Teams Down", 2014). These patterns are similar to those in FIFA 2010, wherein South Africans' use of the vuvuzela was likened to a swarm of angry insects (e.g., Lamansky, 2010) and implied to be a direct reflection of the people's character.

All of these comparisons evoke the perception that members of the target groups are inhuman; a perception referred to as *dehumanization*. However, dehumanization is not a phenomenon that is restricted to soccer. We can see it in how some individuals portray others in social media (e.g., Desmond-Harris, 2014) and artwork (e.g., Obst, n.a.). Accordingly, it has real implications for how individuals are perceived and treated, both in specific contexts (e.g., soccer) and the broader society.

Research indicates that individuals can use dehumanization to justify harming or exploiting others (Castano & Giner-Sorolla, 2006). Alternately, some individuals might dehumanize because they view themselves (and members of their group) more positively when they derogate others (e.g., Leach, Wayne, & Russell, 2008). However, neither of these explanations indicates why individuals can dehumanize people in different ways. For example, why members of some groups can be perceived as machine-like, while others are perceived as

animal-like (Andrighetto et al., 2014). Nor do these explanations indicate why individuals can differ in how much they dehumanize others (e.g., Bain et al., 2009).

We conducted the current study to better understand why these differences occur. We begin by discussing the different types of dehumanization, and then examine how their attribution could change depending on the social status of target groups. Finally, we examine whether individuals' values and goals might influence their willingness to dehumanize others.

Dehumanization Types

Dehumanization is the perception that others are less human than a mental representation (*schema*) of humans (Haslam, 2006). Individuals can perceive others as similar to animals or machines (Haslam, 2006). The perception that others are similar to animals is referred to as *animalization*, whereas the perception that they are similar to machines is referred to as *inanimatization*.

Animalization. When individuals perceive others as more similar to animals than humans, they attribute more characteristics that are common to animals and humans than characteristics that are unique to humans (Haslam, 2006; Leyens et al., 2000). Characteristics that are unique to humans require advanced cognitive abilities (Leyens et al., 2001) and include rationality, morality, and logic (Haslam, 2006). Characteristics that are shared with animals require less advanced cognitive abilities and might be instinctual (Demoulin et al., 2004), such as impulsivity, amorality, and disregard for social conventions (Haslam, 2006). Accordingly, the perception that others have proportionally more non-uniquely human characteristics than a "true" human results in the perception that they are cognitively simple and instinctual. Research shows that animalization facilitates the subsequent use of animal metaphors (Loughnan, Haslam, Kashima, 2009) and stereotypes (Crawford, Modri, & Motyl, 2013) to describe others.

Researchers have identified two ways for animalization to manifest: (1) via the attribution of secondary and primary emotions (Leyens et al., 2000, 2001), and (2) via the attribution of uniquely and non-uniquely human traits (Haslam, 2006). Secondary emotions are unique to humans and include emotions such as hope, optimism, shame, and pessimism (Boccato et al., 2008), whereas primary emotions are shared with animals and include emotions such as pleasure, happiness, fear, and anger. When individuals dehumanize, they perceive secondary emotions as less typical of others than the human schema, but primary emotions as equally typical of others and the human schema. In contrast, uniquely human traits include ambitiousness, humility, insecurity, and disorganization, whereas non-uniquely human traits include activeness, relaxedness, uncooperativeness, and impulsivity (Haslam & Bain, 2007). When individuals engage in this form of dehumanization, they perceive uniquely human traits as less typical of others than the human schema, but non-uniquely human traits as equally typical of both. Although in the literature, animalization has been referred to as infrahumanization when the focus is on emotions and animalistic dehumanization when the focus is on traits, the process remains the same: individuals perceive others as less human- and more animal-like.

Inanimatization. Inanimatization occurs when individuals perceive others as machine-like. This entails the attribution of more characteristics that are not part of human nature than characteristics that are part of human nature (Haslam, 2006). Characteristics that are part of human nature are considered typical of most humans, and include social responsiveness, empathy, and free will. Characteristics that are not part of human nature are considered atypical of most humans, and include a lack of emotional and social responsiveness, a lack of empathy, and passivity (Haslam & Bain, 2007). Accordingly, the perception that others have proportionally more characteristics that are not part of human nature results in the perception that

they are unresponsive, unfeeling, and inert (Haslam, 2006). These characteristics are similar to those attributed to machines (e.g., Walters, Syrdal, Dautenhahn, te Boekhorst, & Koay, 2008; Woods, et al., 2007), resulting in the perception that others are robotic. Research shows that inanimatization facilitates the subsequent use of machine metaphors (Loughnan, Haslam, Kashima, 2009) and stereotypes (Crawford, Modri, & Motyl, 2013) to describe others.

Within the intergroup literature, researchers have identified one way for inanimatization to manifest: via the attribution of traits that are, and are not, part of human nature. Human nature traits include imaginativeness, friendliness, jealousy, and irresponsibility (Haslam & Bain, 2007), while non-human nature traits include politeness, even-temperedness, unemotionalness, and rudeness. When individuals engage in this form of dehumanization, they perceive human nature traits as less typical of others than the human schema, but non-human nature human traits as equally typical of both.

Dehumanization Within the Context of Intergroup Relations

Dehumanization is particularly pervasive in intergroup contexts. We may perceive groups and their members as animal-like (Goff et al., 2008) or machine-like (Martínez, Rodríguez-Bailón, & Moya, 2012). Moreover, research shows that members of different groups are not equally susceptible to animalization and inanimatization (Andrighetto et al., 2014; Cuddy, Rock, & Norton, 2007). First, there is a clear distinction between the group that we belong to (*ingroup*) and other groups (*outgroups*). Second, the social status (low vs. high) of groups may influence individuals' tendency to animalize or inanimatize their members.

Differences in the Dehumanization of Outgroups and Ingroups. Individuals typically dehumanize outgroups more than ingroups (Leyens et al., 2000; Tendayi Viki & Calitri, 2008). This could occur because outgroups and ingroups are often in conflict (e.g., Cottrell & Neurberg,

2005; Esses, Medianu, & Lawson, 2013; Maoz & McCauley, 2008); which facilitates harmful behaviours (e.g., intergroup violence) that can be justified by dehumanization (Castano & Giner-Sorolla, 2006).

Justification can be achieved two ways: (1) by impairing norms that prohibit harm, and (2) by replacing norms that prohibit harm with norms that legitimize it. The first can occur because harm-prohibiting norms are weaker when targets are perceived as less human (Allen, 2004; Marcu, Lyons, & Hegarty, 2007). This occurs because less human targets have less advanced mental states, which reduces their perceived capacity to experience pain (Bateson, 1991; Marcu et al., 2007)[1]. Thus, to achieve the same level of suffering, individuals must inflict more harm on less advanced targets than more advanced targets. Correspondingly, research shows that when individuals attribute fewer human mental states to animals, they are more willing to harm or exploit them (Marcu et al., 2007). Similarly, members of some groups have been stereotyped as mentally inferior (Goff et al., 2008; Williams & Williams-Morris, 2000), and some individuals believe that they experience less pain (Trawalter et al., 2012). Furthermore, physicians historically believed that infants lacked minds, and were unable to experience pain (Porter, 1989).

Dehumanization could also justify harmful behaviours by replacing norms that prohibit harm with norms that legitimizing it. Dehumanization could achieve this by extending beliefs about animal-human interactions to inter-human contexts. One of these beliefs is that humans are superior to, and allowed to exploit, non-humans (Costello & Hodson, 2014). This would allow individuals to believe that society condones their actions, reducing negative feelings that inhibit

[1] Congruent with other researchers (e.g., Bateson, 1991), we distinguish between *sensing* and *experiencing* pain. Sensed pain constitutes the original sensory signals, which need to be interpreted. Experienced pain is the resultant suffering, anguish, and mental discomfort, and should be more severe among more advanced organisms.

harmful behaviour (e.g., guilt; Costello & Hodson, 2014; Crockett, Clark, Hauser, & Robbins, 2010).

Differences in the Dehumanization of Low and High Status Outgroups. Individuals can also distinguish between outgroups that have low and high social status. Outgroups with low social status have economic capacities that are lower than the ingroup's (e.g., Africans and Latinos; Goff et al., 2008; Pike, 1992), while outgroups with high social status have economic outcomes similar to the ingroup's (e.g., Germany, the United States; as noted in Smith, 1999).

Members of low status outgroups could be more vulnerable to animalization than members of high status outgroups. This might occur because ingroup members previously justified the harm or exploitation of low status outgroup members by perceiving them as animal-like. This might have resulted in animal stereotypes, which could facilitate subsequent animalization, but not inanimatization.

Multiple sources support the possibility that members of low status outgroups are vulnerable to animalization. For example, Grosfoguel (2010) noted that throughout history, individuals who harm or exploit members of other groups have perceived them as primitive, barbaric, and under-developed. Which simultaneously diminishes the group's social status, and facilitates the perception that members are animal-like.

Similarly, Goff and colleagues (2008) noted that some individuals belong to groups that were enslaved or exploited, which reduces their social status relative to members of other groups. This abuse and exploitation was justified by perceiving them as similar to apes, facilitating the creation of animal stereotypes. Although most explicit comparisons have disappeared, these stereotypes still exist. Extreme examples include euphemistically referring to criminal cases with members of the groups as N.H.I (no humans involved). More subtle examples include the

perception that members of the group cannot experience pain or suffering as strongly as members of other groups (Trawalter et al., 2012). Goff and colleagues' (2008) research supports the existence of these beliefs. When participants were primed with pictures of low status group members, they identified pictures of apes more quickly than when they were primed with pictures of ingroup members. Furthermore, when participants were primed with pictures of apes, they located and scanned the faces of low status outgroup members faster than the faces of ingroup members. These results indicate that members of low status outgroups are still associated with animals, which could enhance their vulnerability to animalization.

Indirect evidence that members of low status outgroups are vulnerable to animalization is provided by Leahy (1983). Leahy examined individuals' explanations of poverty, which (based upon our definition) is a component of low status. Results showed that members of higher status groups justified poverty by claiming that poor people wasted money, and that it was not possible to change their behaviour. Furthermore, these individuals did not highly endorse the idea that poor people should not suffer. This indirectly supports low status group members' vulnerability to animalization because behaviours such as wasting money indicate impulsivity, which is a non-uniquely human characteristic (Haslam et al., 2005). Furthermore, the claim that poor people's behaviours cannot be changed indicates that participants attributed poverty to people's fundamental nature (versus, e.g., transient environmental factors such as stress). Finally, participants' lack of concern for poor people's suffering indicates that norms prohibiting other people's harm or suffering were weaker. This is the same pattern we observe when individuals perceive others as less human (e.g., Marcu et al., 2007; Trawalter et al., 2012). Together, these indicate that participants rationalized poverty – or low status – by denying others' uniquely human characteristics.

In contrast, members of high status outgroups could be more vulnerable to inanimatization. This might occur because they are successful in uniquely human contexts (e.g., economics) which, by definition, require them to possess uniquely human characteristics (e.g., analytic capacity). However, these contexts might not require them to possess human nature characteristics (e.g., friendliness).

Because high status outgroups' successes threaten individuals' positive perception of their ingroup (Brewer, 1979; Klar & Giladi, 1997), individuals could be motivated to derogate outgroup members (Crocker & Luhtanen, 1990). Because high status outgroup members' uniquely human characteristics are resistant to denial, but their human nature characteristics are not, this would likely manifest as inanimatization. For example, individuals could explain high status outgroup members' successes as the result of their cold, calculating, unthinking nature, but ingroup failings as the result of their friendly, impulsive, or impatient nature. This would mean that ingroup failings are the result of greater human nature, which is a form of superiority.

Multiple studies support the claim that members of high status outgroups are vulnerable to inanimatization. For example, members of economically successful outgroups[2] can be perceived as threats to ingroup superiority. Correspondingly, individuals stereotype members of these groups as unemotional, efficient, and analytical (Chang & Demyan, 2007), which is congruent with inanimatization.

High status outgroup members' vulnerability to inanimatization is also supported indirectly. Research by Leach, Wayne, and Russell (2008) showed that individuals perceive outgroup successes as threats. Outgroup threats cause individuals to have negative feelings about

[2] We refer, specifically, to East Asians after the development of the "Tiger Economies", which involved substantial economic development. To review the timeline for economic development, refer to Davis and Gonzalez (2003). To compare social perceptions before and after economic development, compare Indra (1979) and Chang and Demyan (2007).

their ingroup, which can be reduced by derogating outgroup members and perceiving ingroup members as superior in other domains. One of the domains that individuals can perceive their ingroup as superior in is friendliness (Rosaria Cadinu & Cerchioni, 2001), which is part of human nature (Haslam & Bain, 2007).

Association Between Values/Goals and Dehumanization

Differences in dehumanization are not only the result of groups' social status. Research (e.g., Bain et al., 2009) shows that there are also individual differences in dehumanization. These might result from differences in individuals' values and goals.

Types of values and goals. Values are guiding life principles that influence individuals' social beliefs and behaviours (Grouzet, 2009). They indicate what individuals consider important, and the goals that they pursue. For this paper, we are focusing on the distinction between *extrinsic* and *intrinsic* values and goals.

The distinction between extrinsic and intrinsic was outlined in Self-Determination Theory (Deci & Ryan, 2000) as a way to distinguish between goals that emphasize social rewards, versus goals that are inherently rewarding. Socially rewarding goals are referred to as extrinsic, and include wealth, fame, and image. In contrast, inherently rewarding goals are referred to as intrinsic, and include self-acceptance, community involvement, and affiliation.

Individuals' values could influence whether they prioritize extrinsic goals or intrinsic goals (Grouzet, 2009). When individuals value status, power, or success, they could prioritize extrinsic goals because they provide tangible rewards (e.g., wealth). These can be attained more easily when individuals engage in competitive behaviours. Because competitive behaviours can harm others, individuals could facilitate them by dehumanizing competitors.

In contrast, when individuals value personal pleasure, autonomy, or equality, they likely prioritize intrinsic goals (Grouzet, 2009). These goals are inherently pleasurable, and might promote social connections (e.g., via affiliation). Harmful social behaviours and beliefs (e.g., prejudice, dehumanization) would not facilitate the attainment of these goals, and might interfere with them. Accordingly, these individuals likely behave in a manner that facilitates social interactions and diminishes prejudice and dehumanization.

Association between extrinsic/intrinsic goals and the dehumanization of outgroups. As previously noted, individuals who prioritize extrinsic values and goals could be more willing to derogate others. This derogation could include dehumanization. Few studies have examined this directly (e.g., McHoskey, 1999). However, multiple studies provide indirect support by examining the association between goals and hostility.

McHoskey (1999) examined whether individuals who prioritized extrinsic goals endorsed social manipulation more than individuals who prioritized intrinsic goals. Social manipulation entails the belief that other groups or individuals are tools, and requires the denial of their humanity (i.e., dehumanization). Results showed that individuals who prioritized extrinsic goals were more likely to endorse social manipulation and engage in antisocial behaviours (e.g., cheating, stealing, betraying people's trust). These individuals were also less likely to value community or family, or engage in prosocial behaviours (e.g., returning borrowed items, volunteer work, tutoring).

Indirect support is provided by Kasser and Ryan (2001), and Duriez and colleagues (2007, 2011), who examine whether prioritizing extrinsic goals facilitates hostile attitudes or behaviours. Kasser and Ryan (2001) examined whether individuals who prioritized extrinsic goals had different behavioural and social outcomes than individuals who prioritized intrinsic

goals. They found that individuals who prioritized extrinsic goals were more likely to engage in behaviours such as drug use and have hostile relationships with others. Separate studies have shown that hostile relationships are associated with aggressive and harmful behaviours toward other groups or individuals (e.g., Crick, Grotpeter, & Bigbee, 2002; Godleski & Ostrov, 2010).

Duriez and colleagues (2007) examined whether parents' promotion of extrinsic goals was associated with children's right wing authoritarianism and social dominance. Right wing authoritarianism is the tendency to value conformity, and is associated with the violent rejection of diversity and punishment of non-conforming individuals (Stenner, 2009). Social dominance is how strongly an individual wants their ingroup to have power over outgroups (Pratto, Sidanius, Stallworth, & Malle, 1994). Both are associated with anti-egalitarian beliefs and prejudice (Duckitt & Sibley, 2006; Levin, Federico, Sidanius, & Rabinowitz, 2002), and were stronger among children whose parents promoted extrinsic goals more than intrinsic goals (Duriez et al., 2007).

Finally, Duriez (2011) examined whether parental promotion of extrinsic goals was associated with children's prejudice. He also examined the factors that could mediate this. Results showed that, the more parents promoted extrinsic goals, the more their children prioritized extrinsic goals. The more children prioritized extrinsic goals, the more they endorsed beliefs such as right wing authoritarianism and social dominance; which were associated with higher prejudice toward members of outgroups.

These studies show that prioritizing extrinsic goals results in more hostile attitudes and behaviours. They indirectly support a link between extrinsic goal prioritization and dehumanization because the latter co-occurs with hostility. Research supporting this includes Louis and colleagues (2013), who found a positive association between dehumanization, zero-

sum beliefs (the belief that one group's success must come at the expense of another group), and intergroup hostility. This indicates that, as dehumanization increased, so did the belief that outgroups' successes occur at the expense of the ingroup. The more individuals believed this, the more hostile they were toward outgroup members. This is congruent with Kelman's (1973) review of intergroup violence. He noted that dehumanization is often a prerequisite for hostility and violence, which might occur because dehumanization reduces the moral imperative to not harm others (Marcu et al., 2007). Finally, research by Wiener and colleagues (2014) indirectly supports this pattern; showing that, the more individuals were believed to dehumanize, the more hostile they were perceived as being

Current Study

The objective of the study was to determine whether higher extrinsic orientation resulted in higher dehumanization. We chose to examine this using national soccer teams to reduce the impact of social desirability on participant responses. We expected that participants would consider members of international soccer teams similar to individuals from their home nations, and that perceptions of team members would generalize to national groups.

We asked participants to evaluate 5 national teams: Argentina, Nigeria, Germany, the United States, and Canada. We chose Argentina and Nigeria because they are low status outgroups, being economically and socially subordinate to Canada (the ingroup). In contrast, we chose Germany and the United States because they are high status outgroups, being economic and social competitors with Canada.

We hypothesized that participants would animalize and inanimatize members of the outgroups more than members of the ingroup (Canada). Furthermore, we hypothesized that participants would animalize low status outgroup members more than high status outgroup members, but inanimatize high status outgroup members more than low status outgroup members. Finally, we hypothesized that value orientation would moderate the association between groups' social status and dehumanization, and that higher prioritization of extrinsic goals (over intrinsic goals) would be associated with higher animalization of low status outgroup members and higher inanimatization of high status outgroup members.

Methods

Participants

Participants consisted of two hundred and two undergraduate students (Female = 78.2%) taking at least one undergraduate psychology course at the University of Victoria. Participants included 33 individuals who identified as Asian (16.3%), 6 who identified as Hispanic (3%), and 6 who identified as belonging to other ethnic groups (3%).

Procedure

Participants completed all questionnaires in a single 45-minute session. Sessions were run in groups consisting of 2-8 individuals. However, participants completed the questionnaires at private computer booths. Participants were first asked to indicate their ethnicity, and subsequently rated how typical a series of emotions and traits were for members of five soccer teams (Argentina, Nigeria, Germany, the United States, Canada). Emotions and traits were presented on separate pages, and participants completed both for members of a single team before rating members of the next team. All teams except Canada were presented in random order using Latin Squares; Canada was always shown last. Subsequently, participants completed a measure of how strongly they endorsed extrinsic and intrinsic goals. Afterwards, they were shown all possible pairings of the five teams, and asked to indicate which team they preferred in each pairing. Finally, participants rated the human uniqueness and human nature of the previously listed emotions and traits. Upon completion, participants were fully debriefed and received partial course credit.

Measures

Ratings of Soccer Teams. To measure dehumanization, we asked participants to rate members of each soccer team using a list of emotions and a list of traits.

Emotion attributions. We measured animalization via emotions using a list of 16 emotions. Emotions were selected following a review of the literature and non-academic sources. Criteria for inclusion were perceived consensus of primary/secondary status within the literature, and perceived commonality within the English language. Emotions were shown in random order and consisted of 4 positive secondary emotions (optimism, hope, compassion, friendliness), 4 negative secondary emotions (humiliation, remorse, guilt, sadness), 4 positive primary emotions (joy, surprise, excitement, pleasure), and 4 negative primary emotions (irritation, rage, sadness, fear), and 4 positive secondary emotions (optimism, hope, compassion, friendliness). Participants were asked to rate how typical each emotion was of members of each group, using a scale ranging from 1 (*not at all*) to 7 (*extremely*).

Trait attributions. Because traits' human uniqueness and human nature levels can vary independently, we simultaneously measured animalization and inanimatization via traits. To do this, we included 24 traits from Haslam and Bain (2007). Traits were shown in random order and included 6 high human uniqueness and high human nature traits (ambitious, analytic, imaginative, insecure, reserved, irresponsible), 6 high human uniqueness and low human nature traits (polite, humble, thorough, rude, disorganized, ignorant), 6 low human uniqueness and high human nature traits (active, curious, friendly, impulsive, impatient, jealous), and 6 low human uniqueness and low human nature traits (relaxed, even-tempered, selfless, simple, uncooperative, unemotional). Each category consisted of 3 high-desirability and 3 low-desirability traits. Participants were asked to rate how typical each trait was of members of each group, using a scale ranging from 1 (*not at all*) to 7 (*extremely*).

Extrinsic and intrinsic goals. To determine whether participants prioritized extrinsic goals over intrinsic goals, we asked them to complete the Aspiration Index (Grouzet et al., 2005).

This measure consists of 11 goal domains (e.g., wealth, image, community feelings, affiliation) that vary in how much they emphasize extrinsic vs. intrinsic rewards. To measure participants' endorsement of extrinsic goals, we used the domains: conformity, popularity, image, and financial success. To measure participants' endorsement of intrinsic goals, we used the domains: community, affiliation, self-acceptance, physical health, and safety. We excluded the dimensions of spirituality and hedonism because they represent the approximate midpoint between intrinsic and extrinsic goals, and do not indicate the prioritization of one over the other. Goal domains were measured via 57 goals (e.g., "people will comment about how attractive I look") and participants were asked to rate how important each goal was to them, using a scale ranging from 1 (*not at all*) to 9 (*extremely*).

Participants' value orientations were defined as their average endorsement of extrinsic goals, minus their average endorsement of intrinsic goals. This created an index ranging from -8 to 8. Higher scores indicated higher endorsement of extrinsic goals, relative intrinsic goals.

Team Preferences. To determine which team each participant preferred most, we presented them with ten dyads representing all possible team pairings (e.g., Canada vs. Argentina, Germany vs. USA). For each pairing, participants were asked to select the team they preferred. Their most-preferred team was the one they selected most often.

Humanness ratings. The humanity of each emotion and trait was assessed using two questions from Bain and colleagues (2009). Participants were first asked to indicate whether each emotion and trait was unique to humans, or shared with animals. This was achieved by asking, "Are the following characteristics exclusively experienced by human beings, or can animals also experience them?" (1 = "not at all exclusive to humans" to 5 = "very exclusive to humans"). Subsequently, participants were asked whether each emotion and trait was part of human nature.

This was achieved by asking, “To what extent is each characteristic an aspect of ‘human nature’?” (1 = “not at all an aspect of human nature” to 5 = “very much an aspect of human nature”).

Results

To ensure we analyzed differences in the attribution of high and low humanity emotions and traits, we ensured adequate discrimination between high and low humanity items. We used the items to construct indices of dehumanization, which were used to determine whether participants dehumanized members of the ingroup less than members of each outgroup, and whether they animalized or inanimatized members of low or high status outgroups more. Next, we analyzed whether value orientation, or extrinsic orientation, moderated the association between groups' social status and dehumanization.

Item Discrimination and Dehumanization Indice Creation

To create indices measuring how highly participants dehumanized members of each team, we had to discriminate secondary emotions and high humanity traits (i.e., uniquely human traits and human nature traits) from primary emotions and low humanity traits (i.e., non-uniquely human traits and non-human nature traits). We decided not to discriminate based on prior research because our participants might have perceived emotions and traits differently from participants in other studies. Instead, we used participants' ratings of item humanity to distinguish secondary emotions and high humanity traits from primary emotions and low humanity traits.

We began by obtaining participants' ratings of each emotion's human uniqueness, and each trait's human uniqueness and human nature. Then, we calculated the average human uniqueness of each emotion, and the average human uniqueness and human nature of each trait. This process created three item sets. We discriminated high and low humanity groups by removing all emotions and traits within the middle third of each set's humanity range. During removal, we ensured that each set had an equal number of high and low humanity emotions or

traits, and that each set's high and low humanity groups had an equal number of positive and negative items.

We observed good discrimination between high and low humanity groups on all sets. However, on the human nature traits set, most positive traits were attributed higher humanity than most negative traits. To ensure the attribution of human nature and non-human nature traits was not confounded with explicit prejudice, we removed the negative items from this set, and then repeated the above process. To ensure that differences in the attribution of human uniqueness items and human nature traits were not due to valence differences, we created additional human uniqueness emotion and trait sets using only positive items.

To create an index for dehumanization via emotions (DE), we obtained each participant's ratings of how typical each emotion was for members of each team. For each participant/team combination, we separately calculated the average typicality of secondary and primary emotions. Then, we subtracted the secondary emotion average from the primary emotion average. A second version of this index was created using only positive emotions (DE-P).

We also created an index for dehumanization via human uniqueness traits (DHU). We obtained each participant's ratings of how typical each human uniqueness trait was for members of each team. Then we separately calculated the average typicality of uniquely human and non-uniquely human traits for each participant/team combination. Finally, we subtracted the uniquely human average from the non-uniquely human average. An additional version of this index was created using only positive human uniqueness traits (DHU-P).

The last index we created was for dehumanization via human nature traits (DHN). We obtained each participant's ratings of how typical each human nature trait was for members of each team. Then we separately calculated the average typicality of human nature and non-human

nature traits for each participant/team combination. Finally, we subtracted the average for human nature traits from the average for non-human nature traits.

For each index, we created additional scores for low and high status outgroups. For low status outgroups, we averaged each participant's scores for Argentina and Nigeria. For high status outgroups, we averaged the scores for Germany and the United States. All indices had scores between -6 and 6. Higher scores represented higher dehumanization.

Subsequent analyses (Table 1) showed that DE and DE-P were uncorrelated with DHU and DHU-P, *r*s(201) = 0.01 – 0.10, *p*s = .167 – .890. Furthermore, DHN was negatively correlated with DE and DE-P *r*s(201) = -0.23 – -0.20, *p*s = .001 – .004, but uncorrelated with DHU and DHU-P *r*s(201) = -0.04 – 0.07, *p*s =.333 – .530.

Table 1
Correlations Between Mean Dehumanization Scores Across All Groups

	Infrahumanization		Positive Infrahumanization		Animalistic Dehumanization		Positive Animalistic Dehumanization		Mechanistic Dehumanization	
	r	p	r	p	r	p	r	p	r	p
Mechanistic Dehumanization	-0.228	.001	-0.202	.004	-0.044	.530	0.068	.333	1.000	.000
Positive Animalistic Dehumanization	0.010	.890	0.098	.167	0.619	.000	1.000	.000		
Animalistic Dehumanization	0.024	.739	0.084	.235	1.000	.000				
Positive Infrahumanization	0.720	.000	1.000	.000						

Note. N = 202.

Absolute Dehumanization of Teams

To determine whether participants dehumanized members of any team, we conducted a series of paired samples t-tests analyzing differences in the attribution of high and low humanity emotions and traits. Results showed that participants attributed members of the Canadian team significantly more secondary emotions than primary emotions $t(202) = -2.72$, $p = .007$, $d = -0.16$. However, participants attributed secondary emotions significantly less than primary emotions to

members of the German $t(202) = 4.29$, $p < .001$, $d = 0.28$, United States $t(202) = 6.37$, $p < .001$, $d = 0.46$, and Argentinian teams $t(202) = 3.69$, $p < .001$, $d = 0.23$. Moreover, there was no significant difference in participants' attribution of secondary and primary emotions to members of the Nigerian team $t(202) = 0.925$, $p = .356$, $d = 0.06$.

When we focused our analyses on positive emotions, participants attributed significantly more secondary emotions than primary emotions to members of the Canadian $t(202) = -4.58$, $p < .001$, $d = -0.30$ and Nigerian teams $t(202) = -2.76$, $p = .006$, $d = -0.18$. However, participants attributed members of the United States team significantly less secondary emotions than primary emotion $t(202) = 2.88$, $p = .004$, $d = 0.20$. Moreover, participants did not significantly differ in their attribution of secondary and primary emotions to members of the German $t(202) = 0.924$, $p = .357$, $d = 0.06$ or Argentinian teams $t(202) = -0.237$, $p = .813$, $d = -0.02$.

Conversely, participants attributed uniquely human traits significantly less than non-uniquely human traits to members of the Canadian $t(202) = 6.44$, $p < .001$, $d = 0.40$, German $t(202) = 7.52$, $p < .001$, $d = 0.50$, United States $t(202) = 5.11$, $p < .001$, $d = 0.33$, Argentinian $t(202) = 5.99$, $p < .001$, $d = 0.40$, and Nigerian teams $t(202) = 10.58$, $p < .001$, $d = 0.64$. However, when we focused our analyses on positive traits, participants attributed uniquely human traits significantly more than non-uniquely human traits to members of the German team $t(202) = -4.32$, $p < .001$, $d = -0.28$. In contrast, participants attributed uniquely human traits significantly less than non-uniquely human traits to members of the United States $t(202) = 4.26$, $p < .001$, $d = 0.26$ and Nigerian teams $t(202) = 3.74$, $p < .001$, $d = 0.19$. Moreover, there was no significant difference in participants' attribution of uniquely and non-uniquely human traits to members of the Canadian $t(202) = 1.13$, $p = .262$, $d = 0.06$ or Argentinian teams $t(202) = 1.47$, $p = .144$, $d = 0.09$.

Subsequently, we analyzed participants' attribution of human nature and non-human nature traits. Results showed that participants attributed members of the Canadian team significantly more human nature than non-human nature traits $t(202) = -11.05$, $p < .001$, $d = -0.78$. The same pattern was found for participants' attribution of traits to members of the German $t(202) = -17.46$, $p < .001$, $d = -1.33$, United States $t(202) = -24.58$, $p < .001$, $d = -1.87$, Argentinian $t(202) = -21.39$, $p < .001$, $d = -1.79$, and Nigerian teams $t(202) = -17.98$, $p < .001$, $d = -1.18$.

Dehumanization of the Ingroup Relative Outgroups

To determine whether participants dehumanized members of the ingroup (the Canadian team) less than members of the outgroups, we conducted a series of paired samples t-tests. The t-tests compared participants' relative attribution of high and low humanity emotions or traits to members of each team. Relative attributions were measured using dehumanization indices (refer to the *Item Discrimination and Dehumanization Indice Creation* section).

When we analyzed dehumanization via emotions (DE), participants dehumanized members of the Canadian team ($M = -0.11$, $SD = 0.57$) significantly less than members of any other team (Ms = 0.04 – 0.42, SDs = 0.62 – 0.80, ps < .006; refer to Tables 2 & 3 for details). When we focused our analyses on positive emotions (DE-P), participants dehumanized members of the Canadian team ($M = -0.26$, $SD = 0.80$) significantly less than members of the German ($M = 0.05$, $SD = 0.82$; $t(202) = -4.34$, $p < .001$, $d = -0.38$), United States ($M = 0.17$, $SD = 0.86$; $t(202) = -6.13$, $p < .001$, $d = -0.52$) and Argentinian teams ($M = -0.01$, $SD = 0.79$; $t(202) = -3.23$, $p = .001$, $d = -0.31$). However, participants did not significantly differ in how highly they

Table 2

Dehumanization of Groups: Attitude Means and Correlations with Value Orientation

	Infrahumanization				Animalistic Dehumanization				Mechanistic Dehumanization	
	All Emotions		Positive Emotions		All Traits		Positive Traits		Positive Traits	
	M (SD)	r	M (SD)	r	M (SD)	r	M (SD)	r	M (SD)	r
All Teams	0.16 (0.41)	-.05	-0.05 (0.61)	-.06	0.22 (0.26)	-.08	0.04 (0.35)	-.03	-1.06 (0.45)	.21**
Canada (ingroup)	-0.11 (0.57)^{a}	.13	-0.26 (0.80)^{a}	.10	0.18 (0.40)^{a}	-.07	0.05 (0.58)^{a}	-.01	-0.59 (0.76)^{a}	.12
Germany	0.42 (0.80)^{b}	-.09	0.05 (0.82)$^{b\,c}$	-.06	0.23 (0.43)$^{a\,b}$	-.04	-0.21 (0.68)^{b}	-.01	-1.07 (0.87)^{b}	.05
United States	0.30 (0.67)^{b}	-.10	0.17 (0.86)^{b}	-.13	0.15 (0.41)$^{a\,c}$	-.02	0.17 (0.55)^{c}	-.05	-1.35 (0.78)^{c}	.14
Argentina	0.16 (0.63)^{c}	-.08	-0.01 (0.79)^{c}	-.08	0.20 (0.47)^{a}	-.06	0.06 (0.60)$^{a\,d}$	-.02	-1.34 (0.89)^{c}	.12
Nigeria	0.04 (0.62)^{d}	.02	-0.16 (0.82)^{a}	-.01	0.30 (0.41)^{d}	-.06	0.14 (0.55)$^{a\,d}$	-.01	-0.94 (0.75)^{b}	.24**
Outgroup	0.46 (0.92)^{b}	-.09	0.01 (0.52)^{b}	-.11	0.22 (0.26)^{a}	-.07	0.04 (0.35)^{a}	-.03	-1.18 (0.53)^{b}	.20**
High Status	0.36 (0.58)^{b}	-.12	0.11 (0.69)^{b}	-.12	0.19 (0.32)^{a}	-.04	-0.02 (0.48)^{a}	-.02	-1.21 (0.68)^{b}	.11
Low Status	0.10 (0.50)^{c}	-.03	-0.09 (0.62)^{c}	-.06	0.25 (0.34)^{b}	-.08	0.10 (0.44)$^{a\,b}$	-.02	-1.14 (0.63)^{b}	.22**

Note. N = 202. All groups compared against each other. Differences in superscript letters indicate significant difference at p<.05. Different obtained using paired samples t-tests. Positive correlations indicate that higher dehumanization is associated with higher extrinsic orientation.

*$p < .05$. ** $p < .01$.

Table 3

Size of Differences in the Dehumanization of Canada Relative Outgroups

	Infrahumanization						Animalistic Dehumanization						Mechanistic Dehumanization		
	All Items			Positive Items			All Items			Positive Items			All Items		
	t	p	d	t	p	d	t	p	d	t	p	d	t	p	d
Canada vs. Germany	-8.001	.000	-0.754	-4.336	.000	-0.384	-1.223	.223	-0.111	4.563	.000	0.399	6.901	.000	0.580
Canada vs. United States	-7.720	.000	-0.656	-6.126	.000	-0.521	0.896	.371	0.080	-2.491	.014	-0.209	10.775	.000	0.977
Canada vs. Argentina	-4.865	.000	-0.453	-3.233	.001	-0.308	-0.440	.661	-0.039	-0.275	.784	-0.026	9.152	.000	0.902
Canada vs. Nigeria	-2.839	.005	-0.251	-1.335	.183	-0.122	-3.372	.001	-0.304	-2.082	.039	-0.173	5.007	.000	0.464
Canada vs. High Status	9.253	.000	0.810	5.932	.000	0.497	0.215	.830	0.019	-1.532	.127	-0.125	-10.066	.000	-0.850
Canada vs. Low Status	4.430	.000	0.393	2.622	.009	0.239	2.186	.030	0.188	1.282	.201	0.109	-8.278	.000	-0.784

Note. N = 202.

dehumanized members of the Canadian and Nigerian teams (M =-0.16, SD = 0.82; t(202) = -1.34, p = .183, d = -0.12).

Subsequently, we analyzed dehumanization via uniquely human traits (DHU). Results showed that participants dehumanized members of the Canadian team (M = 0.18, SD = 0.40) significantly less than members of the Nigerian team (M = 0.30, SD = 0.41; t(202) = -3.37, p = .001, d = -0.30). However, participants did not dehumanize members of the Canadian team significantly more, or less, than members of any other team (Ms = 0.15 – 0.23, SDs = 0.41 – 0.47; ps = .223 – .661; refer to Tables 2 & 3 for more details). When we focused our analyses on positive human uniqueness traits (DHU-P), participants dehumanized members of the Canadian team (M =0.05, SD = 0.58) less than members of the United States (M =0.17, SD = 0.55; t(202) = -2.49, p = .014, d = -0.21) and Nigerian teams (M = 0.14, SD = 0.55; t(202) = -2.08, p = .039, d = -0.17) at levels that approach significance when using Bonferroni adjusted alpha levels of .01 (.05/5). However, participants dehumanized members of the Canadian team significantly more than members of the German team (M = -0.21, SD = 0.68; ts(202) = 4.56, p < .001, d = 0.40). Moreover, there was no significant difference in participants' dehumanization of members of the Canadian and Argentinian teams (M = 0.06, SD = 0.60; t(202) = -0.28, p = .784, d = -0.03).

Finally, we analyzed how participants dehumanized team members using human nature traits (DHN). Results showed that participants dehumanized members of the Canadian team (M =-0.59, SD = 0.76) significantly more than members of the German (M =-1.07, SD = 0.87; t(202) = 6.901, p < .001, d = 0.58), United States (M =-1.35, SD = 0.78; t(202) = 10.78, p < .001, d = 0.98), Argentinian (M =-1.34, SD = 0.89; t(202) = 9.15, p < .001, d = 0.90), and Nigerian teams (M =-0.94, SD = 0.75; t(202) = 5.01, p < .001, d = 0.46).

Dehumanization of Low Status Outgroups Relative High Status Outgroups

To determine whether participants dehumanized members of low or high status outgroups more, we conducted a series of paired samples t-tests using dehumanization indices. When participants attributed emotions (DE), they dehumanized members of low status outgroups (M = 0.10, SD = 0.50) less than members of high status outgroups (M = 0.36, SD = 0.58), $t(202)$ = 6.32, $p < .001$, d = 0.47. The same pattern was found when we focused our analysis on positive emotions (DE-P). Participants dehumanized members of low status outgroups (M = -0.09, SD = 0.62) less than members of high status outgroups (M = 0.11, SD = 0.69), $t(202) = 3.59$, $p < .001$, d = 0.30. In contrast, when participants attributed human uniqueness traits (DHU), they dehumanized members of low status outgroups (M = 0.25, SD = 0.34) more than members of high status outgroups (M = 0.19, SD = 0.32) at a level that approaches significance, when using Bonferroni adjusted alpha levels of .01, $t(202) = -2.22$, $p = .027$, d = -0.19. Similarly, when we focused our analysis on positive traits (DHU-P), participants dehumanized members of low status outgroups (M = 0.10, SD = 0.44) more than members of high status outgroups (M = -0.02, SD = 0.48), $t(202) = -3.01$, $p = .003$, d = -0.27. Finally, when participants attributed human nature traits (DHN), they did not significantly differ in their dehumanization of low status (M = -1.14, SD = 0.63) or high status (M = -1.21, SD = 0.68) group members, $t(202) = -1.22$, $p = .224$, d = -0.10.

Moderating Effect of Value Orientation on the Association Between Team Social Status and Dehumanization

To determine whether value orientation moderated the association between teams' social status and dehumanization, we conducted a series of mixed factorial ANOVAs. Results showed that social status had a main effect on the attribution of secondary and primary emotions (DE)

$F(1, 199) = 44.960$, $p = .002$. Participants dehumanized members of the ingroup ($M = -0.11$, $SD = 0.57$) less than members of low status outgroups ($M = 0.10$, $SD = 0.50$, $p = .024$) and members of high status outgroups ($M = 0.36$, $SD = 0.58$, $p = .043$) at levels that approach significance when using Bonferroni adjusted alpha levels of .01; although the difference in dehumanization between the latter two was non-significant, $p = .159$. Furthermore, value orientation had a non-significant main effect on the attribution of emotions $F(1, 199) = 1.035$, $p = .618$, and the interaction between value orientation and social status was non-significant $F(1, 199) = 0.928$, $p = .633$.

When we focused our analysis on positive emotions (DE-P), social status had a main effect on the attribution of secondary and primary emotions $F(1, 199) = 44.960$, $p = .002$. Participants dehumanized members of the ingroup ($M = -0.26$, $SD = 0.80$) less than members of high status outgroups ($M = 0.11$, $SD = 0.69$, $p = .034$) at a level that approaches significance when using Bonferroni adjusted alpha levels of .01. However, participants did not dehumanize members of the ingroup significantly more, or less, than members of low status outgroups ($M = -0.09$, $SD = 0.70$, $p = .282$). Furthermore, participants did not significantly differ in their dehumanization of members of low and high status outgroups ($p = .415$). Results also showed that value orientation had a non-significant main effect on the attribution of positive emotions $F(1, 199) = 1.235$, $p = .554$. Additionally, the interaction between value orientation and social status was non-significant $F(1, 199) = 0.990$, $p = .598$.

Subsequent analyses showed that social status did not have a significant main effect on the attribution of uniquely human and non-uniquely human traits (DHU) $F(1, 199) = 1.866$, $p = .268$. Additionally, value orientation had a non-significant main effect on the attribution of human uniqueness traits $F(1, 199) = 0.396$, $p = .917$, and a non-significant interaction with group

status $F(1, 199) = 0.489$, $p = .912$. When we focused our analysis on participants' attribution of positive human uniqueness traits (DHU-P), social status did not have a significant main effect on the attribution of positive uniquely human and non-uniquely human traits $F(1, 199) = 3.433$, $p = .136$. Furthermore, value orientation did not have a significant main effect on the attribution of traits $F(1, 199) = 0.257$, $p = .978$, nor a significant interaction with social status $F(1, 199) = 0.776$, $p = .726$.

In contrast, results showed that social status had a significant main effect on the attribution of human nature and non-human nature traits (DHN), $F(1, 199) = 168.727$, $p < .001$. Participants dehumanized members of the ingroup (M =-0.59, $SD = 0.76$) more than members of low status outgroups (M = -1.14, $SD = 0.63$, $p = .013$) and high status outgroups (M = -1.21, $SD = 0.68$, $p = .019$) at levels that approach significance, when using Bonferroni adjusted alpha levels of .01. However, participants did not significantly differ in their dehumanization of low and high status outgroup members ($p = .182$). Furthermore, value orientation did not have a significant main effect on trait attributions $F(1, 199) = 0.481$, $p = .872$, nor a significant interaction with social status $F(1, 199) = 2.791$, $p = .162$.

Moderating Effect of Extrinsic Orientation on the Association Between Team Social Status and Dehumanization

Subsequently, we decomposed value orientation into extrinsic orientation and intrinsic orientation. Extrinsic orientation is participants' average endorsement of extrinsic goals. Intrinsic orientation is participants' average endorsement of intrinsic goals. We examined whether these moderated the association between social status and dehumanization. To do so, we conducted a series of mixed factorial ANOVAs.

When analyzing the effect of extrinsic orientation, social status had a significant main effect on the attribution of secondary and primary emotions (DE) $F(1, 199) = 46.298$, $p < .001$. Participants dehumanized members of the ingroup ($M = -0.11$, $SD = 0.57$) significantly less members of low status outgroups ($M = 0.10$, $SD = 0.50$, $p < .001$) and members of high status outgroups ($M = 0.36$, $SD = 0.58$, $p < .001$). Furthermore, participants dehumanized members of low status outgroups significantly less than members of high status outgroups ($p < .001$). Results also showed that extrinsic orientation had a main effect on the attribution of emotions that approaches significance when using Bonferroni adjusted alpha levels of .01, $F(1, 199) = 1.422$, $p = .040$; though subsequent analyses did not show significant correlations (refer to Table 4 for details). Additionally, the interaction between extrinsic orientation and social status was non-significant $F(1, 199) = 1.103$, $p = .244$.

When we focused our analysis on positive emotions (DE-P) social status had a significant main effect on the attribution of secondary and primary emotions $F(1, 199) = 22.676$, $p < .001$. Participants dehumanized members of the ingroup ($M = -0.25$, $SD = 0.80$) less than members of low status outgroups ($M = -0.09$, $SD = 0.62$, $p = .013$) at a level that approaches significance when using Bonferroni adjusted alpha levels of .01, and dehumanized members of the ingroup significantly less than members of high status outgroups ($M = 0.11$, $SD = 0.69$; $p < .001$). Furthermore, participants dehumanized members of low status outgroups significantly less than members of high status outgroups ($p < .001$). In contrast, extrinsic orientation had a non-significant main effect on the attribution of positive emotions $F(1, 199) = 1.231$, $p = .150$, and a non-significant interaction with social status $F(1, 199) = 1.182$, $p = .120$.

Table 4

Dehumanization of All Groups via Three Attitudes: Attitude Means and Correlations with Extrinsic Orientation

	Infrahumanization				Animalistic Dehumanization				Mechanistic Dehumanization	
	All Emotions		Positive Emotions		All Traits		Positive Traits		Positive Traits	
	M (SD)	r	M (SD)	r	M (SD)	r	M (SD)	r	M (SD)	r
All Teams	0.16 (0.41)	.02	-0.05 (0.61)	.03	0.22 (0.26)	-.04	0.04 (0.35)	-.07	-1.06 (0.48)	.08
Canada (ingroup)	-0.11 (0.57)^{a}	.15*	-0.26 (0.80)^{a}	.14	0.18 (0.40)^{a}	-.06	0.05 (0.58)^{a}	-.05	-0.59 (0.76)^{a}	.04
Germany	0.42 (0.80)^{b}	-.05	0.05 (0.82)$^{b\ c}$	-.01	0.23 (0.43)$^{a\ b}$	-.09	-0.21 (0.68)^{b}	-.09	-1.07 (0.87)^{b}	-.07
United States	0.30 (0.67)^{b}	-.01	0.17 (0.86)^{b}	.01	0.15 (0.41)$^{a\ c}$	-.01	0.17 (0.55)^{c}	-.05	-1.35 (0.78)^{c}	-.01
Argentina	0.16 (0.63)^{c}	-.04	-0.01 (0.79)^{c}	-.04	0.20 (0.47)^{a}	.03	0.06 (0.60)$^{a\ d}$	.00	-1.34 (0.89)^{c}	.05
Nigeria	0.04 (0.62)^{d}	.03	-0.16 (0.82)^{a}	.00	0.30 (0.41)^{d}	.01	0.14 (0.55)$^{a\ d}$	.02	-0.94 (0.75)^{b}	.26**
Outgroup	0.23 (0.46)^{b}	-.03	0.01 (0.52)^{b}	-.03	0.22 (0.26)^{a}	-.02	0.04 (0.35)^{a}	-.07	-1.18 (0.53)^{b}	.08
High Status	0.36 (0.58)^{b}	-.04	0.11 (0.69)^{b}	.00	0.19 (0.32)^{a}	-.06	-0.02 (0.48)^{a}	-.10	-1.21 (0.68)^{b}	-.05
Low Status	0.10 (0.50)^{c}	-.01	-0.09 (0.62)^{c}	-.03	0.25 (0.34)^{b}	.03	0.10 (0.44)$^{a\ b}$	.05	-1.14 (0.63)^{b}	.19*

Note. N = 202. All groups compared against each other. Differences in superscript letters indicate significant difference at p<.05. Different obtained using paired samples t-tests. Positive correlations indicate that higher dehumanization is associated with higher extrinsic orientation.

*$p < .05$. ** $p < .01$.

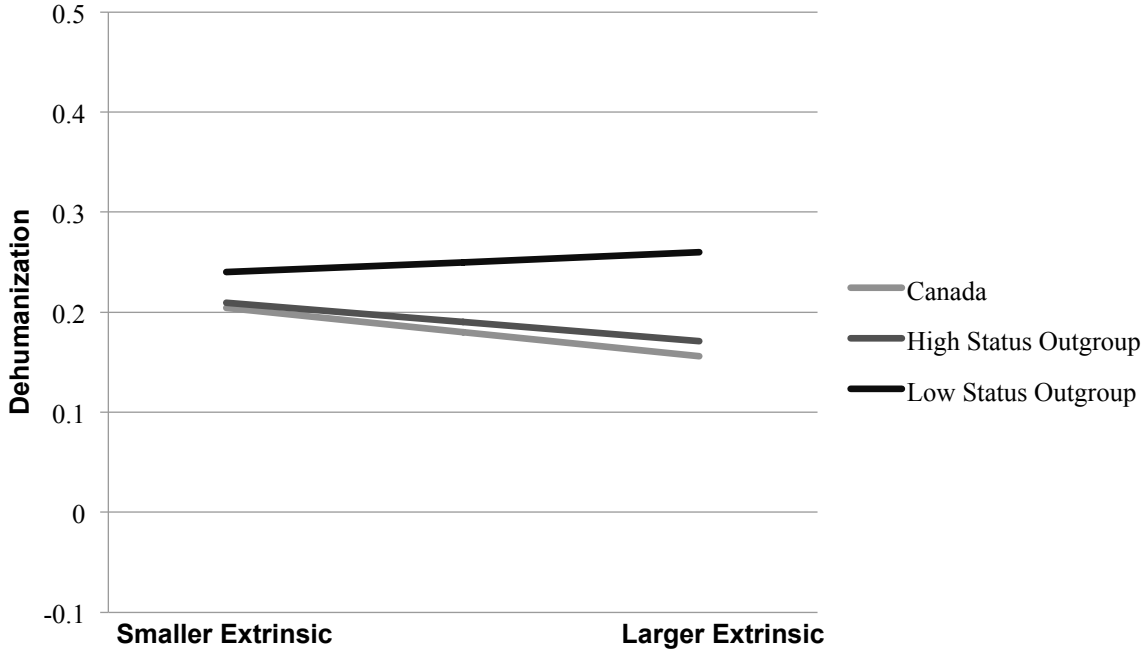
Results also showed that social status had a significant main effect on the attribution of uniquely human and non-uniquely human traits (DHU) $F(1, 199) = 4.965$, $p = .008$. Participants dehumanized members of the ingroup ($M = 0.18$, $SD = 0.40$) less than members of low status outgroups ($M = 0.25$, $SD = 0.34$, $p = .048$) at a level that approaches significance when using Bonferroni adjusted alpha levels of .01. However, participants did not significantly differ in their dehumanization of ingroup and high status outgroup members ($M = 0.19$, $SD = 0.32$; $p = 1.000$). In contrast, participants dehumanized members of low status outgroups significantly more than members of high status outgroups ($p = .005$). Analyses also showed that extrinsic orientation had a non-significant main effect on the attribution of traits $F(1, 199) = 1.126$, $p = .275$; although its interaction with social status approaches significance $F(1, 199) = 1.213$, $p = .088$ (Figure 1). The main effect of the interaction approaches significance for members of low status outgroups $F(1, 199) = 1.328$, $p = .079$, but was non-significant for members of the ingroup (Canada) $F(1, 199) = 1.034$, $p = .430$, and high status outgroups $F(1, 199) = 1.223$, $p = .158$.

When we focused our analyses on positive traits, social status had a significant main effect on the attribution of uniquely human and non-uniquely human traits (DHU-P), $F(1, 199) = 4.964$, $p = .008$. However, participants did not dehumanize members of the ingroup ($M = 0.05$, $SD = 0.58$) significantly more, or less, than members of low status outgroups ($M = 0.10$, $SD = 0.44$, $p = .576$) or members of high status outgroups ($M = -0.02$, $SD = 0.48$, $p = .248$). Although participants did dehumanize members of low status outgroups significantly more than members of high status outgroups ($p = .003$).

When using Bonferroni adjusted alpha levels of .01, results also showed that the main effect of extrinsic orientation on the attribution of positive traits approaches significance $F(1, 199) = 1.324$, $p = .025$, although subsequent analyses did not reveal significant correlations for

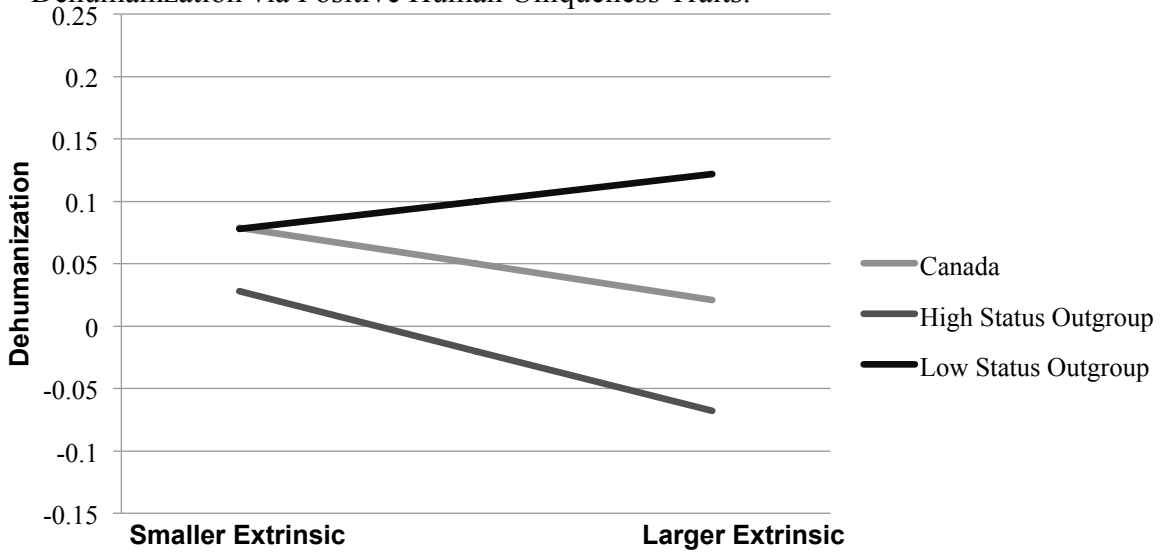
any team (Table 4). Additionally, the interaction between extrinsic orientation and social status approaches significance, $F(1, 199) = 1.324$, $p = .025$ (Figure 2). The interaction had a significant main effect on the attribution of traits to members of low status outgroups $F(1, 199) = 1.635$, $p = .007$, and a main effect on the attribution of traits to members of high status outgroups that approaches significance, $F(1, 199) = 1.465$, $p = .029$. However, the main effect was non-significant for the attribution of traits to members of the ingroup $F(1, 199) = 1.241$, $p = .141$.

Figure 1. Interaction Between Group Status and Extrinsic Orientation on Dehumanization via Human Uniqueness Traits.



Note. n = 202. Higher scores indicate more higher dehumanization. High status outgroup include Germany and USA, low status outgroup include Argentina and Nigeria.

Figure 2. Interaction Between Group Status and Extrinsic Orientation on Dehumanization via Positive Human Uniqueness Traits.



Note. n = 202. Higher scores indicate more higher dehumanization. High status outgroup include Germany and USA, low status outgroup include Argentina and Nigeria.
*$p < .05$.

Table 5

Interactions Between Group Status and Value Orientations on the Dehumanization of Canada and High- and Low- Status Outgroups

	Infrahumanization				Animalistic Dehumanization				Mechanistic Dehumanization	
	All Items		Positive Items		All Items		Positive Items			
Direct Effects & Interactions	F	p	F	p	F	p	F	p	F	p
	Intrinsic Orientation									
Group Status	42.066	.000	14.878	.000	2.135	.123	2.861	.061	49.003	.000
Values	1.236	.181	1.129	.304	1.006	.501	0.802	.852	0.913	.672
Group Status * Values	1.090	.299	1.013	.475	0.761	.965	0.839	.878	0.916	.721

Note. N = 202. Value Orientation = extrinsic orientation – intrinsic orientation.

Subsequently, we analyzed the main effect of social status on the attribution of human nature and non-human nature traits (DHN) and found that it was significant $F(1, 199) = 41.283$, $p < .001$. Participants dehumanized members of the ingroup ($M = -0.59$, $SD = 0.76$) significantly more than members of low status outgroups ($M = -1.14$, $SD = 0.63$, $p < .001$) and members of high status outgroups ($M = -1.21$, $SD = 0.68$, $p < .001$). However, participants did not significantly differ in their dehumanization of low and high status outgroup members ($p = 1.000$). Furthermore, the main effect of extrinsic orientation on the attribution of traits was non-significant $F(1, 199) = 1.032$, $p = .433$, as was its interaction with social status $F(1, 199) = 0.941$, $p = .658$.

Finally, we conducted a series of mixed factorial ANOVAs exploring the moderating effect of intrinsic orientation. However, the results mirrored those for value orientation (Table 5).

Discussion

The objective of the study was to determine whether values moderated the association between groups' social status and dehumanization. Our results provide modest support for the association between social status and dehumanization, but do not indicate that value orientation moderates it or has a main effect on dehumanization. However, subsequent analyses provide tentative support for a moderating and main effect of extrinsic orientation.

In the following sections, we explore these results in detail, discussing their congruence with the literature and possible causes of unpredicted results. Recurrent themes include possible non-synonymy between types of dehumanization, and the possibility that dehumanization is influenced by multiple factors. Additionally, we examine values in more detail and explore why extrinsic orientation – but not value orientation – was associated with dehumanization. Finally, we discuss how ingroup identification could influence our understanding of the results.

Dehumanization of Group Members

We first examined whether participants dehumanized members of different groups. If participants dehumanized members of a group, they would have perceived high humanity emotions (e.g., optimism, guilt) or traits (e.g., imaginativeness, irresponsibility) as less typical than low humanity emotions (e.g., pleasure, fear) or traits (e.g., even-tempered, simple-minded). When we included all emotions in the analysis, this pattern was found for members of all groups except Canada. When we included all human uniqueness traits, the pattern was universal. However, when we focused our analyses on positive emotions, the pattern was only found for Americans; and when we focused our analyses on positive traits, the pattern was only found for Americans and Nigerians. Moreover, low human nature traits were perceived as less typical than high human nature traits for members of all groups.

This raises several questions. Why did animalization severity change between emotion and trait indices? Why did it change between indices that used all items and indices that used positive items? Moreover, why was inanimatization not found?

To answer the first question, we turn to the concept of ingroup protection, which refers to any behaviours individuals use to protect their ingroup from external threats. Changes in the intensity of ingroup protection might influence how much individuals animalize others via emotions, versus traits. Researchers (e.g., Leyens et al., 2000) have theorized that higher ingroup protection results in higher animalization via emotions. Research indirectly supports this, showing that higher ingroup identification was associated with higher animalization via emotions (Demoulin et al., 2009). We argue that ingroup identification can be a proxy for ingroup protection, because individuals are probably not motivated to protect groups they do not identify with. In contrast, research indirectly shows that higher ingroup protection is associated with no change, or a reduction in, animalization via traits. Specifically, research showed that the more individuals animalized others via traits, the less they blamed them for their behaviours or viewed them as willfully malicious (Bastian et al., 2011). Research also showed that, the less individuals blamed others for their actions, the less aggressive they were toward them (Kulik & Brown, 1979). This indicates that, the more individuals animalize others via traits, the less motivated they are to engage in aggressive or retaliatory behaviours; which could reduce the intensity of ingroup protective behaviours. This is congruent with our results, wherein participants animalized outgroup members, but not ingroup members, via emotions; indicating that they protected their ingroup's identity by perceiving it as superior (Crocker & Luhtanen, 1990). Furthermore, participants animalized members of the ingroup and outgroups via traits, indicating that ingroup protection does not influence it as much as other factors.

This leaves two questions unanswered: (1) why did dehumanization severity change between indices that used all items versus indices that used positive items, and (2) why was inanimatization not found? We can answer these questions by examining how individuals' willingness to behave in accordance with social norms influences their responses.

In our study, the groups were soccer teams. Although these teams are competitors, they are built on cooperative principles and norms (*prosocial norms*), which might enhance the salience of prosocial norms among participants.

If prosocial norms are salient, they could influence participants' responses. Behavioural changes could result from the activation of two processes: personal valuing or punishment avoidance. Which process is activated depends on how strongly participants have *internalized* the importance of behaving in accordance with social norms (*norm congruence*). When individuals strongly internalize this goal (i.e., it is *identified* or *integrated*), they consider its fulfillment an important and worthwhile endeavour (Legault, Green-Demers, & Eadie, 2009; Legault, Green-Demers, Grant, & Chung, 2007). They might also integrate the goal into their self-concept, making its fulfillment an expression of their identity. As a result, these individuals pursue the goal even when social pressures do not require them to, which facilitates the creation of habits. Habits allow individuals to behave congruent with the goal without any need for conscious thought (Gollwitzer, 1999). In contrast, when individuals have weakly internalized a goal or behaviour (i.e., it is *external* or *introjected*), they do not consider it important or worthwhile (Legault et al., 2007). Instead, they engage in the behaviour to avoid being punished. This means that they will not engage in the behaviour when there is no risk of punishment, impairing the formation of habits.

When prosocial norms are salient, individuals who strongly internalized norm congruence likely engage in prosocial behaviours consistently. They do this because their strong internalization facilitates the creation of habits, which allow them to pursue their goal without conscious thought. This means that explicit pressures (e.g., social norms) are reinforced by implicit beliefs. Individuals' implicit beliefs can influence their implicit attitudes and behaviours (Perugini, 2005), which include the attribution of traits to others (Loughnan et al., 2009). Congruence with prosocial norms could manifest as positive beliefs about others, and the attribution of positive mental and emotional states to them (e.g., lack of maliciousness) (Hughes, Robinson, & Moore, 1991; Malti, Gummerum, Keller, & Buchmann, 2009; Malti, Gummerum, & Buchmann, 2007). In our study, this could manifest as the attribution of more positive, and high humanity emotions and traits to others.

If prosocial norms are salient, individuals who weakly internalized norm congruence could also behave prosocially. They can do this because individuals' explicit beliefs can influence their implicit attitudes and behaviours (Perugini, 2005). Explicit beliefs might influence implicit attitudes and behaviours by interacting with individuals' implicit beliefs. Alternately, if individuals deliberate on their attributions, they reduce their automaticity. Reduced automaticity could increase the extent to which explicit factors (e.g., consciously held beliefs, social pressures) influence individuals' attributions. If prosocial norms are salient, this could result in individuals attributing more positive characteristics and humanity to others.

Prosocial norm salience might explain why dehumanization was lower when it was measured using indices that used positive items, relative indices that used all items. Moreover, it could explain the difference between animalization and inanimatization. This is because valence was confounded with human nature in our study. Valence is continuous (Demoulin et al., 2004),

but when we removed negative traits to eliminate the confound, we used a dichotomous scale. Thus, the confound might not have been eliminated. If this occurred, prosocial norm congruence might have facilitated the attribution of high human nature traits because they were more positive, resulting in the attribution of human nature, rather than its denial.

However, if we did succeed in removing the confound between human nature and valence, there is another explanation for our results: the tendency for participants to attribute different forms of humanity in a complementary manner. Research (e.g., Andrighetto et al., 2014; Bain et al., 2009) shows that, the more individuals deny others' capacity for one form of humanity (e.g., human uniqueness), the more they might attribute them another (e.g., human nature). Congruent with this, participants attributed members of all groups a low level of human uniqueness, but a high level of human nature. Furthermore, the less participants denied group members' human uniqueness, the less they attributed them human nature. For example, participants animalized members of the Canadian team via traits, but not emotions, and attributed them a small amount of human nature.

Differences in Dehumanization Between the Ingroup and Outgroups

Our second hypothesis was that participants would dehumanize outgroup members more than ingroup members (Canadians). Congruent with this hypothesis, participants animalized outgroup members more than ingroup members via emotions. Inconsistent with this hypothesis, participants animalized ingroup members comparably to outgroup members via traits, and inanimatized ingroup members more than outgroup members.

The literature supports our results for emotions, but provides mixed support for our results with traits. Research shows that individuals animalize outgroup members more than ingroup members via emotions (e.g., Cortes et al., 2005; Leyens et al., 2000; Vaes & Paladino,

2009). Many studies also show that individuals dehumanize outgroup members more than ingroup members via traits (e.g., Čehajić, Brown, & González, 2009; Waytz & Epley, 2012). However, some studies show that individuals dehumanize ingroup and outgroup members comparably (e.g., Bain et al., 2009).

This raises two questions. (1) Why did participants animalize ingroup members less than outgroup members via emotions but not traits, and (2) why did participants attribute ingroup members less human nature than outgroup members?

To answer the first question, we return to the concept of ingroup protection. Subsequently, we attempt to answer both questions by examining whether forms of dehumanization can be complementary, and whether they can interact with ingroup protection. Afterwards, we focus on why participants attributed ingroup members less human nature than outgroup members. Possible explanations include (1) the idea that participants can positively reframe derogation they suffer, and (2) that participants might have inanimatized ingroup members for personal gain.

As previously discussed, ingroup protection is any behaviour designed to protect the ingroup from external threats. Ingroup protection might be associated with animalization via emotions, but not traits. This could result in an ingroup bias when participants attribute emotions, causing them to deny ingroup members' humanity less than outgroup members'. If ingroup protection is not associated with animalization via traits, other factors could influence their attribution more. As a result, ingroup biases might be reduced, resulting in the more equitable animalization of ingroup and outgroup members.

One factor that might influence animalization via traits is humanity complementarity. This occurs when individuals deny others' capacity for one form of humanity, but attribute them

another. Humanity complementarity could explain participants' equitable animalization of ingroup and outgroup members via traits, because participants attributed human nature to members of all groups. Thus, the denial of all the groups' members' capacity for one type of humanity might have been facilitated by the attribution of another. However, if the denial of human uniqueness traits facilitated the attribution of human nature (or vice versa), why were members of the ingroup attributed less human nature than members of the outgroups? We can answer this by examining animalization via emotions. When participants animalized via emotions, they dehumanized ingroup members less than outgroup members – possibly in an attempt to protect their ingroup. As a result, overall animalization (i.e., across emotions and traits) was lower for ingroup members than outgroup members. Congruent with humanity complementarity, we would expect participants to compensate by attributing ingroup members less human nature than outgroup members. Because differences in inanimatization corresponded to differences in animalization via emotions, we would not expect participants to differ in how much they animalized members of different groups via traits.

However, there are other explanations for why participants attributed less human nature to ingroup members than outgroup members. These include the possibility that participants can (1) positively reframe derogation they suffer, or (2) inanimatize ingroup members for personal gain.

The idea that people can positively reframe derogation is not without precedent. Research shows that individuals who are dehumanized can reframe it as a valued aspect of their identity (Bain et al., 2009; Crawford et al., 2013). They can achieve this by perceiving negative characteristics in a positive manner (e.g., by reframing impulsivity as spontaneity), or by emphasizing traits that are congruent with dehumanization, but more positive (Crawford et al.,

2013; Reed & Valenti, 2012). For example, members of an animalistically dehumanized group might emphasize their capacity for curiosity or relaxedness, rather than their capacity for impatience or uncooperativeness. This might explain our results, because a cursory review of international media indicates that ingroup members are inanimatized (e.g., in Peregrine, 2014) and that ingroup members describe themselves and their group in a similar manner (Mackey, 2002). This indicates that inanimatization is reframed as a valued aspect of the ingroup's identity, which could result in less human nature being attributed to ingroup members than outgroup members.

Alternately, individuals might inanimatize members of their ingroup for personal gain. To understand why, we must understand what *objectification* is. Objectification is the perception that group members are tools that can be used for personal gain (Nussbaum, 1995). Individuals objectify members of groups that they can approach, and thus manipulated (Gruenfeld et al., 2008). Because individuals have more contact with ingroup members than outgroup members, the former might be especially vulnerable to objectification. Several researchers have noted that objectification and inanimatization can co-occur, and might be the same perception (e.g., Gervais et al., 2013). Both include the beliefs that others are inert, rigid, and interchangeable (compare Haslam, 2006 and Nussbaum, 1995). If objectification and inanimatization are the same perception, the latter could be directed primarily at ingroup members.

Differences in Dehumanization Between High and Low Status Outgroups

Our third hypothesis was that participants would animalize members of low status outgroups more than members of high status outgroups, but inanimatize members of high status outgroups more than members of low status outgroups. Overall, support for this hypothesis is weak. Participants animalized members of low status outgroups more than members of high

status outgroups via traits, but less via emotions. Furthermore, participants did not significantly differ in how much they inanimatized members of low and high status outgroups.

To explain differences in the animalization of low and high status outgroup members, we return to the concept of ingroup protection. As previously noted, research indirectly shows that ingroup protection is associated with animalization via emotions, but not traits (compare Bastian et al., 2011 and Demoulin et al., 2009). This indicates that emotion animalization could increase with targets' perceived threat, while trait animalization might not.

Congruent with this, the high status groups we chose compete economically with the ingroup, increasing the threat that they pose. In contrast, neither of the low status outgroups are economic competitors with the ingroup, which reduces their threat. This means that, when participants attributed emotions, they primarily animalized members of high threat outgroups, consistent with the idea that they were attempting to protect their ingroup. Conversely, participants animalized members of lower threat, low status groups, more via traits; consistent with the idea that trait animalization is primarily influenced by factors other than ingroup protection (e.g., historical exploitation).

If groups differed in both social status and threat, why did participants not significantly differ in their inanimatization of low and high status outgroup members? There are three possible explanations. First, because the ingroup is stereotyped as mechanical (e.g., Mackey, 2002; Peregrine, 2014) individuals might have reframed inanimatization as a positive, valued aspect of their identity (Crawford et al., 2013). This might have been incompatible with inanimatization as a form of derogation, reducing participants' willingness to inanimatize members of high or low status outgroups. Alternately, humanity complementarity might have influenced the attribution of human nature traits (e.g., Andrighetto et al., 2014; Bain et al., 2009). Participants denied the

uniquely human characteristics of high and low status outgroup members (albeit, using different characteristics), potentially facilitating the attribution of their human nature. Finally, because inanimatization and objectification might be the same process (Gervais et al., 2013), participants might have inanimatized members of groups that were easier to approach. Members of high or low status outgroups are less approachable than members of the ingroup, which could reduce the likelihood of substantial differences in their inanimatization.

Moderating Effects of Value and Extrinsic Orientation on the Association Between Groups' Social Status and Dehumanization

Our fourth hypothesis was that value orientation would moderate the association between groups' social status and dehumanization. However, our results do not indicate this. We found no significant interaction between social status and value orientation, nor did value orientation have a significant main effect on dehumanization.

These findings are incongruent with the literature, which indicates that value orientation is associated with dehumanization. Research by McHoskey (1999) directly supports this, showing an association between value orientation and the perception of others as tools. Research on hostility provides indirect support, as hostility and dehumanization could co-occur (Kelman, 1973). Examples include value orientation's association with prejudice (Duriez, 2011), hostile relationships (Kasser & Ryan, 2001), social dominance, and right wing authoritarianism (Duriez et al., 2007).

To better understand our results' incongruence with the literature, we analyzed whether extrinsic orientation moderated the association between social status and dehumanization. Whereas value orientation is an index of participants' relative valuing of extrinsic and intrinsic goals, extrinsic orientation measures participants' average endorsement of extrinsic goals.

Results showed that extrinsic orientation has a main effect on animalization via emotions and traits. Furthermore, extrinsic orientation and social status had a marginally significant interaction on trait animalization; both when all traits were included, and when analyses focused on positive traits. This provides tentative support for an association between extrinsic orientation and the dehumanization of others.

However, subsequent analyses indicate a more complex picture. When we examined animalization via traits, participants with higher extrinsic orientations dehumanized members of low status outgroups more, but members of high status outgroups and the ingroup less, than participants with lower extrinsic orientations. The pattern was found when we analyzed all traits, and when we focused on positive traits.

We can explain these results by examining how individuals' goals might influences their tendency to behave in a manner that society supports. Participants who highly endorse extrinsic goals might make more attempts to behave in a socially-supported manner, compared to individuals who have low endorsement of extrinsic goals. They might do this because they value social rewards more, and social rewards could be easier to attain (or more frequent) when individuals conform with society. To determine what society supports, these individuals could examine societal beliefs. Societal beliefs include stereotypes. Members of low status outgroups are stereotyped as animal-like (e.g., Goff et al., 2008; Pike, 1992) and members of high status outgroups are stereotyped as machine-like (e.g., O'Donnell, 1994). Accordingly, the more individuals value social rewards, the more they might deny low status outgroup members' human uniqueness. In contrast, they might attribute members of high status outgroups more human uniqueness. This would explain why higher extrinsic orientation was associated with higher

animalization of low status outgroup members, but lower animalization of high status outgroup, and ingroup, members.

The Role of Ingroup Identification

When interpreting our results, it is important to consider the effect of ingroup identification. Research shows that higher ingroup identification is associated with higher prejudice and dehumanization (Aboud, 2003; Bizman, & Yinon, 2010; Castano, Yzerbyt, Paladino, & Sacchi, 2002; Sassenberg & Wieber, 2005; Waytz & Epley, 2012). We measured participants' identification with national groups using their team preferences. However, team preferences can be a proxy for multiple identities (e.g., gender, social class, religion; Heere & James, 2007), making its use problematic. Correspondingly, analyses using the sample subset, participants who preferred the Canadian soccer team, did not systematically differ from analyses using all participants[3].

Our inability to effectively reduce our sample to participants who identified with Canada nationally might explain the study's weak pattern of effects. Participants who identified with other nations (e.g., Argentina, Nigeria, Germany, United States) likely dehumanized members of their ingroup less than members of other groups. Because differences in others' group memberships would have been less consistently associated with differences in dehumanization, the main effects of social status and value orientation on dehumanization, and the strength of their interaction, would have been reduced.

However, we would not expect extrinsic orientation to suffer this loss of power. Higher extrinsic orientation might be associated with the prioritization of social rewards; which could increase participants' willingness to behave in accordance with social norms. Because the study

[3] Furthermore, using more restricted subsamples yielded extremely small *n*s (8.9% - 39.6% base sample), severely limiting generalizability. For this reason, reported analyses used all participants.

was conducted in Canada, these participants would have behaved in accordance with perceived Canadian norms, resulting in a consistent pattern of responses across participants.

Limitations and Future Directions

Limitations of our study include sample composition, the failure to control for outgroup threat, and the lack of an appropriate measure of ingroup identification. Sample composition is a known threat to external validity (Calder, Phillips, & Tybout, 1982). Because our sample consisted of undergraduate psychology students at a Canadian university, it was probably not representative of most humans. However, we argue that this does not significantly impair the external validity of our results. Socio-demographic factors could influence participants' value orientations (Diamantopoulos, Schlegelmilch, Sinkovic, & Bohlen, 2003). However, we are unaware of any research showing that the relationship between values and dehumanization changes depending on how highly individuals prioritize extrinsic goals. Thus, we expect the patterns we observed to replicate in samples with higher or lower prioritization of extrinsic goals. Alternately, students at a Canadian university might be less familiar with soccer than students at non-Canadian universities, which could influence their responses. However, we argue that this increases the generalizability of our results, as low-knowledge participants would have needed to rely on their knowledge of teams' home nations, rather than their knowledge of the teams; increasing the likelihood that participants' responses mirror their perceptions of the national groups.

We previously noted that members of low and high status outgroups differed in threat. If ingroup protection is strongly associated with one type of dehumanization, but not another, it is plausible that equality of threat between low and high status outgroups could produce results more consistent with our hypotheses. However, changes in groups' status can occur alongside

changes in their threat. For example, members of groups with weak economic performance are stereotyped as animal-like (e.g., Indra, 1979), but when the same groups become economically strong, their members are perceived as machine-like (Chang & Demyan, 2007). Accordingly, few low status groups might be high threat (or vice versa), and participants' perceptions of these groups might have limited generalizability.

A more severe limitation is our inadequate measure of ingroup identification. As previously noted, the sports teams individuals prefer can be a proxy for multiple identities (Heere & James, 2007). Accordingly, we were unable to limit our sample to participants who identified with Canada as a nation. Thus, some participants might have perceived one of the outgroups as their ingroup. This would have increased variance in dehumanization not accounted for by group status or value orientation, weakening any effects.

To overcome these issues, we recommend that future research control outgroup threat – either by selecting groups with equal threat, or by measuring it during data collection. Additionally, we recommend the use of more direct measures of ingroup identification. Future research could also benefit from examining the impact of social norms on dehumanization, or by examining factors that might influence different types of dehumanization (e.g., outgroup threat).

Conclusion

Our results provide results provide tentative support for an association between groups' social status and dehumanization. Members of outgroups were not consistently dehumanized more than members of the ingroup. Furthermore, members of low status outgroups were not always animalized more, and inanimatized less, than members of high status outgroups. We interpret these results as indicating interplay between groups' social status, individuals' motivation to behave in accordance with social norms, and differences in dehumanization types' susceptibility to ingroup protection. This interpretation is supported by research showing that individuals can positively reframe dehumanization they suffer (Bain et al., 2009; Crawford et al., 2013), and tentatively supported by research showing that explicit beliefs can influence implicit attitudes and behaviours (Perugini, 2005), and that individuals who highly identify with their group animalize others more via emotions (Demoulin et al., 2009), but not traits (Bastian et al., 2011). Moreover, although our results did not show the predicted interaction between social status and value orientation, they provided tentative support for an interaction between social status and extrinsic orientation, and a main effect of extrinsic orientation on dehumanization. Although our results did not entirely support our predictions, and further research is necessary to clarify some of the issues we have raised, we believe our research provides a step toward understanding how values could influence dehumanization – both independently and in conjunction with other factors.

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Appendix A

Infrahumanization and Animalistic and Mechanistic Dehumanization Measure: Post-Refinement Items

High Human Uniqueness Emotions	High Human Uniqueness Traits	High Human Normativity Traits
	Positive Items	
Optimism	Imaginative	Imaginative
Hope	Analytic	Friendly
Compassion	Ambitious	Ambitious
	Humble	Active
	Polite	
	Negative Items	
Humiliation	Rude	
Remorse	Irresponsible	
Guilt	Disorganized	
	Ignorant	
	Insecure	

Low Human Uniqueness Emotions	Low Human Uniqueness Traits	Low Human Normativity Traits
	Positive Items	
Surprise	Active	Even-Tempered
Excitement	Curious	Thorough
Pleasure	Relaxed	Relaxed
	Friendly	Humble
	Even-Tempered	
	Negative Items	
Rage	Simple	
Sad	Uncooperative	
Fear	Impulsive	
	Impatient	
	Unemotional	