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OF FILTHY PIGS AND SUBHUMAN MONGRELS: DEHUMANIZATION, DISGUST, AND INTERGROUP PREJUDICE

GORDON HODSON
BROCK UNIVERSITY

NOUR KTEILY
BROCK UNIVERSITY
KELLOGG SCHOOL OF MANAGEMENT, NORTHWESTERN UNIVERSITY

MARK HOFFARTH
BROCK UNIVERSITY

Representing others as less-than-human can have profound consequences, delegitimizing the target and removing them from protections otherwise afforded to "people." This review explores recent developments in research on both outgroup dehumanization and the emotion of (intergroup) disgust, factors increasingly receiving attention for their importance in explaining intergroup relations. We specifically explore topics such as the human-animal divide (i.e., the sense that humans are different from and superior to non-human animals) and intergroup disgust sensitivity (i.e., revulsion reactions toward outgroups, particularly those foreign in nature). We conclude that: a) human outgroup prejudices (e.g., racism) find their origins, in part, in human-animal relations; b) our expressed revulsion toward other groups plays a meaningful role in explaining bias, beyond ideology and related emotions (e.g., intergroup anxiety); c) the field needs to integrate dehumanization and disgust into existing theories of intergroup prejudice to better understand the ways we psychologically distance ourselves from outgroups.

Conservative musician Ted Nugent recently made no secret of his dislike for Barack Obama, referring to him as a "subhuman mongrel" and accusing the president of "weasel[ing] his way into the top office of authority of the United States of America" (Grow, 2014). His subsequent apology was directed not toward the president, but rather toward conservative politicians for any fallout that his animalistic comparisons may have caused to their political goals. In fact, Nugent vehemently insisted that no racial bias underpinned his statement, claiming that there is "not a racist bone in [his] body" (Allon, 2014). Such blatant dehumanization in the political arena is far from an isolated incident. In Italy, right-wing senator Roberto Calderoli recently likened a Black government minister to "lower" animals, remarking: "I love animals — bears and wolves, as is known — but when I see the pictures of Kyenge I cannot but think of the features of an orangutan, even if I'm not saying she is one" (Davis, 2013). Like Nugent, he rebuked attributions of bias underpinning his comments, dismissing his statement as simply a "joke." Yet jokes can be vehicles for expressing

negative intergroup sentiments (Hodson, Rush, & MacInnis, 2010; see also Hodson, MacInnis, & Rush, 2010), with dehumanizing metaphorical speech no exception. Although using language likening humans to animals can be relatively harmless and without ill intent, as when we playfully refer to our own children as "monkeys" or "piglets" (Haslam, Loughnan, & Sun, 2011), the typical use of animalistically-dehumanizing metaphors to denigrate outgroups represents a deliberate and offensive attempt to devalue and remove rights/protection afforded to another (see Bastian, Denson, & Haslam, 2013; Costello & Hodson, 2010, 2011).

Presumably, humans have long been capable of dehumanizing others, given our capacity for abstract thought and symbolic representations of social groups. However, the term *dehumanization* did not creep into the public discourse until the latter half of the 20th century. Interestingly, its use in the English language peaked after the 1960s American Civil Rights movement (see Figure 1), when Western societies were contemplating key questions about what it means to be human, and how being represented as less human removes fundamental rights and protections. Even social psychologists were slow to recognize and systematically study dehumanization as a psychological process with important intergroup outcomes, with major prejudice texts ignoring the topic almost entirely (see Hodson, MacInnis, & Costello, 2014). Yet the field has made tremendous advances over the past 15 years, and these ideas about humanness are clearly becoming integrated in meaningful ways (e.g., Bain, Vaes, & Leyens, 2014). But little work has been done to integrate dehumanization with other prejudice-relevant factors — such as the emotion of disgust — recently identified as important factors in predicting outgroup prejudices. The present paper reviews some of our recent thinking about the role of human-animal relations in outgroup dehumanization, as well as the nature of intergroup disgust, a newly introduced construct that has been shown to have important utility in predicting outgroup attitudes. Moreover, we explore ways to more meaningfully integrate these ideas to better understand prejudice and discrimination.

FIGURE 1
References to dehumanization-relevant words in English texts 1800-2000 (Google ngrams).

DEHUMANIZATION: REPRESENTING TARGETS AS "LESS-THAN-HUMAN"

Psychologically, dehumanization is "*the perception and/or belief that another person (or group) is relatively less human than the self (or ingroup)*" (Hodson et al., 2014, p. 87, italics in original). We dehumanize others frequently and easily, generally seeing others as less human than

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ourselves even within the interpersonal domain (Haslam, Bain, Douge, Lee, & Bastian, 2005). Our central focus, however, concerns the dehumanization of *outgroups* and their members, that is, thinking of "them or they" (vs. "us and we"), the domain most relevant to prejudice and discrimination. In their seminal work, Leyens and colleagues (Leyens, Demoulin, Vaes, Gaunt, & Paladino, 2007; Leyens et al., 2000) introduced the notion of *infrahumanization*, the relatively subtle perception that other groups are less human and more animal-like in nature compared to our own groups. Specifically, these authors observed that we attribute primary emotions (those common to humans and non-humans; e.g., fear, sadness) to both ingroups and outgroups, but typically under-attribute secondary emotions (those commonly considered particularly unique to humans; e.g., remorse, guilt) to outgroups. Interestingly, this phenomenon occurs largely independently of the valence of the emotions: thus, individuals are more likely to attribute both negative and positive secondary emotions to their group than to outgroups (see also Costello & Hodson, 2014a, 2014b; but see Costello & Hodson, 2011). This represents an interesting exception to the way we typically think about intergroup relations (where we generally consider our ingroups particularly positive in valence). By associating ingroups with negative qualities or experiences that are more closely associated with humanity, we imbue our ingroups with inherent value, in ways that advantage ingroups over outgroups. This theoretical approach therefore emphasizes that, in a relative sense, we recognize and attribute fewer uniquely "human" (i.e., secondary) emotional capabilities and experiences to outgroups. This process essentially animalizes outgroups by denying them qualities that differentiate humans from non-human animals.

Haslam (2006) and colleagues (Haslam et al., 2005) similarly highlight the process of *animalistically dehumanizing* others, whereby we systematically deny the "uniquely human" aspects of human nature to others. Like infrahumanization research, this approach compares the extent to which we imbue ingroups or outgroups with specific characteristics. Rather than focusing on attributions of secondary emotions (see Leyens et al., 2000, 2007), however, Haslam and colleagues examine traits or stereotypes about the other group (e.g., "they are irresponsible," "they are rude"). These are not just *any* traits or stereotypes: rather, their content specifically reflects characteristics that these researchers have empirically identified as differentiating humans from animals in human thinking. Importantly, these researchers also recognize a second dimension of dehumanization called *mechanistic dehumanization*, by which we deny qualities to others that are essential to the human make-up (e.g., interpersonal warmth; curiosity). These qualities are not necessarily unique to humans; for instance, one can speak of a curious cat. But their attribution is nevertheless deemed essential to capture humanness. For instance, the capacity for warmth is important to being considered human, but is also evident in non-human animals. A target deemed not to hold qualities central to human nature, therefore, is considered machine-like or robotic in nature (i.e., cold, empty). Whereas we typically animalistically dehumanize lower status outgroups such as ethnic minorities (e.g., Costello & Hodson, 2010, 2011, 2014a), mechanistic dehumanization can be directed toward either lower status groups (as when physicians dehumanize their patients; see Vaes & Muratore, 2013), or toward higher-status groups, as when the New Statesman magazine portrayed the powerful and influential European leader Angela Merkel (Chancellor of Germany) as a half-human cyborg on their cover (see http://www.newstatesman.com/blogs/staggers/2012/06/new-statesman-cover-25-june). More research on this latter topic is particularly needed.

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It is also possible for a group to be represented in animalistic and mechanistic ways simultaneously. Asexuals, those without sexual attraction, represent an example of one such group (see MacInnis & Hodson, 2012). When this happens, the dehumanization appears particularly motivated, a "two-pronged" attack against the group (Hodson et al., 2014; MacInnis & Hodson, 2012). At some level, it makes little sense to consider asexuals as both more machinelike *and* more animalistic. Animals are not generally considered flat, cold, and lacking in curiosity (i.e., robotic), but rather are seen as relatively uninhibited and openly sexual. By dehumanizing asexuals along both dimensions, it is clear that their deviance from typical human norms renders the group particularly vulnerable dehumanization targets.

Although dehumanization can result from basic cognitive/perceptual processing (i.e., "seeing" others as less human), it can also be motivationally driven (for a review on these distinctions see Hodson et al., 2014). Thus, like stereotypes, dehumanizing representations can be both cognitive and functional in nature. Consider a recent study (Costello & Hodson, 2011, Study 1) in which participants were exposed to information profiling the degree and type of threat posed by an immigrant group: realistic (e.g., physical and/or property relevant); symbolic (e.g., non-tangible, such as culture), or no threat (control). The higher participants scored in social dominance orientation (SDO; Sidanius & Pratto, 1999), the belief that groups in society should be arranged hierarchically, the more they reacted to threats (realistic or symbolic) by disempowering an immigrant group in need of assistance to integrate. In Study 2, the importance of dehumanization in this process was revealed: SDO exerted its effects on prejudice and intergroup helping by increasing the assertion that the outgroup is lower in human qualities, especially when the group posed a symbolic, non-tangible threat. In order to justify negative reactions toward an outgroup posing no tangible threat, therefore, participants effectively downgraded the reported humanity of the outgroup (stripping them of protection and concern primarily afforded to "people"). To participants, dehumanization played a functional role, rationalizing resistance toward helping an outgroup in need when no tangible threat by the outgroup could otherwise be used to deflect attributions of bias for failing to help. That is, rationalization was "unnecessary" when tangible threat was salient, but "necessary" when the outgroup only differed in values and posed no objective threat; dehumanization of the outgroup occurred *only* when objective threats were absent. This speaks to the flexibility with which we strategically choose to apply outgroup dehumanization, particularly when other rationalizing factors (e.g., "they pose a physical threat") are less readily available to explain away an action that might otherwise seemed biased. Similarly, other research indicates that those who consider racial outgroup members to be relatively lower in secondary emotions (i.e., *infrahumanizing* them) were subsequently less willing to help these outgroup victims of Hurricane Katrina (Cuddy, Rock, & Norton, 2007). Thus, failure to help outgroups and outgroup dehumanization appear to go hand in hand.

HOW WE THINK ABOUT ANIMALS IMPACTS HOW WE THINK ABOUT EACH OTHER

Until recently, psychologists rarely addressed how we think about non-human animals, and certainly not in the context of human-human intergroup relations. Yet might attitudes toward outgroups relate meaningfully to attitudes toward animals? A re-analysis of several studies by Hodson and Olson (2005), originally designed to examine name-letter effects, provides some pre-

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liminary evidence to this question. Across samples (Study 2: $n = 132$, UK; Study 3: $n = 177$, Canada; Study 4: $n = 188$, Canada), undergraduates rated their attitudes toward 22 national outgroups (e.g., Germans, Japanese), 23 animal species (e.g., dog, moose, whale), and several non-social categories of stimuli (e.g., leisure activities). Attitudes toward animals correlated significantly with attitudes toward national outgroups: $r = .32$, $p < .001$ (Study 2); $r = .44$, $p < .001$ (Study 3); $r = .36$, $p < .01$ (Study 4). Thus, those liking animals more also liked human outgroups more. With average correlations in the .37 range, these animal-human evaluation associations represent moderate effect sizes (Cohen, 1988), with attitudes toward animals predicting human prejudices to the same degree (or better) than typical prejudice predictors such as stereotyping (Dovidio, Brigham, Johnson, & Gaertner, 1996), intergroup contact (Pettigrew & Tropp, 2006), or intergroup threat (Riek, Mania, & Gaertner, 2006). But is this simply an artifact reflecting the fact that some people are more positively oriented toward objects generally? After statistically controlling for their liking of other targets (food, leisure activities, alphabetic letters, and/or brand name products), these outgroup-animal correlations remained robust (partial rs = .32, .23, and .19, respectively, ps < .05), ruling out this potential confound. Overall, therefore, our attitudes toward animals appear significantly linked to human-human prejudices, but this begs the question: *why*?

Interspecies Model of Prejudice (IMP)

One viable reason that attitudes toward animals are relevant to human-human prejudices is that (animalistic) outgroup dehumanization, a frequent precursor of negative outgroup attitudes, is fundamentally *about* animals. Put simply, there would be no strategic "value" in representing an outgroup as animal-like if not for the fact that we under-value animals (relative to humans) in the first place (Hodson & Costello, 2012; Hodson et al., 2014). According to the Interspecies Model of Prejudice, thinking of humans as different from and superior to animals (i.e., the *human-animal divide*) facilitates representations of human outgroups as animal-like (i.e., less human than one's own group), which in turn promotes a host of negative intergroup biases (e.g., attitudes, stereotypes, unwillingness to help, discrimination, avoidance). This pattern of relations is presented in Figure 2, where the relation between human-animal divide and anti-outgroup bias is mediated (or explained by) outgroup dehumanization.

Support for this model has been observed in correlational and experimental data among young children, as well as among young and middle-aged adults. In an early test, greater human-animal divide perceptions predicted dehumanization of immigrants, which in turn predicted immigrant prejudice. In fact, immigrant dehumanization fully mediated this effect (Costello & Hodson, 2010, Study 1). A follow-up experiment (Costello & Hodson, 2010, Study 2) manipulated the human-animal divide by exposing participants to scientific editorials either stressing the similarity or differences between humans and animals. The editorials also varied whether animals were compared to humans or humans to animals. As expected, emphasizing that animals are similar to humans (relative to the other conditions, including humans being similar to animals) significantly increased the perception that immigrants are human (on both secondary emotions and trait measures) and reduced anti-immigrant prejudice. Thus, psychologically "elevating" animals to the level of humans effectively robbed the effectiveness or strategic value in represent-

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ing a human outgroup as animal-like, effectively cutting prejudice off at its roots. This process of *rehumanization* counters the otherwise natural tendency to dehumanize other groups. A subsequent series of studies (Bastian, Costello, Loughnan, & Hodson, 2012) confirmed that experimentally framing animals as similar to humans expands one's circle of moral concern for animals (Study 2) and reduces speciesism and heightens moral concern for human outgroups (Study 3).
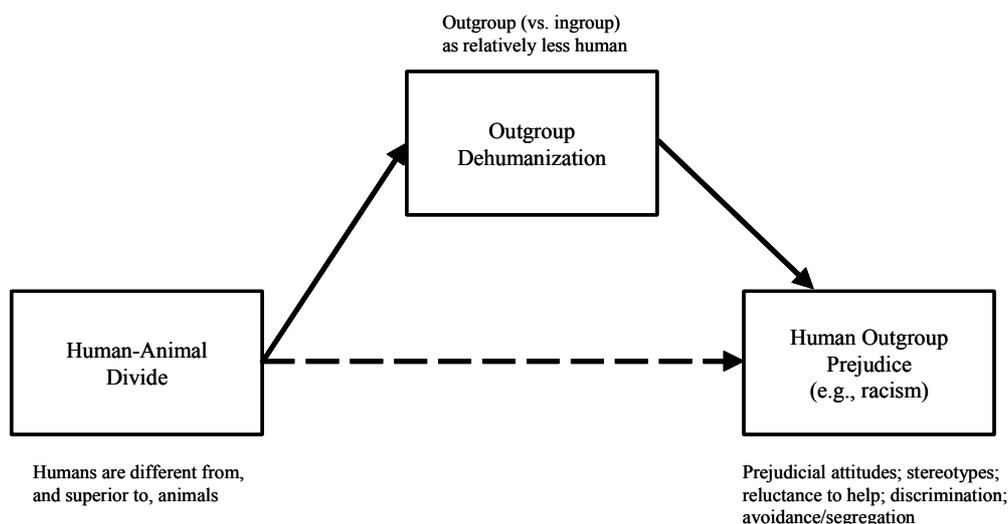
FIGURE 2
The Interspecies Model of Prejudice (IMP). Dotted line represents a (fully) mediated path.

More recently, the IMP has been expanded to consider dehumanization processes among children (Costello & Hodson, 2014a). Children demonstrated clear evidence of racial outgroup dehumanization by denying human traits and the experience of secondary (i.e., human) emotions to outgroups (Studies 1-2). Among both children and their parents the IMP framework was supported: greater perceived human-animal divide predicted increased racial prejudice through greater perceptions that the racial outgroup is more animal-like. Furthermore, greater parental SDO predicted children's prejudicial attitudes through their child's perception of a large human-animal divide and through the child's outgroup dehumanization. One interpretation is that endorsing (intergroup) hierarchies in the home contributes to beliefs about human-animal relations that may in turn impact the development of racism. Fortunately, a video-intervention highlighting the fundamental similarities between humans and animals proved effective at experimentally shifting human-animal divide beliefs in young children, relative to a video stressing the importance of recycling (another prosocial goal), representing a large effect ($d = .77$). Such methods could be easily implemented in schools and as part of television programming.

As might be anticipated, lay people (i.e., those not experts in human-animal relations or prejudice) not only fail to consider beliefs about the human-animal divide as relevant to human-human biases (e.g., racism), but they actively resist this notion and reject prejudice-reduction procedures rooted in these processes (Costello & Hodson, 2014b). This suggests an interesting avenue for future research — developing methods, particularly among adults, to lessen their sense of superiority over animals. Such interventions would not only exert positive effects toward animals themselves (see Dhont & Hodson, 2014), but, in keeping with the IMP framework, exert positive

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downstream effects by reducing biases against dehumanized human outgroups. In fact, the endorsement of social dominance generally may represent the underlying glue binding speciesism and generalized prejudice toward outgroups. Recent evidence supports this contention. Dhont, Hodson, Costello, and MacInnis (2014) asked participants (n = 191) at a Canadian university to rate their attitudes toward multiple ethnic groups (immigrants, Blacks, ethnic minorities, Natives/ Aboriginals, Muslims) and to complete a speciesism scale indicating their willingness to exploit animals. As expected, ethnic prejudice was positively associated with speciesism (r = .34, p < .001), an effect fully explained when modelling SDO as the common underlying construct underpinning this association. Put simply, human-human prejudices and speciesist attitudes would not be related if not for their common association with ideological beliefs about dominance and hierarchy generally (i.e., SDO; see Kteily, Ho, & Sidanius, 2012, for a discussion of SDO's generality). This is a powerful reminder that "speciesism represents an *oppressive* belief system where an empowered group (humans) uses another (animals) for their own ends" (Dhont et al., 2014, p. 107, italics in original). Common psychologies underlie human-human prejudices and the exploitation of animals in ways that we are only just beginning to appreciate (see Plous, 2003).

DISGUST: REVULSION, REPUGNANCE, AND REPULSION REACTIONS TOWARD UNSAVOURY OTHERS

Some argue that our disregard for, or aversion toward, animals is rooted in concerns about our own inescapable mortality as humans. As noted by Heflick and Goldenberg (2014), "the sheer physicality of humans — similar to that of any other dying animal — undermines [the] symbolic immortality [of humans] and even belief in literal immortality" (p. 111). From this perspective, we construe our ingroups as particularly human (and thus special and valuable) to manage such anxieties (see Vaes, Heflick, & Goldenberg, 2010). By downplaying the fact that we are animals, we can avoid thinking about the fact that we are "of this earth" and face the same inevitable end as animals. This theoretical approach is both rich and interesting, but arguably focuses more on ingroup humanization (to reduce existential anxieties) than outgroup dehumanization itself, particularly the animalistic forms of dehumanization. This line of thinking does, however, support the notion that by thinking of ourselves as transcendent and not creaturely, we consequently see outgroups as relatively more creaturely as a point of intergroup contrast. In pushing against the outgroup's creatureliness, we experience disgust and revulsion toward the group.

Another theoretical perspective gives revulsion a more central role in what is known as the *behavioral immune system* (Schaller & Park, 2011). In addition to the physiologically costly immune responses to the pathogens carried by "others," psychological mechanisms related to aversion and disgust are proposed to serve protection needs through our social relations and exclusionary boundary demarcations. Schaller and Park liken this defence system to a smoke detector — overly sensitive and triggered by cues that signal deviance, deficit, and (potentially) disease. As such, feelings of disgust in the presence of others are likely to be highly consequential to the way we interact with and feel toward them, prompting avoidance. Whereas prejudice researchers have long studied the role in intergroup relations for emotions such as threat or anxiety (Gaertner & Dovidio, 1986; Stephan & Stephan, 1985), fear (Greenberg & Kosloff, 2008), anger or even sadness (Bodenhausen, Sheppard, & Kramer, 1994), disgust has remained relatively un-

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derexplored despite being widely considered a basic human emotion (Ekman, 1992; Rozin, Haidt, & McCauley, 2009).

Recent attempts to integrate disgust into prejudice and intergroup relations have proven promising. From a social psychological perspective, Intergroup Emotions Theory (Devos, Silver, Mackie, & Smith, 2002; Smith, 1999) stipulates that many of our intergroup emotions arise from cognitive appraisals about outgroups in relation to the ingroup. We essentially ask ourselves "Is this group a threat or potential source of harm to the ingroup?" From this perspective "disgust arises when an outgroup is appraised as violating moral standards" (Devos et al., 2002, p. 111), or deviates from the norms and customs (e.g., sexual or dietary) held by one's ingroup (Smith, 1999). Although interesting and valuable, this theoretical position very much considers disgust an emotion arising from conscious cognitive appraisal. Of course, conscious appraisal can result directly in disgust, but disgust can also arise at a more visceral, basic, and automatic (i.e., sub-conscious) level. Sometimes groups are considered "offensive" for what they are, what they represent, where they have been, and what contact they have had with other objects and group members. In short, outgroups can be considered repulsive in their own right, regardless of their relation to the ingroup, and regardless of conscious consideration of norm violation. To the extent that an outgroup reminds us of something disgusting, or is associated with contagion-relevant concerns, the outgroup can itself evoke a disgust reaction. In addition, the practices and norms of another group can instantiate an automatic disgust reaction even when that group does not directly pose a sense of threat to one's own group. That is, groups can provoke disgust automatically, in the absence of a conscious and reasoned defence of one's group. Consider the case of a middle-class person passing a homeless person sleeping on the street, or a Westerner watching a documentary on "unsanitary" food practices employed by tribes overseas: disgust can be elicited without consciously thinking about how outgroups violate our norms or pose a direct threat to our personal well-being.

Recently researchers have moved away from disgust-relevant reactions that follow from cognitive appraisals toward explanations that are more social-evolutionary in focus. Navarrete and Fessler (2006) observed that perceived disease vulnerability predicts negative reactions toward foreign outgroups, and that those scoring higher in general disgust sensitivity held more negative outgroup attitudes (see also Faulkner, Schaller, Park, & Duncan, 2004). In line with this finding, disgust sensitivity predicts more negative attitudes toward homosexuals, and experimental manipulations of disgust elevate homophobia among conservatives (but not liberals; see Terrizzi, Shook, & Ventis, 2010; for related findings, see Inbar, Pizarro, Knobe, & Bloom, 2009). Overall, such approaches emphasize disgust as a reaction against disease-related targets, especially foreign or deviant ones, posing contamination-relevant threats (see Cottrell & Neuberg, 2005; Schaller & Park, 2011). These approaches de-emphasize cognitive assessments as precursors of disgust in favor of more biological, low-level imperatives to protect one's health in keeping with the behavioral immune system.

But disgust also appears relevant to the imposition of social order and hierarchy. For instance, Hodson and Costello (2007) found that heightened interpersonal disgust sensitivity (e.g., being squeamish about used clothing, or sitting on warm seats vacated by others) predicts both greater SDO (endorsement of intergroup hierarchies) and greater right-wing authoritarianism (resistance to change and submission to authority). As such, interpersonal disgust helps to maintain group-based differences and hierarchies, while also inducing avoidance-relevant tendencies relevant to maintaining norms, traditions, and the status quo. In this sense, disgust reactions play dis-

tinctly *social* (and especially intergroup) functions of the sort directly relevant to understanding prejudice and discrimination. This notion was recently supported in a meta-analytic review revealing consistent positive correlations between behavioral immune system mechanisms (e.g., disgust, disease vulnerability) and social conservatism (Terrizzi, Shook, & McDaniel, 2013). Of interest to the present review, Hodson and Costello also observed that interpersonal disgust sensitivity positively predicted more dehumanizing perceptions of immigrants, providing the first evidence linking these constructs.

Building on many of these former theoretical positions, we introduced the notion of *intergroup disgust* as a predictor of increased prejudice and discrimination, as both an individual difference construct (where people meaningfully and reliably differ from each other on this tendency) and as a situational manipulation (where an outgroup that induces revulsion is introduced or made salient). The concept of intergroup disgust sensitivity (ITG-DS) "represents affect-laden revulsion toward social outgroups, incorporating beliefs in stigma transfer and social superiority" (Hodson et al., 2013, p. 195), that is relevant to "outgroup revulsion, avoidance of physical and/or intimate contact with outgroups, concerns of stigma transfer, and desire for post-contact 'purification'" (p. 197). The 8-item scale (see Hodson et al., 2013, Table 1) demonstrates unidimensional factor structure and is positively associated with a range of relevant constructs, including general disgust sensitivity, ideology (conservatism, SDO, authoritarianism), and outgroup prejudices (e.g., Islamophobia, anti-Black racism) (see Hodson et al., 2013, Tables 3-4). Importantly, ITG-DS predicts prejudice above and beyond previously established constructs such as ideology or intergroup anxiety, clarifying that disgust-relevant group reactions clearly play a distinct role in explaining intergroup dynamics. Moreover, these individual differences are stable across time. Recent evidence (Kteily & Hodson, 2014a) with a sample of several hundred White Americans reveals strong test-retest reliability after four months ($r = .74$), and even after 12 months ($r = .68$), confirming inter-individual stability over time.

ITG-DS represents not only an interesting individual difference predicting prejudice, but serves as a moderator of experimental manipulations making the 'disgustingness' of outgroups salient. Hodson and colleagues (2013) exposed participants to a travel blog whereby the outgroup in question was presented as engaging in a series of disgust-inducing activities (e.g., incest, dramatic skin piercings) or related control activities. Although the manipulation (vs. control) induced perceptions of the outgroup as disgusting across the entire sample on average, those higher (vs. lower) in ITG-DS were more likely to subsequently translate their outgroup threat perceptions and outgroup anxieties into negative outgroup prejudices (see Hodson et al., 2013, Figure 1). We can all feel repulsed by outgroups engaging in disgusting behaviors, therefore, but only some of us become more prejudicial toward the outgroup as a result. Overall, these findings suggest that people differ meaningfully from one another in the extent to which they naturally experience disgust and revulsion toward outgroups (as indexed by ITG-DS scores), and this difference influences whether seeing outgroups engaging in disgusting activities subsequently makes these groups become targets of prejudice.

Importantly, the extent to which ITG-DS predicts prejudice is malleable. Choma, Hodson, and Costello (2012) examined this issue by considering both correlational (Study 1) and experimental (Study 2) moderators of the relation between ITG-DS and Islamophobia. In Study 1, this relation was significantly moderated by several dispositional emotion variables: individuals reporting greater fear or sadness generally demonstrated stronger relations between ITG-DS and anti-Muslim

attitudes. In contrast, dispositional happiness and anger did not moderate this relation. In Study 2, mood states were experimentally manipulated via exposure to film clips relevant to particular emotions (fear, sadness, or happiness). Despite the film clips inducing each intended emotion successfully, only participants induced to experience heightened fear demonstrated significantly elevated associations between ITG-DS and Islamophobia. These findings offer interesting insights into how distinct but related forms of emotional expression interact with each other in predicting outgroup bias. For instance, these findings are in keeping with the notion of a behavioral immune system; when experiencing fear, disgust-relevant defences are more likely to be activated and influential in predicting reactions to disgust-relevant stimuli. In this investigation, positive mood states induced by movie clips were not able to significantly reduce the otherwise strong association.

It is important to note, however, that in the study by Choma and colleagues (2012) the interventions (i.e., mood manipulations) were *incidental* to the target group in question. That is, the movie clips were chosen specifically because they were not relevant to Muslims (or intergroup relations generally), in an effort to examine a theoretically "pure" role for non-disgust emotions as moderators of disgust effects. A subsequent study, in contrast, utilized an intervention that directly involved the target group in question. Specifically, Hodson, Dube, and Choma (in press) examined the relation between ITG-DS and attitudes toward the homeless (a target found to be relevant to disgust reactions; see Harris & Fiske, 2006) as a function of several experimental conditions. Those in the control condition simply imagined a calm nature scene, whereas those in the imagined contact condition imagined a brief and pleasant interaction with a homeless target (as per standard instructions in imagined contact research; see Crisp, Stathi, Turner, & Husnu, 2009). However, participants assigned to a third condition experienced *elaborated imagined contact*, mentally simulating very detailed contact with a homeless target: this contact included several forms of physical contact, all while being instructed to relax and take deep breaths. The goal here was to simulate the benefits of exposure-based therapies in clinical settings, particularly those that employ mental imagery whereby the patient visualizes intimate but successful contact with the noxious stimulus. The results confirmed theoretical expectations: both the regular imagined contact and the elaborated imagined contact conditions were able to reduce the relation between ITG-DS and prejudice toward the homeless as a group. That is, those higher in ITG-DS were *not* more prejudiced toward the homeless, providing they had previously engaged in the imagined contact interventions. Encouragingly, the elaborated imagined contact condition impacted the path between ITG-DS and prejudice by effectively increasing trust toward the homeless. Thus, although ITG-DS meaningfully differs between individuals and is stable over time, relaxation-based imagery exposure methods can effectively attenuate its well-documented potential to generate prejudice, likely by reducing anxieties and distrust.

FUTURE DIRECTIONS

Integrating Dehumanization and Disgust

As evident from this review, the intergroup relations field has made great steps forward in explaining prejudice by examining dehumanization and disgust. The former involves seeing others as less human, and thus less valuable and less worthy of rights and protection. The latter

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involves reacting to others, particularly those lower in status or power and those holding different norms and practices, with revulsion and repugnance, in ways that distance us from "others," drawing us closer to "us," and demarcating sharper ingroup/outgroup boundaries (see Hodson & Costello, 2007). With the benefit of hindsight, it seems as though the field should have been at this junction decades earlier. Yet throughout much of the 1970s to late 1990s, the field was concerned largely with social cognition, particularly categorization processes and heuristic processing, tending to sidestep the *content* of intergroup thoughts and reactions. The role of emotion in intergroup relations was seriously under-examined, and dehumanization was presumably considered too extreme and tangential to the types of everyday bias psychologists typically seek to explain. Yet dehumanization and disgust vary in degree — they are relevant to everyday life (especially intergroup life), not solely to contexts characterized by extreme hostility and competition. Perhaps given the recent rise of influential theories such as Social Dominance Theory (Sidanius & Pratto, 1999) and System Justification Theory (Jost, Banaji, & Nosek, 2004), which prioritize discussion of power, hierarchy, and status-quo maintenance, the concepts of dehumanization and intergroup disgust have become increasingly topical and relevant.

As this review indicates, disgust and dehumanization are natural bedfellows. Neuroimaging studies reveal that targets considered less human (e.g., the homeless, and others that are often considered "the lowest of the low") activate brain areas associated with the reaction of disgust (Harris & Fiske, 2006). Dehumanization and disgust each concern keeping others in their place (and often away from oneself or one's ingroup). They each recognize and entrench perceptions of inferiority in others in ways that legitimize concerns over maintaining a superior and dominant social standing. They each involve *downward* social contrasts (i.e., "looking down" rather than "looking up"), rooted in our arguably biased sense that humans are superior to animals (and those deemed similar to animals), and that our ingroups are more pure and closer to divinity than our outgroups (Rozin et al., 2009). Anecdotally, dehumanization and disgust co-occur frequently. Consider the recent case of a police officer in Switzerland, initially reprimanded for calling an Algerian man (suspected of stealing a handbag) names such as "foreign pig" and "dirty asylum seeker" ("Swiss court", 2014). This case was eventually overturned on the legal grounds that no specific group was targeted, circumventing the country's anti-racism laws. In this case, however, the officer in question capitalized on the double-pronged attack afforded by simultaneously dehumanizing ("pig") the target and invoking disgust ("dirty"). This is reminiscent of Ted Nugent's reference to President Obama as a "subhuman" being who acts like a "weasel," while simultaneously using the specific label "mongrel." Of note, *mongrel* has multiple meanings, including dogs with no discernable pedigree, or persons of mixed (and by social implication impure) "origin, nature, or character" (Oxford English Dictionary; see Allen, 1990). Seeing others as less human, and also worthy of disgust and contempt through their lack of purity and/or (social) hygiene, represents an extremely powerful and offensive strategy to disparage and delegitimize the target.

The next imperative for the field, therefore, is to better integrate the psychologies underlying dehumanization and disgust. The new volume *Humanness and Dehumanization* (Bain et al., 2014), although vast in scope and breadth, contains little mention of disgust or related emotions (e.g., contempt). Our own research on these topics, summarized above, has largely treated these phenomena as separate topics (with a few exceptions; see Hodson & Costello, 2007). Yet recent theorizing and research integrating these domains have proven fruitful. As noted above, Harris and Fiske (2006) employed neuroimaging techniques to examine reactions to different target groups, depending on

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whether they lay on two perceived dimensions: warmth (low vs. high) and competence (low vs. high). It is the "lowest of the low," or the low-warmth, low-competence groups (e.g., homeless, drug addicts) who were expected to be responded to as targets that are less-than-human. The researchers found that areas of the brain responsible for social cognition (i.e., medial pre-frontal cortex), that is, processing information about others as social beings, were activated for all groups except those low in both warmth and competence (i.e., disgust-relevant targets). Rather, the insula and amygdala were activated for these latter targets, consistent with disgust reactions. Such findings confirm, at a neurological level, the intimate interplay between dehumanization and disgust suggested by correlational, self-report means (e.g., Hodson & Costello, 2007).

A new line of theorizing argues that representing others with a lack of mind is itself a form of dehumanization or objectification (see Gray, Gray, & Wegner, 2007; Harris & Fiske, 2011; Loughnan, Haslam, & Bastian, 2010). For instance, Sherman and Haidt (2011) have theorized about the links between emotion and such mental-ability humanizing perceptions. They argue that objects or entities that are disgust relevant (e.g., the homeless) are dehumanized through a process that diminishes their attributed capacity for mental observation and reflection, what they call *hypo-mentalization*. In contrast, entities considered cute are *hyper-mentalized* (i.e., humanized), a process we experience when attributing human qualities to inanimate but adorable toys, for instance. Interestingly, they also argue that disgust may be both a cause of, and be caused by, dehumanization. Seeing others in animalistic terms, therefore, may induce disgust in perceivers, because of animals' associations with creaturely and base properties. But in turn, being disgusted keeps boundaries in place in ways that can inhibit perceptions of mental capacity in others: after all, when one is disgusted by another group and seeks to avoid them (Rozin et al., 2009) there is no need to expend additional effort thinking about their mental state. We consider this an intriguing direction for future research.

We propose that animalistic dehumanization (i.e., perceiving others as animal-like) will be a particularly strong elicitor of disgust reactions. But mechanistic dehumanization (i.e., perceiving others as machine-like) can also elicit disgust. Disgust provoked by mechanistically-dehumanized targets may often be more diffuse in nature, being accompanied by emotions such as fear and bewilderment that are common when witnessing a psychopath or terrorist murder others in cold blood (see Hodson et al., 2014). That is, perpetrators of "cold" and calculated killings of strangers should be denied the aspects of emotionality (e.g., interpersonal warmth) that undergird our understanding of human nature. Moreover, individuals may fear and avoid contact with targets deemed to lack human nature because such targets cannot be appealed to or reasoned with on the same moral grounds as most people (the same way one would not expect to appeal to the moral sensibilities of the Terminator movie character or a "cold-blooded" serial killer). Feelings of disgust may cue this desire to avoid mechanistically dehumanized targets, although we argue that mechanistic dehumanization may provoke disgust in ways that are more linked to an associated sense of moral outrage rather than pure disgust (a point we continue in a later section). Relatedly, we argue that disgust reactions can simultaneously facilitate both animalistic dehumanizing perceptions (*they are beastly*) and mechanistically dehumanizing representations (*they are heartless*) toward certain targets (e.g., an enemy during war). Both of these types of dehumanizing perceptions may then contribute to legitimizing aggressive responses ("they deserve it" and "they can't feel pain anyway"). The field would benefit greatly from a better understanding of the bidirectional relation and interaction between various forms of dehumanization (animalistic vs.

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mechanistic) and disgust reactions (aversion/repulsion vs. moral outrage), and how these variables contribute to negative intergroup outcomes.

Critically needed is more experimental evidence of the relation between disgust and dehumanization. For instance, Buckels and Trapnell (2013) randomly assigned participants to minimal groups (i.e., ad hoc, previously meaningless groups formed in the laboratory), who were then assigned to conditions where they viewed photographs designed to make them feel disgusted, sad, or neutral. Subsequently, participants completed a dehumanization implicit association test (IAT), which examined the relative strength of participants' mental association between "outgroup and animal" and "ingroup and human" (vs. "ingroup and animal" and "outgroup and human"). The researchers observed clear evidence that disgust induction (vs. sadness induction or control) substantially increased scores on the dehumanization IAT. Thus, becoming disgusted by stimuli that have nothing to do with an outgroup (e.g., images of surgery, dirty toilets, insects on food) can lead one to implicitly associate "them" with animals and "us" with humans. Of course, demonstrating that disgust causes dehumanization does not preclude the possibility of the reverse direction (i.e., that dehumanization causes disgust). To examine this possibility, a separate series of studies are needed (for related arguments about causality, see Costello & Hodson, 2011).

Meta-Dehumanization

The vast majority of the dehumanization literature considers how members of dominant, advantaged groups view those in subordinate, disadvantaged groups as relatively less human. This interest mirrors the general interests in the prejudice literature, where the bias expressed by advantaged groups is more commonly considered "the problem" to address. Only recently have researchers turned attention to the effects of being dehumanized (for a recent review, see Bastian, Jetten, & Haslam, 2014). Our specific interest concerns how dehumanized groups come to view themselves. Akin to how meta-stereotypes represent our beliefs about what outgroups think of us and our ingroup (Vorauer, Main, & O'Connell, 1998), *meta-dehumanization* represents the degree to which we perceive outgroups to consider us and our ingroup as less-than-human (Kteily & Hodson, 2014b). Whereas some research has investigated the effects of feeling that oneself or ingroup are targets of discrimination (e.g., Doosje & Haslam, 2005; Schmitt, Branscombe, Postmes, & Garcia, in press), no work to date explores the effects of perceiving that an outgroup actively dehumanizes one's ingroup. Perceiving another group to dehumanize one's group may lead to *retaliatory dehumanization* (see also Bastian & Haslam, 2010), particularly in contexts characterized by illegitimacy and intergroup competition, consistent with the observation that perceptions of racial prejudice against one's own group predicts one's own outgroup prejudice (for related points, see MacInnis & Hodson, 2013). That is, believing that an outgroup represents one's own group as relatively less human may in turn lead to retaliatory perceptions of the outgroup as relatively less human. Just as a third-party observer might perceive Nazis in dehumanizing terms given their dehumanizing treatment of Jews and other groups (i.e., "*only animals would brutalize others that way*"), we may therefore come to dehumanize and delegitimize those groups that appear to dehumanize our ingroup.

Consistent with research suggesting that perceptions of unfair treatment by other groups can result in emotions such as anger (see Van Zomeren, Postmes, & Spears, 2008), perceptions that the ingroup is dehumanized by an outgroup may be likely to elicit emotions such as anger

and disgust, particularly when dehumanizing perceptions are deemed illegitimate. Such emotions may well motivate retaliatory collective action. As Tausch and colleagues (2011) have demonstrated, contempt (a psychological cousin of disgust) predicts non-normative collective intergroup responses, particularly those of a violent nature, such as arson or object throwing. The interplay between meta-dehumanization, dehumanization, emotions such as disgust, and retributive intergroup actions is especially interesting.

In line with this reasoning, preliminary research (Kteily & Hodson, 2014b) suggests that Americans who perceive that Arabs dehumanize Americans (i.e., American participants experiencing meta-dehumanization) become more likely to dehumanize and feel disgusted by Arabs. Associations between meta-dehumanization, retaliatory dehumanization, and disgust have been observed both cross-sectionally and experimentally. Moreover, our initial evidence suggests that disgust mediates the effect of retaliatory dehumanization on support for aggressive intergroup responses. Importantly, this research also demonstrates that meta-dehumanization (they think we are less human) is an important construct over and above individuals' own dehumanizing perceptions of other groups (they are less human). Thus, learning that another group dehumanizes the ingroup uniquely contributes to intergroup responses even when individuals' dehumanizing perceptions of that group are taken into account, an important advance in the study of dehumanization.

The role of meta-dehumanization in contributing to negative intergroup relations is clearly worthy of additional research. Specifically, it will be important to further explore the processes and boundary conditions of its effects. For example, it is worth considering whether meta-dehumanization will provoke retaliatory dehumanization and disgust only when a dominant group perceives a subordinate group to dehumanize them, or whether this also occurs among disadvantaged groups perceiving dehumanization from advantaged groups. Similarly, situational constraints and conditions (e.g., legitimacy of differential power relations) presumably will influence meta-dehumanization and the internalization of negative perceptions.

Refined Theorizing

It is becoming increasingly clear that refined and well-validated methods for conceptualizing, tapping, and manipulating both dehumanization and disgust are sorely needed. In terms of dehumanization, we need: a) greater understanding of how and why some people dehumanize more than others; b) better insights into the mechanisms through which dehumanization affects prejudice; c) standardized measurement of dehumanization that can apply across groups and are well-validated (and empirically distinct from prejudicial attitudes); d) clearer insights into how dehumanization rationalizes prejudice; and e) development of interventions to curb dehumanization (for a lengthier analysis, see Hodson et al., 2014). In particular, we encourage the field to consider explicit dehumanization measures that more directly tap one's sense that another group is less human (and of lesser value or importance as a result), in addition to the more subtle measures commonly employed.

Similarly, more refined thinking about disgust is needed. Much of the extant literature focuses on the moral (not necessarily prejudicial) implications of disgust. This emphasis is reasonable given that disgust is arguably one of the most important basic moral emotions. But we often find other groups offensive and unsavory, and consider contact with these groups unpalatable,

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in ways that can have little to do with their morality at all (yet ironically may speak to our own relatively immoral reactions toward "different" others). As a field, our thinking about disgust requires both more depth and breadth to better understand this least well understood of the basic emotions. This lack of clarity, both in the minds of researchers and our respondents alike, may explain why disgust has not played a dominant role in the prejudice literature. When research participants, for example, express "disgust at lawyers" or "repulsion toward their mother-in-law" we understand that they do not literally find lawyers (or mothers-in-law) disgusting in the raw, visceral sense of avoiding a toxic and unsavory object. Rather, they find these social targets morally questionable. It is evident that our conceptualizations and measurement tools require revamping to elevate the empirical status of disgust to the level of other emotions such as anxiety or fear.

CONCLUDING REMARKS

The field has experienced an explosion of empirical interest in dehumanization over the past 15 years, culminating in a recent volume (Bain et al., 2014) demonstrating both the breadth and depth of this thinking. Surprisingly, dehumanization was once largely absent from major texts and journals in the prejudice domain, and remains under-recognized today (see Hodson et al., 2014). Moving from a peripheral to a central position, the field now recognizes that *how* we mentally represent others, and whether that representation removes social targets from care and protection, is critical to understanding intergroup relations. As this review indicates, how we think about animals directly influences how we think about human outgroups. Arguably this places a sharp focus on our general disregard for and mistreatment of animals in the first place; to some extent, improving intergroup relations may ultimately hinge on remedying our sense of dominance over animals and nature more generally. Progress on this front is encouraging. As observed by Pinker (2011, see pp. 380-381), we are witnessing trends toward more enlightenment generally, first having granted civil rights (along racial grounds), then women's rights, then childrens' rights, followed by gay rights, with animal rights the next frontier to reach. Such progress would be good news, not only for the animals directly affected, but for those human social targets treated with less respect and regard after being psychologically associated with beings widely not afforded rights or protection.

Also encouraging is the renewed interest in emotional processes and states, particularly given that dehumanization is often motivated and hot rather than passive and unimpassioned (Hodson et al., 2014). Disgust, we argue, is an excellent candidate to explain why and when dehumanization leads to negative outcomes. The double-barreled thrust of dehumanization coupled with disgust, as evidenced by assertions of "filthy pigs," "subhuman mongrels" and "dirty asylum seekers," speaks to the power of animal metaphors in explaining social life (Haslam et al., 2011). With disgust poised to be the emotion of study for the 21st century (Power & Dalgleish, 1997), dehumanization is itself now poised to become the intergroup-bias variable of central importance. This observation seems particularly poignant as our species faces climate change and its ensuing resource wars, mass migrations, and difficult questions about which species deserve to be saved. Asking ourselves what it means to be human, and the rights that this designation affords, has never been so central nor critical to our understanding of intergroup relations.

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