



Explaining dehumanization among children: The interspecies model of prejudice

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Although many theoretical approaches have emerged to explain prejudices expressed by children, none incorporate outgroup dehumanization, a key predictor of prejudice among adults. According to the Interspecies Model of Prejudice, beliefs in the human–animal divide facilitate outgroup prejudice through fostering animalistic dehumanization (Costello & Hodson, 2010). In the present investigation, White children attributed Black children fewer ‘uniquely human’ characteristics, representing the first systematic evidence of racial dehumanization among children (Studies 1 and 2). In Study 2, path analyses supported the Interspecies Model of Prejudice: children’s human–animal divide beliefs predicted greater racial prejudice, an effect explained by heightened racial dehumanization. Similar patterns emerged among parents. Furthermore, parent Social Dominance Orientation predicted child prejudice indirectly through children’s endorsement of a hierarchical human–animal divide and subsequent dehumanizing tendencies. Encouragingly, children’s human–animal divide perceptions were malleable to an experimental prime highlighting animal–human similarity. Implications for prejudice interventions are considered.

The causes of outgroup prejudice have proven to be multifaceted. In the adult literature, outgroup dehumanization has emerged as a robust predictor of prejudice in intergroup contexts (Costello & Hodson, 2010; Goff, Eberhardt, Williams, & Jackson, 2008; Hodson & Costello, 2007; Leyens *et al.*, 2000). Surprisingly, outgroup dehumanization has yet to be recognized as a fundamental aspect of prejudice among children, with no extant studies on racial dehumanization in particular. Here, we investigate children’s racial dehumanization within the context of an Interspecies Model of Prejudice (Costello & Hodson, 2010). Specifically, we consider whether children’s propensity for perceiving humans as superior to animals leads to outgroup derogation by increasing dehumanization. We also explore the role of parental social dominance orientation and whether children’s beliefs regarding the human–animal divide are informed by parental preferences for general intergroup dominance. Finally, we examine the malleability of children’s human–animal divide beliefs to inform the development of future prejudice interventions.

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Prejudice Among Children

It is well established that children display prejudicial attitudes by middle childhood (Aboud, 2003; Bigler & Liben, 2007; Rutland, Cameron, Milne, & McGeorge, 2005). Several theories have attempted to explain children's prejudices in terms of social-environmental factors, motivational roots, and/or individual differences. For instance, prevailing approaches focus on prejudicial parental attitudes (Allport, 1954; Rodriguez-Garcia & Wagner, 2009; Sinclair, Dunn, & Lowery, 2005; White & Gleitzman, 2006), social normative influences (Rutland *et al.*, 2005), internalized lay theories about intergroup relations (Levy, West, & Ramirez, 2005), and even interracial friendships (Feddes, Noack, & Rutland, 2009). Other perspectives consider motivational processes such as the development of moral reasoning (Killen, 2007), ingroup identification (Rutland, Killen, & Abrams, 2010), and threats to one's social identity (Nesdale, Durkin, Maass, & Griffiths, 2005). From an individual difference perspective, children's prejudice has been explained in terms of disordered personality traits resulting from authoritarian-type childrearing (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950; Altemeyer, 1996; Knafo, 2003; Peterson, Smirles, & Wentworth, 1997). In yet another approach, Aboud (1988) argues that racial biases in children are largely determined by limited cognitive-perceptual abilities. Specifically, abstract reasoning and inclusive categorization are seen as critical determinants of racially biased expressions in children (Aboud & Spears Brown, *in press*; Bigler, Jones, & Loblinger, 1997; Bigler & Liben, 1992). For example, children who fail to master a basic water conservation task (i.e., recognizing that a short wide glass can hold equivalent fluid to a tall thin glass) show evidence of less sophisticated cognitive ability of the sort associated with greater intergroup bias (Doyle & Aboud, 1995). Further evidence implicating the role of cognitive capabilities in prejudice development is found in longitudinal studies showing that weaker cognitive abilities in childhood predict greater levels of prejudice in adulthood (Deary, Batty, & Gale, 2008; Hodson & Busseri, 2012). These approaches have undoubtedly advanced our understanding of prejudice in children. However, noticeably absent from the literature is the role of outgroup dehumanization. Here, we consider whether children devalue outgroups because they endorse perceptions that racial outgroups are more animalistic and consequently 'less human' in nature.

Outgroup Dehumanization

Dehumanization is a psychological process through which others are derogatively likened to 'animals' and perceived as 'less human' (Haslam, 2006; Leyens *et al.*, 2000).¹ In intergroup contexts, dehumanization can serve to justify the exclusion of outgroups from moral consideration (Bandura, 1999; Bar-Tal, 1989; Opatow, 1990), rendering them 'unworthy' of assistance (Costello & Hodson, 2011) or forgiveness (Tam *et al.*, 2008). Not surprisingly, dehumanization is also associated with heightened outgroup prejudices (Costello & Hodson, 2010; Hodson & Costello, 2007) and greater acceptance of outgroup-directed violence (Goff *et al.*, 2008). Put simply, dehumanizing an outgroup paves the way for negative treatment and evaluation of that group.

Dehumanization can involve explicit animalistic-outgroup comparisons, such as historical portrayals of Blacks as 'apes' or Jews as 'vermin' (Livingstone-Smith, 2011).

¹ According to Haslam (2006) outgroups can also be mechanically dehumanized. Given our interest in human-animal ideology, we focus on animalistic dehumanization.

Contemporary approaches to dehumanization, however, are subtler in nature and involve the lesser attributions of ‘uniquely human’ characteristics to outgroups (Haslam, 2006; Leyens *et al.*, 2000). For example, tests of Leyens *et al.* (2000, 2001) infrahumanization hypothesis reveal that people are reluctant to attribute secondary emotions that are considered ‘uniquely human’ to the outgroup (see Demoulin *et al.*, 2004; Paladino *et al.*, 2002; Vaes, Paladino, Castelli, Leyens, & Giovanazzi, 2003). In contrast, differential attributions of primary emotions that humans share with other animals between the ingroup and outgroup are not expected or typically observed (Demoulin *et al.*, 2004; Leyens *et al.*, 2000, 2001). Furthermore, the concept of ‘humanity’ is only activated when the ingroup (not outgroup) is associated with uniquely human emotions (Vaes, Paladino, & Leyens, 2006). Interestingly, the lesser attribution/association of uniquely human emotions to outgroups usually occurs independently of emotion valence (Leyens *et al.*, 2000, 2001; Paladino & Vaes, 2009), suggesting that infrahumanization is more than a mere expression of ingroup favouritism. Comparable dehumanizing patterns have also been uncovered for the differential attributions of ‘uniquely human’ personality traits to the ingroup versus outgroup (Haslam, 2006; see also Hodson & Costello, 2007).

Despite the role that dehumanization plays in explaining human outgroup prejudices at the conceptual level (Costello & Hodson, 2010; Hodson & Costello, 2007; Leyens *et al.*, 2000), only two known studies have attempted to measure dehumanization in children (Brown, Eller, Leeds, & Stace, 2007; Martin, Bennett, & Murray, 2008). In keeping with the infrahumanization hypothesis, both studies operationalized dehumanization as the lesser attribution of uniquely human emotions to outgroup versus ingroup members. In the study by Brown *et al.* (2007), children between the ages of 11 and 16 attributed more positive uniquely human emotions to students from their home (ingroup) versus neighbouring (outgroup) school. Furthermore, this relative denial of ‘humanity’ to outgroup members was associated with heightened outgroup negativity (Brown *et al.*, 2007). Similarly, Martin *et al.* (2008) found that younger children aged 6 to 11 expected that members of their National sports team (ingroup) would experience more intense uniquely (vs. non-uniquely) human emotions relative to members of an opposing sports team (outgroup).

These studies provide preliminary evidence that children are capable of attributing outgroup members less ‘humanity’ by denying them the complete experience of ‘human’ emotions. Despite providing valuable insights, the extant studies are limited by focusing on non-stigmatized social outgroups (e.g., sports teams, schools), and by tapping reactions to hypothetical scenarios as a measure of dehumanization (which were not always reliable, see Brown *et al.*, 2007). In contrast, we examine children’s dehumanization of a *racial* outgroup and employ standard dehumanization measures used with adults but adapted for use in children. Furthermore, we explore whether children’s attribute-based dehumanization is associated with actual animalistic-outgroup metaphors, as established in the adult literature (see Loughnan & Haslam, 2007; Loughnan, Haslam, & Kashima, 2009). Finally, we draw on recent research on the Interspecies Model of Prejudice to explain why children devalue outgroups by undermining their humanness.

Interspecies Model of Prejudice

Theorists have speculated that the oppression of marginalized humans may be rooted in ideology involving the human–animal divide and accompanying connotations of human superiority (Livingstone-Smith, 2011; Mason, 2005; Nibert, 2002; Patterson, 2002). Theoretically, the human–animal divide reflects an ideological belief system of human

supremacy, where humans are considered fundamentally distinct from and superior to animals. This ideology justifies the social legitimacy of dominating and exploiting non-human animals, especially those perceived to be lower in the human–animal hierarchy (Opotow, 1993; Westbury & Neumann, 2008). Troublingly, human domination over animals may also justify interhuman domination including slavery, genocide, and intergroup prejudices or violence (see Livingstone-Smith, 2011; Mason, 2005; Nibert, 2002; Patterson, 2002). Indeed, some argue that ‘human domination, which promotes and justifies the exploitation of animals, legitimize[s] the oppression of humans alleged to be in an animal condition’ (Patterson, 2002, p. 25).

Building on this observation, the Interspecies Model of Prejudice proposes that fundamental beliefs in a human–animal divide set the foundation for outgroup dehumanization (Costello & Hodson, 2010; Hodson, MacInnis, & Costello, in press). Specifically, beliefs in a human–animal divide allow people to exclude some humans from the realm of humanity by likening them to ‘inferior’ animals, with these dehumanizing perceptions predicting prejudice and discrimination (see Figure 1). Put simply, the derogative value of animalistic-outgroup dehumanization is theoretically dependent upon the hierarchical devaluation of animals relative to humans in the first place.

Support for the Interspecies Model of Prejudice was confirmed in Costello and Hodson (2010), in which the human–animal divide systematically predicted prejudices through greater animalistic dehumanization. Specifically, Canadian university students who endorsed greater beliefs in the human–animal divide attributed fewer uniquely human characteristics to an immigrant outgroup, which in turn predicted greater anti-immigrant attitudes. In other words, the effect of human–animal divide on outgroup prejudice was fully mediated by dehumanizing representations of the outgroup. Critically, in a second study, Costello and Hodson (2010) used an experimental design to evaluate the causal assumptions implied by the Interspecies Model of Prejudice. As predicted, psychologically closing the human–animal divide (via exposure to scientific editorials highlighting animals’ similarities to humans) attenuated dehumanization, which in turn predicted more favourable attitudes towards immigrants. In other words, outgroup dehumanization was significantly reduced by stressing the similarity of animals to humans, supporting the proposed causal relation. Related research confirms that experimentally accentuating animals’ similarity to humans also expands moral concern towards marginalized human outgroups (Bastian, Costello, Loughnan, & Hodson, 2012, Study 3). These experimental studies confirm the proposition that decreasing hierarchical beliefs in human superiority over animals causally predicts lower animalistic dehumanization.

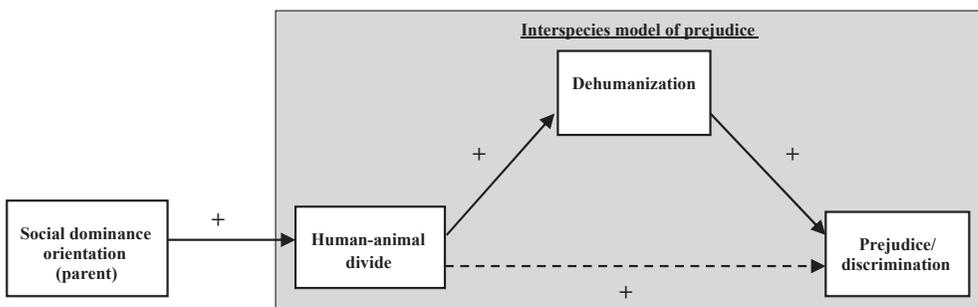


Figure 1. Conceptual illustration of our interspecies model of prejudice (based on Costello & Hodson, 2010), with parent-SDO predicting children’s human–animal divide. Dotted line represents a path predicted to be weak (or non-significant) when dehumanization is included as a mediator.

At present, however, it remains unclear whether children actually devalue racial outgroups via dehumanization, and whether their dehumanizing tendencies are predicted by the human–animal divide belief systems underlying the Interspecies Model of Prejudice. Like adults, children hold lay beliefs about the world that serve to influence their intergroup perceptions and behaviours (Cameron, Alvarez, Ruble, & Fuligni, 2001; Levy *et al.*, 2005). However, some theorists argue that belief systems justifying outgroup derogation in particular, emerge in late adolescence (Altemeyer, 1996), largely precluding the possibility of such processes in younger children. Because societal norms supporting human superiority over animals are so deeply entrenched (Plous, 2003), we argue that even young children show evidence of belief in the human–animal divide. If true, we predict that individual differences in this propensity to view humans as superior to animals should be systematically related to outgroup dehumanization. If established, these findings would considerably enhance our understanding of prejudice development and highlight novel contributors to prejudice that can be targeted in interventions. With such an objective in mind, we also consider the flexibility of children’s human–animal divide beliefs, given that experimentally blurring the human–animal divide attenuates dehumanization and among university-aged adults (Costello & Hodson, 2010). That is, using a child-friendly experimental context highlighting human–animal similarity, we evaluate whether children’s human–animal divide beliefs are malleable.

STUDY 1 (Pilot)

We begin with a pilot study to validate our measures and explore the viability of examining racial dehumanization in children. We expected children to attribute fewer uniquely human emotions and traits to Black versus White children (H1). Furthermore, we expected the denial of uniquely human characteristics to Black children to be positively associated with explicit animalistic-outgroup representations (i.e., explicit perceptions that Blacks are similar to animals) (H2). We then explore whether constructs relevant to the Interspecies Model of Prejudice are meaningfully correlated in children. Specifically, we expected children’s human–animal divide beliefs to be positively related to their dehumanization (H3) and racial prejudices (H4). In keeping with previous research (see Aboud, 1988), we expected that greater conservation ability (a common measure of cognitive ability in children, see Doyle & Aboud, 1995) would be inversely correlated with racial prejudice (H5) and with beliefs in the human–animal divide (H6). Finally, we predicted that children’s human–animal divide beliefs will be significantly narrowed following an experimental manipulation highlighting fundamental human–animal similarities (H7).

Method

Participants and procedure

Middle childhood is a critical period for the establishment of intergroup prejudices among children (Aboud, 1988). As such, White Canadian children between the ages of 6 and 10 were recruited to participate in this study via advertisements in local newspapers. In total 11 girls and 9 boys participated ($M_{\text{age}} = 7.60$ years, $SD = 1.32$). After obtaining consent from the participating child’s parent/guardian, children were individually tested by a White female investigator. After completing the primary measures, children were exposed to the experimental manipulation of the human–animal divide and completed a

post-manipulation measure of human–animal divide. In a separate room, parents provided their child's demographics.

Measures

Photo stimuli

Photos of Black and White girls and boys were collected from public internet websites and previously published studies. The stimuli were pre-tested among adults ($n = 20$) who rated the age, race, attractiveness, happiness, and niceness of each child in the photos. A final set of four photos representing both Black and White boy/girl, matched for the aforementioned characteristics, was retained. A composite photo representing 'people' was created by arranging the four child photos into a circle pattern. A composite photo representing 'animals' was created by arranging the faces of four different animal species (e.g., dog, cow) into a circle pattern. Photos were 4×4 inches and grey scaled.

Dehumanization

We measured dehumanization via the attribution of uniquely human characteristics. Following Leyens *et al.* (2001), children attributed uniquely (secondary) and non-uniquely (primary) human emotions to Black and White child targets. The emotions were selected from Demoulin *et al.* (2004) based on their use in previous research with children (Brown *et al.*, 2007; Martin *et al.*, 2008). Included were four secondary emotions (sympathy, love, guilt, and embarrassment) and four primary emotions (happiness, excitement, sadness, and fear). The personality factors, Openness and Conscientiousness are also perceived to be more uniquely human relative to Agreeableness and Neuroticism factors (Haslam, 2006; Hodson & Costello, 2007). Consequently, children also attributed four uniquely human (curious, creative, careless, and disorganized) and four non-uniquely human (nervous, calm, friendly, and mean) personality traits to the Black and White child targets. For each emotion/trait, children were handed two identical cards labelled with the trait/emotion word as the researcher read aloud a sentence illustrating its meaning. Children sorted the cards into boxes labelled as belonging to a same-sex White or Black child based on the corresponding box photo, or into a box labelled 'X' for characteristics not deemed applicable to targets (adapted from Doyle & Aboud, 1995).

Animalistic-outgroup representations

The extent to which children explicitly associated Black children with animals was tapped using a 60 cm horizontal Same-Different board (adapted from Aboud & Mitchell, 1977). Children placed pictures of a Black child and 'animals' closer together or farther apart on the board, reflecting perceived similarity or difference. Lesser distance between the pictures reflects greater perceived similarity between Black children and non-human animals.

The human–animal divide

Human–animal divide beliefs were tapped using the 60 cm horizontal Same-Different board described previously, but with distinct stimuli. Specifically, children placed a picture of 'humans' and 'animals' closer together or farther apart on the board, reflecting

perceived similarity or difference. Greater distance between human and animal pictures reflects greater human–animal divide perceptions.

Racial prejudice

Participants completed a modified version of the widely used multi-response racial attitude measure (Doyle & Aboud, 1995). Using a procedure methodologically similar to that for the dehumanization measure, children attributed three positive (smart, clean, and polite) and three negative (bad, bossy, and dirty) evaluative adjectives to the same-sexed White and Black child targets. Given our interest in outgroup negativity, an index score for racial prejudice was derived by averaging positive (reversed) and negative evaluations of Black children; higher scores reflect more negative evaluations of Black children.

Conservation ability

Children completed a water conservation task (Goldschmid, 1967) commonly used to measure abstract cognitive ability among children (Doyle & Aboud, 1995). Mastery of the conservation task involves recognizing that a short wide glass holds equivalent water to a taller narrower glass (0 = *not mastered*, 1 = *mastered*).

Human–animal divide manipulation

After completing all of the measures above, children viewed the first two segments of the educational video ‘Share the World’ (Ellis, Pakay, & Carolon, 2010). The video was approximately 15 min in length and featured engaging animal footage and commentary on the similarities that many non-human animals share with humans. Immediately following the video, children again completed the human–animal divide measure.

Results and Discussion

Racial dehumanization in children

To examine differential attributions of uniquely and non-uniquely human characteristics across groups, we conducted a 2 (Group: Black vs. White) \times 2 (Trait: Human vs. Non-human) ANOVA on the trait-attribution measure, and a 2 (Group: Black vs. White) \times 2 (Emotion Type: Uniquely vs. Non-Uniquely Human) \times 2 (Valence: Positive vs. Negative) ANOVA on the emotion-attribution measure (See Table 1 for summary). No significant main effects emerged for the attribution of traits. However, the emotion-attribution analysis revealed a significant main effect for Valence, $F(1,19) = 9.19, p = .007$, such that more positive (vs. negative) emotions were attributed overall. Of theoretical importance, significant Group \times Trait and Group \times Emotion interactions emerged in their respective analyses. In support of H1, children attributed significantly fewer uniquely human traits and emotions to Black (vs. White) children. In contrast, no significant differences emerged for the attribution of non-uniquely human traits or emotions across groups. As is commonly observed (Leyens *et al.*, 2000), the differential attribution of emotions across groups was not moderated by emotion valence, $F(1,19) = 0.07, p = .800$. That is, children attributed fewer positive *and* negative uniquely human emotions to Black versus White children. Overall, these findings represent the first documented evidence of racial dehumanization among children, using measures comparable to those commonly used with adults.

Associations among key variables

Descriptive statistics and intercorrelations among all variables are presented in Table 2. As predicted, the denial of uniquely human traits and emotions to Black children was associated with greater Black–animal metaphoric associations, supporting H2. Thus, to the extent that children perceive Blacks as more animal-like they also attribute them fewer uniquely human characteristics, validating the use of attribute-based dehumanization measures in children. Of theoretical importance, the psychological constructs underlying the Interspecies Model of Prejudice were also meaningfully intercorrelated in children. Specifically, heightened dehumanization was positively associated with children’s beliefs

Table 1. Evidence of outgroup racial dehumanization, Studies 1 and 2

	Uniquely human					Non-uniquely human					Group × Trait/Emotion	
	Black	White	t	p	d	Black	White	t	p	d	F	p
	M	M				M	M					
Study 1												
Children												
Traits	2.25	3.25	−2.21	.040	.86	2.95	2.85	.42	.681	.11	5.12	.036
Emotions	2.45	3.30	−2.13	.047	.80	3.10	3.15	−.20	.841	.06	3.32	.084
Study 2												
Children												
Traits	2.36	2.96	−2.53	.014	.51	2.79	2.98	−1.37	.176	.19	2.95	.072
Emotions	2.41	2.89	−2.68	.010	.43	3.09	3.13	−.34	.735	.04	4.02	.050
Parents												
Traits	18.57	19.72	−2.33	.024	.28	16.87	16.64	.90	.371	.14	6.80	.012
Emotions	32.57	34.74	−3.09	.003	.31	35.32	35.42	−.40	.690	.04	7.64	.008

Note. Study 1 *df* = 1, 19 and Study 2 *df* = 1, 52, for two-way interactions.

Table 2. Descriptive statistics and intercorrelations among key variables, Study 1

	M	SD	1.	2.	3.	4.	5.	6.	7.	8.
1. Human–animal divide	20.20	13.30	–	.47*	.42*	.45*	.79***	−.43*	−.15	−.13
2. Dehumanization emotions	1.55	1.28		.62	.40 ⁺	.54*	.39 ⁺	−.41 ⁺	−.24	−.09
3. Dehumanization traits	1.75	1.33			.65	.64**	.43*	−.14	−.30	−.02
4. Racial prejudice	3.05	1.50				.82	.41 ⁺	−.39 ⁺	−.45*	−.23
5. Black–animal similarity	21.50	14.51					–	−.34	−.02	−.08
6. Conservation ability	.70	.47						–	.48*	.07
7. Child age	7.60	1.31							–	−.03
8. Child gender	–	–								–

Note. Dehumanization Emotions/Traits = attribution of uniquely human emotions/traits to Black children. Sex (0 = boys; 1 = girls).

Values in diagonal represent alpha coefficients.

⁺*p* < .07; **p* < .05; ***p* < .01; ****p* < .001.

in the human–animal divide (supporting H3), and with negative evaluations of Black children (supporting H4). Consistent with cognitive approaches to prejudice development (Aboud, 1988), children’s conservation mastery was negatively associated with expressions of racial bias (supporting H5), human–animal divide beliefs (supporting H6), as well as dehumanization. Consequently, we control for conservation ability (in addition to other prejudice correlates) when testing the full Interspecies Model of Prejudice in Study 2.

Malleability of the human–animal divide

Encouragingly, children’s human–animal divide perceptions were malleable. Relative to pre-manipulation scores, children reported narrower human–animal divides following exposure to the video highlighting the similarities among humans and animals, supporting H5 ($M_s = 20.20$ vs. 10.75), $t(19) = 3.72$, $p = .001$. This decrease in human–animal divide following exposure to the video represented a large effect, $d = .76$.

STUDY 2

Our initial study provides the first systematic evidence of racial dehumanization among children, plus indication that children’s denial of uniquely human characteristics to outgroups is associated with explicit animalistic-outgroup perceptions, validating this methodology for measuring subtle dehumanization in children. Our preliminary analyses also indicate that the constructs underlying the Interspecies Model of Prejudice are observable and meaningfully related in children. For the next study we recruited a larger sample of children to formally test the Interspecies Model of Prejudice. Specifically, children’s human–animal divide beliefs were expected to predict racial prejudice, an effect mediated by racial dehumanization. In Study 2, we also collect data from the parent/caregiver of the participating child. This allowed us to conduct a test of the Interspecies Model of Prejudice among a community sample of older participants, relative to previous explorations involving adolescent students (Costello & Hodson, 2010).

Social dominance orientation

Collecting data from parents also allowed us to empirically link parent ideological variables with their child’s expressions of prejudice. Individuals characterized by higher social dominance orientation (SDO; Pratto, Sidanius, Stallworth, & Malle, 1994) exhibit ideological preferences for hierarchical social relations over egalitarianism. Consequently, SDO is positively associated with prejudice, particularly towards subordinate outgroups (Duckitt, 2006; Hodson, Rush, & MacInnis, 2010). Importantly, individual differences in SDO also predict beliefs in the human–animal divide such that those higher in SDO exhibit heightened preferences for human superiority over animals, with these perceptions predicting greater dehumanization and subsequent prejudice (see Costello & Hodson, 2010). The human–animal divide, therefore, is a mechanism explaining the link between greater SDO (i.e., preferences for general social inequality) and heightened outgroup dehumanization. Here, we determine whether children’s human–animal divide beliefs are informed by parental ideology concerning general preference for social dominance. Evidence indicates that parents characterized by prejudice-related ideologies (e.g., SDO) are more likely to raise prejudiced children (Dhont & Hiel, 2012; Duriez & Soenens, 2009). To date, however, the particular

mechanisms through which parent SDO impacts children's dehumanization or prejudices are unknown. We propose that parent SDO indirectly predicts children's dehumanization and prejudice by influencing the extent to which children believe in a hierarchical human–animal divide.

Known predictors of prejudice in children

In testing the Interspecies Model of Prejudice among children, we adopt a conservative approach, statistically controlling for many of the factors conventionally implicated in prejudice development. In keeping with cognitive approaches to prejudice development (Aboud, 1988), the results of Study 1 confirmed that children's cognitive ability, namely mastery of a conservation task, is associated with more positive intergroup attitudes. Other evidence suggests that inclusive categorization skills are related to racially biased expressions in children (Aboud, 2003; Bigler *et al.*, 1997; Houlette *et al.*, 2004). Whereas conservation mastery implies an understanding that stimuli/people can share considerable overlap despite perceptual differences (Doyle & Aboud, 1995), inclusive categorization skills require an understanding that two groups can be different but still belong to the same category. Consequently, in Study 2 we control for children's cognitive ability (i.e., namely their conservation *and* inclusive categorization capabilities).

Children's prejudices are also systematically impacted by parental prejudice (e.g., Rodriguez-Garcia & Wagner, 2009; White & Gleitzman, 2006; but see also Aboud & Doyle, 1996), and authoritarian childrearing (Adorno *et al.*, 1950). Specifically, prejudiced parents are more likely to raise prejudiced children and to practice harsh and punitive parenting styles (Peterson *et al.*, 1997), and children raised under punitive disciplinary conditions are more likely to endorse prejudicial values (Altemeyer, 1996; Knafo, 2003). Given their established importance in predicting prejudice in children, we test the Interspecies Model of Prejudice among children controlling for children's cognitive abilities, authoritarian parenting, and parental prejudices. We also control for child's age and gender, given that outgroup evaluations tend to become more favourable with age (as in Study 1; Doyle & Aboud, 1995) and that boys express greater prejudice than girls (Powlishta, Serbin, Doyle, & White, 1994).

Human–animal divide malleability

Promisingly, Study 1 provided preliminary support for the malleability of children's human–animal divide beliefs; after watching a video highlighting how animals are similar to humans, children reported significantly diminished human–animal divide beliefs. If children's human–animal divide beliefs are indeed flexible, interventions targeting hierarchical human–animal ideology may prove fruitful in reducing human intergroup biases. Relative to pre-test evaluations and a neutral control condition, we evaluate the effects of the human–animal similarity manipulation on children's beliefs in the human–animal divide, but also dehumanization and prejudice.

Overview of predictions

Both children and parents were expected to exhibit racial dehumanization by attributing fewer uniquely human traits and emotions to Black versus White targets (H1 and H2, respectively). Next, we test the Interspecies Model of Prejudice as represented in

Figure 1, in which children's hierarchical beliefs regarding humans and animals were expected to indirectly predict heightened racial prejudice through greater dehumanization (H3). Moreover, parent SDO was expected to impact children's dehumanization and prejudice indirectly by enhancing the extent to which children endorse hierarchical beliefs in the human–animal divide (H4). These relations were expected to remain significant even after controlling for previously established predictors of prejudice in children (i.e., parental prejudice, authoritarian parenting, cognitive ability, and child demographics; H5). In an ancillary analysis we test the Interspecies Model of Prejudice in our community sample of adult participants. Among parents, human–animal divide beliefs were expected to indirectly predict heightened prejudice via dehumanization (H6). Lastly, children exposed to a video highlighting human–animal similarity (vs. control condition) were expected to demonstrate attenuated human–animal divides (H7), dehumanization (H8), and outgroup prejudices (H9).

Method

Participants and procedure

White Canadian children (ages 6–10) and one of their parents were recruited to participate in this study via advertisements in local newspapers. Included were 29 girls and 24 boys ($M_{\text{age}} = 7.66$ years, $SD = 1.21$), 42 biological mothers, and 11 biological fathers ($M_{\text{age}} = 35.28$, $SD = 4.28$). For children, the data collection procedure matched Study 1 except where noted. Parents completed parent measures and demographics for self and child in a separate room. Parents received \$20 for participation.

Child measures

Children completed dehumanization and prejudice measures as in Study 1.

Human–animal divide

In addition to the human–animal divide measure in Study 1, children indicated how superior humans are to animals by placing a picture of 'humans' and 'animals' closer together or farther apart on a vertical 60 cm board. Greater distance (cm) between the human and animal pictures with humans placed higher than animals reflected greater human superiority to animals. Scores for both measures of the human–animal divide ($r = .62$, $p < .001$) were standardized and aggregated into a 'human-animal divide' index; higher values reflect greater beliefs that humans are distinct from and superior to animals.

Cognitive ability

In addition to completing the basic water conservation task from Study 1, children completed two inclusive categorization tasks (Inhelder & Piaget, 1964). Mastery of these tasks required knowledge that 'dogs' and 'cows' belong to a superordinate category 'animals', and that 'cars' and 'trucks' belong to a superordinate category 'vehicles' (0 = *incorrect*; 1 = *correct*). To simplify forthcoming path modelling, standardized scores for the conservation and inclusive categorization tasks ($r = .56$, $p < .001$) were aggregated into an overall 'cognitive ability' index, with higher values reflecting more cognitive sophistication.

Parent measures

Social dominance orientation

Parental SDO levels were assessed using the 16-item scale (Sidanius & Pratto, 1999). A sample item reads, 'Some groups of people are just more worthy than others'. (1 = *strongly disagree* to 7 = *strongly agree*).

Human–animal divide

Parent's human–animal divide was assessed via six items from Costello and Hodson (2010).² Items tapped beliefs that humans are distinct from and superior to animals. A sample item reads: 'Humans are so vastly different from other life forms that it is a mistake to classify humans as animals'. (1 = *strongly disagree* to 7 = *strongly agree*). Higher scores reflect greater beliefs that humans are separate from and superior to non-human animals.

Dehumanization

Following Leyens *et al.* (2001), parents indicated the extent to which Whites and Blacks experience 12 positive/negative uniquely human (e.g., hope, guilt) or non-uniquely human (e.g., happiness, sadness) emotions. Following Costello and Hodson (2010), parents also indicated the extent to which uniquely human (i.e., traits measuring openness and conscientiousness) and non-uniquely human (i.e., traits measuring agreeableness and neuroticism) traits apply to Whites and Blacks (see also Haslam, 2006). All items were rated on a 7-point scale (1 = *does not apply* to 7 = *strongly applies*).

Racial prejudice

Parents completed the widely used 7-item Modern Racism Scale (McConahay, Hardee, & Batts, 1981). A sample item reads: 'Black people are getting too demanding in their push for equal rights' (0 = *strongly disagree* to 4 = *strongly agree*). Higher scores reflect greater prejudice towards Blacks.

Authoritarian parenting style

Punitive parenting was assessed using four items from the authoritarian subscale (Robinson, Mandleco, Olsen, & Hart, 1995). A sample item reads 'I scold and criticize to make my child improve' (1 = *strongly disagree* to 7 = *strongly agree*).

Human–animal divide manipulation

After completing primary measures children were randomly assigned to an experimental ($n = 26$) or control ($n = 27$) condition. In the experimental condition, children viewed the film 'Share the World' (see Study 1) to highlight the fundamental similarities among humans and animals. In the control condition, children viewed 'Recycling is Fun' (Perkin, 1991), an equally long film addressing the importance of recycling for the environment without any mention of animals. Afterwards, children again completed the human–animal divide measures as well as abbreviated versions of the dehumanization and prejudice measures.

² Some scale items were borrowed from Templer, Connelly, Bassman, and Hart (2006).

Results and Discussion

Evidence of racial dehumanization

As in Study 1, separate analyses were conducted to uncover relative attributions of traits and emotions across groups (see Table 1). Among children, the trait-attribution analysis revealed a significant main effect for Group, $F(1,52) = 6.74, p = .012$, such that more traits were attributed to Whites than Blacks. For the emotion-attribution analysis, significant main effects emerged for Group, $F(1,52) = 6.55, p = .013$, Emotion Type, $F(1,52) = 16.62, p < .001$, and Valence, $F(1,52) = 25.81, p < .001$. Specifically, fewer emotions were attributed to Blacks versus Whites, and more negative (vs. positive) and non-uniquely (vs. uniquely) human emotions were attributed overall. Of greater theoretical importance, Group \times Trait (marginal) and Group \times Emotion (significant) interactions emerged. In support of H1, children attributed significantly more uniquely human traits and emotions to White than Black children. In contrast, no differential attribution of non-uniquely human traits or emotions across groups emerged, as expected. Moreover, the attribution of uniquely human emotions as a function of group category was not moderated by emotion valence, $F(1,52) = 0.49, p = .487$. Corroborating Study 1 findings, we again found meaningful evidence of racial dehumanization among children. To simplify forthcoming model testing, a dehumanization composite variable was created for children by aggregating the total attributions of uniquely-human traits and emotions to Black children ($r = .52, p < .001$). After reverse scoring, higher scores reflect decreased attributions of uniquely human characteristics to Black children.

Similar dehumanization effects were observed among parents. The dehumanization-traits analysis revealed a significant main effect for Traits, $F(1,52) = 22.52, p < .001$, such that more uniquely human than non-uniquely human traits were attributed overall. The emotion-attribution analysis revealed significant main effects for Group, $F(1,52) = 9.64, p = .003$, Emotion Type, $F(1,52) = 12.38, p < .001$, and Emotion Valence, $F(1,52) = 37.85, p < .001$. Specifically, fewer emotions were attributed to Blacks than Whites, as well as fewer uniquely human (vs. non-uniquely human) and fewer negative (vs. positive) emotions were attributed overall. More importantly, as indicated in Table 1, significant Group \times Trait and Group \times Emotion interactions were found, with parents attributing significantly fewer uniquely human traits and emotions to Blacks than Whites (supporting H2). As expected, parents did not differentially attribute non-uniquely human traits or emotions to the ingroup versus outgroup. Contrary to the dehumanization analyses for children, parent's attribution of non-uniquely human emotions was moderated by emotion valence, $F(1,52) = 5.46, p = .023$. That is, fewer positive (but not negative) non-uniquely human emotions were attributed to Blacks than Whites ($p = .035$). Nonetheless, parents characterized Blacks (vs. Whites) as experiencing fewer uniquely human characteristics. As with children, a dehumanization composite variable was created for parents by aggregating the total attribution of uniquely human traits and emotions to Blacks ($r = .48, p < .001$), with higher values reflecting greater dehumanization.

Descriptive statistics and intercorrelations

As indicated in Table 3, associations among key variables were largely as predicted and consistent with the Study 1. Among children, beliefs in the human-animal divide, dehumanization, and prejudice were positively associated with each other and with parent SDO. Consistent with existing theories of prejudice development, authoritarian parenting and social-cognitive skills were systematically associated with children's racial

Table 3. Descriptive statistics and intercorrelations among key variables, Study 2

	M	SD	1	2	3	4	5	6	7	8	9	10	11
<i>Child measures</i>													
1. Human–Animal Divide	.00	1.00	.77	.45***	.48***	.61***	.28*	.28*	.51***	.34*	-.28*	-.24 ⁺	-.10
2. Dehumanization	.00	1.00		.65	.55***	.26*	.26*	.23	.22	.15	-.24 ⁺	-.17	-.36**
3. Prejudice	2.21	1.85			.74	.40**	.31*	.18	.46***	.37**	-.45***	-.29*	-.27*
<i>Parent Measures</i>													
4. SDO	2.24	.87				.90	.52***	.35*	.67***	.65***	-.13	-.17	-.13
5. Human–Animal Divide	3.26	1.39					.91	.43**	.46***	.24 ⁺	-.13	-.22	-.00
6. Dehumanization	.00	1.00						.90	.45***	.16	-.24 ⁺	-.28*	-.12
7. Prejudice	.73	.67							.93	.51***	-.17	-.23	-.01
<i>Control Measures</i>													
8. Authoritarian Parenting	2.11	.80								.75	-.19	.07	-.18
9. Cognitive Ability	.00	1.00									.66	.44***	.06
10. Child Age	7.66	1.21										–	.19
11. Child Gender	–	–											–

Note. SDO = social dominance orientation. Dehumanization = attribution of uniquely human traits and emotions to Black children.

Sex (0 = boys, 1 = girls). Values in diagonal represent alpha coefficients.

⁺p < .08; *p < .05; **p < .01; ***p ≤ .001.

prejudice. That is, children who were reared under punitive conditions and who failed to master basic cognitive tasks demonstrated more prejudiced attitudes and greater human–animal divide beliefs. Furthermore, boys and younger children demonstrated greater inclinations towards both prejudice and dehumanization. Among parents, human–animal divide was positively associated with dehumanization, racial prejudice, and SDO, as expected. Finally, significant positive intergenerational (parent–child) associations were observed for measures of prejudice, dehumanization (marginal), and human–animal divide beliefs.

Test of the interspecies model of prejudice in children

On the basis of our Interspecies Model of Prejudice, we expected children’s human–animal divide beliefs to predict outgroup prejudice through heightened dehumanization, with parent SDO positively predicting their child’s human–animal divide (see Figure 1). These predicted relations were expected to emerge even after controlling for other child prejudice predictors (i.e., parent prejudice, authoritarian parenting, children’s cognitive ability, and child demographics). The proposed model, with statistical controls on all variables, was tested with AMOS 18 software using bootstrapping methods ($n = 2,000$) with maximum likelihood procedures to estimate the significance of indirect effects. Initially, all possible paths among variables were tested, resulting in a fully saturated model ($df = 0$) (Taylor, MacKinnon, & Tein, 2008). A summary of direct, indirect, and total effects is provided in Table 4. In the interest of maximizing model parsimony, non-significant paths were then dropped (see Kline, 2005), allowing subsequent tests of model fit with statistical controls retained. Recommended model fit criteria include non-significant χ^2 values, χ^2/df values <2 ,

Table 4. Standardized direct, indirect, and total effect decomposition for the interspecies model of prejudice among children and parents (Study 2)

Criteria	Predictor								
	Social dominance Orientation (Parent)			Human–animal divide (Child)			Dehumanization (Child)		
Child Model	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
Human–Animal Divide	.59**	–	.59**	–	–	–	–	–	–
Dehumanization	.02	.23*	.23	.39*	–	.39*	–	–	–
Prejudice	.03	.13*	.16	.09	.13*	.22	.35*	–	.35*
Parent Model	Social dominance orientation (Parent)			Human–animal divide (Parent)			Dehumanization (Parent)		
Parent Model	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
Human–Animal Divide	.52**	–	.52**	–	–	–	–	–	–
Dehumanization	.17	.18*	.35*	.35 ⁺	–	.35 ⁺	–	–	–
Prejudice	.54**	.12*	.67**	.08	.08*	.16	.23*	–	.23*

Note. Standardized coefficients based on bootstrapping analyses from fully saturated models. Child model (Figure 2) statistically controls for effects of parent prejudice, authoritarian parenting, children’s social-cognitive skills, and child gender/age on all path variables.

⁺ $p < .07$; * $p < .05$; ** $p < .01$.

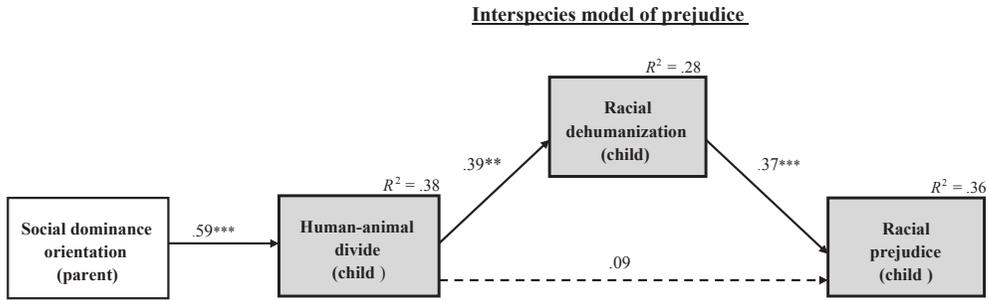


Figure 2. Interspecies model of prejudice (grey) tested among children, including parent SDO as an exogenous variable (Study 2). Model statistically controlled for the effect of parent prejudice, parenting style, children’s cognitive ability, and child demographics (sex, age) on all variables. Standardized path coefficients derived after non-significant paths dropped from fully saturated model. ** $p < .01$; *** $p < .001$.

comparative fit index (CFI) values ≥ 0.95 , root mean square error of approximation (RMSEA) values $\leq .06$, and standard root mean squared residual (SRMR) values $< .08$ (Hu & Bentler, 1999; Kline, 2005).

Consistent with H3, the relation between children’s human–animal divide beliefs and children’s prejudice was entirely indirect via greater dehumanization (see Figure 2). That is, children’s heightened beliefs in animal–human divide predicted greater dehumanization, which subsequently led to heightened prejudice, supporting the Interspecies Model of Prejudice. In contrast, the direct effect of children’s human–animal divide on prejudice was non-significant in the model, despite significant bivariate correlations ($r = .48$, $p < .001$). In other words, dehumanization explained the link between children’s human–animal divide beliefs and racial prejudice. In support of H4, parent SDO exerted a significant direct effect on children’s human–animal divide, such that children of parents higher in SDO exhibited greater beliefs in the human–animal divide. In contrast, the direct effect of parent SDO on both child dehumanization and prejudice was non-significant (see Table 4). In fact, the association between parent SDO and child prejudice was entirely indirect, operating through the theoretical processes underlying the Interspecies Model of Prejudice. To summarize, parental SDO (involving general preferences for social dominance) positively predicted children’s hierarchical beliefs regarding humans and animals; children’s human–animal divide beliefs in turn predicted greater racial prejudices, a relation explained by greater outgroup dehumanization. Critically, these predicted effects remained significant even after controlling for known predictors of child prejudice (i.e., parent prejudice, authoritarian parenting, and social-cognitive skills) and relevant child demographics (i.e., age and sex), supporting H5. The final model illustrated in Figure 2, statistical controls retained, demonstrated good fit to the data: $\chi^2(3) = 0.43$, $p = .933$, $\chi^2/df = 0.14$, CFI = 1.00, RMSEA = .00, SRMR = .070.³

Some noteworthy effects involving the statistical control variables also warrant discussion. In keeping with the cognitive approaches to children’s prejudice (Aboud, 1988), children’s cognitive ability exerted a unique direct effect on prejudice ($b = -.28$,

³ An alternative model testing whether human–animal divide mediates the relation between dehumanization and prejudice, did not indicate mediation and resulted in poorer model fit ($\chi^2[6] = 10.87$, $p = .039$, $\chi^2/df = 1.84$, CFI = 0.928, RMSEA = .125]. We thank an anonymous reviewer for suggesting this analysis

$p = .021$), and also on human–animal divide beliefs ($b = -.23, p = .05$). Furthermore, a significant positive path between parent–child prejudices emerged, supporting social–environmental explanations to child prejudice (e.g., Rodriguez-Garcia & Wagner, 2009). Impressively, support for the Interspecies Model held beyond these established effects.

Tests of the interspecies model of prejudice among parents

Given the importance of replication for the development and validation of theoretical models, a supplementary test of the Interspecies Model of Prejudice was conducted among our community sample of parents. A fully saturated model was tested to estimate total, direct, and indirect effects (see Table 4 for summary); non-significant paths were then dropped allowing for tests of model fit. As found with children, parent’s human–animal divide beliefs exerted a significant indirect effect on prejudice via greater dehumanization. That is, heightened beliefs in the human–animal divide predicted greater dehumanization, which subsequently led to greater prejudice, supporting H6. In contrast, the direct effect of parent’s human–animal divide on prejudice was non-significant despite significant bivariate associations among these variables ($r = .46, p < .001$). As indicated in Table 4, parent SDO predicted a significant direct effect on human–animal divide and prejudice, and significant indirect effects on both dehumanization and prejudice. Overall in support of H7, adults characterized by higher SDO exhibited greater human–animal divide beliefs, which predicted heightened dehumanization and subsequently greater prejudice. The final model (see Figure 3) demonstrated good fit to the data: $\chi^2(2) = 1.78, p = .411, \chi^2/df = 0.89, CFI = 1.00, RMSEA = .00, SRMR = .046$.

Human–animal divide malleability in children

No pre-manipulation differences emerged between experimental and control children on any of the key constructs ($ps > .898$). Regarding post-manipulation differences, children exposed to the experimental prime highlighting animals’ similarity to humans reported narrower human–animal divide beliefs ($M = -0.32, SD = 0.73$), $F(1,51) = 7.85, p = .007$, than control participants ($M = 0.31, SD = 0.89$), representing a large effect size ($d = .77$) and supporting H7. Contrary to expectations, comparable post-manipulation analyses revealed no significant differences between experimental and control

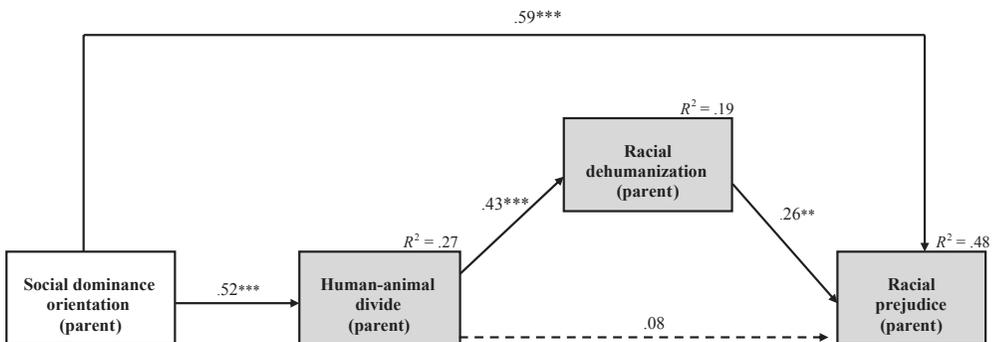


Figure 3. Interspecies model of prejudice (grey) with SDO, tested among parent participants (Study 2). Standardized path coefficients derived from analyses after non-significant paths were dropped from fully saturated model. ** $p < .01$; *** $p < .001$.

participants on dehumanization or racial prejudice measures ($ps > .146$). Overall, therefore, children's human–animal divide beliefs were amenable to intervention through video stimuli highlighting human–animal similarities, but any knock-on effects for dehumanization or prejudice attitudes were not statistically significant.

GENERAL DISCUSSION

Despite the growing theoretical recognition that dehumanization is a critical predictor of prejudice in adults (e.g., Costello & Hodson, 2010, 2012; Goff *et al.*, 2008; Hodson & Costello, 2007), surprisingly little is understood about the role of dehumanization in children's intergroup biases. The present investigation offers important contributions to the prejudice literature and insight into probable interventions. First, we report unequivocal evidence of racial dehumanization in children. Across both studies, White children aged 6–10 dehumanized Black children by attributing them fewer characteristics considered 'uniquely human'. In contrast, non-uniquely human characteristics were not differentially attributed across target groups. These child dehumanization patterns mirror those previously established in adults (e.g., Costello & Hodson, 2010; Hodson & Costello, 2007; Leyens *et al.*, 2000), providing the first known evidence that children endorse dehumanizing representations of racial outgroups. Not only did we find evidence of racial dehumanization among children, we found these effects to be moderate to large in size (see Table 1). Importantly, our analyses confirmed assumptions that attribute measures of dehumanization (attribution of uniquely human characteristics) are associated with more explicit animalistic-outgroup associations, a relation previously found among adults (Loughnan & Haslam, 2007; Loughnan *et al.*, 2009) but untested in children. This provides considerable validation for the use of these attribute-based dehumanization measures among children.

In support of the Interspecies Model of Prejudice, the effect of children's human–animal divide on racial prejudice was fully mediated through dehumanizing representations (specifically, seeing Blacks as lower in uniquely human characteristics). Thus, dehumanization explains the link between children's perceptions of human superiority over animals and anti-Black evaluations. A separate ancillary test of the Interspecies Model of Prejudice revealed identical patterns among parents. Consequently, the role of human–animal divide as a meaningful predictor of dehumanization with subsidiary effects on prejudice has been evidenced among university students (Costello & Hodson, 2010), and now in children and adult-aged samples.

Collecting data from parents allowed us to examine the relation between parent social dominance and children's expressions of prejudice. Recall that those higher in SDO naturally endorse beliefs in the human–animal divide (Costello & Hodson, 2010). In the present investigation, children of high-SDO parents also perceived greater human–animal divides relative to those with low-SDO parents. Interestingly, the effect of parent SDO on child prejudice was entirely *indirect*, operating through the theoretical paths specified by the Interspecies Model of Prejudice. In other words, increased levels of parental SDO indirectly impacted children's dehumanization (and subsequent prejudices) through children's heightened beliefs in a hierarchical human–animal divide. Of course, there may also be a genetic component to this story as recent research suggests that ideological beliefs, including preference for inequality, may be genetically inherited (Kandler, Bleidorn, & Riemann, 2012). Future research can clarify whether parental ideology impacts child prejudice through the psychological or genetic transmission of group dominance norms.

Encouragingly, the present investigation suggests that children's human–animal divide beliefs are also malleable. Specifically, children reported narrower beliefs in the human–animal divide after viewing a video that induced human–animal similarities relative to a control condition. However, contrary to research with adults (see Costello & Hodson, 2010; Study 2), accentuating human–animal similarities did not significantly influence children's outgroup dehumanization or prejudices relative to the control group. Consequently, the causal relations implied by the Interspecies Model of Prejudice should be cautiously interpreted in this context. For children, stronger manipulations may be necessary given the non-obvious nature of the link between the human–animal divide and human intergroup relations (see Costello & Hodson, 2012). Indeed, prejudice interventions for younger children are optimally effective when they are concrete and realistic (Aboud & Spears Brown, in press). This suggests that children may optimally benefit from learning of human–animal similarities via direct interspecies contact, or when links between human and animal prejudices are made more explicit. Future research can explore the causal assumptions underlying the Interspecies Model of Prejudice by examining the viability of other human–animal divide manipulations as well as the longitudinal outcomes of such interventions.

Research by Costello and Hodson (2010, Study 2) also suggests that the benefit of manipulating human–animal similarity to improve intergroup relations depends on the framing of interspecies similarity. Specifically, the researchers manipulated the *framing* of the human–animal contrast, by accentuating that animals are similar to humans or that humans are similar to animals (see also Bastian *et al.*, 2012). Making salient that *animals are similar to humans*, but not that *humans are similar to animals*, successfully increased moral concern for human outgroups (Bastian *et al.*, 2012), and significantly reduced dehumanization and prejudice (Costello & Hodson, 2010, Study 2). In other words, it is not sufficient to merely stress similarities between humans and animals; the framing of the human–animal contrast is critical, such that the similarity of animals to humans needs to be emphasized. Future research can determine whether the directional framing of interspecies similarity differentially impacts children's intergroup biases, a factor which may account for the non-significant post-manipulation findings in Study 2.

Conclusion

The present investigation provides the first direct evidence of racial dehumanization in children. Across two studies, White children expressing greater human–animal divide perceptions were more prejudiced towards Black children, with outgroup dehumanization mediating this relation. Moreover, parent ideological preferences for social dominance indirectly predicted children's prejudice through the route specified by the Interspecies Model of Prejudice. Although human–animal divide perceptions contribute to negative intergroup biases in children, our results highlight the promising implications of targeting the human–animal divide as a possible prejudice intervention.

Acknowledgement

Supported by a Social Sciences and Humanities Research Council of Canada grant awarded to second author (410-2007-2133).

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Received 11 June 2012; revised version received 31 August 2012