



FlashReport

When animals attack: The effects of mortality salience, infrahumanization of violence, and authoritarianism on support for war

Matt Motyl*, Joshua Hart, Tom Pyszczynski

University of Colorado, Department of Psychology, 1420 Austin Bluffs Parkway, Colorado Springs, CO 80903, United States

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ABSTRACT

Terror management theory (TMT) suggests that people are motivated to elevate themselves above other animals as a way of denying their creatureliness and mortality. Based on this reasoning, the present study assessed whether infrahumanizing violence by emphasizing its similarities to animal aggression would lead to reduced support for war, especially when mortality is salient. This hypothesis was supported among participants high in right-wing authoritarianism (RWA), who are especially prone to infrahumanize outgroup members and are generally more supportive of military action against outgroups. RWA was associated with greater support for war against Iran, except when primed with thoughts of death and violence as an infrahuman behavior. These data suggest that by portraying violence as something instinctual and creaturely, it may be possible to reduce inter-group hostility and aggression among individuals who tend to be more dispositionally aggressive, particularly in the context of the death awareness that often exacerbates inter-group conflict.

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Introduction

Historically, people have justified violent actions in myriad ways, including the demotion of outgroup victims to an infrahuman, or creaturely, status. For example, the violent persecutors of the Bosnians in the Balkan wars, the Jews in the Holocaust, and the Tutsis in the Rwandan conflict equated their victims with vermin (cf. Haslam, 2006). Bandura (1999) suggested that seeing victims as infrahuman (i.e., subhuman creatures), excludes them from moral considerations, allowing perpetrators to commit atrocities against them. Research has documented the variety of ways in which people infrahumanize each other – especially outgroup members – and how this tendency relates to mistreatment and other negative outcomes (for reviews, see Haslam, Loughnan, Kashima, & Bain, 2008; Leyens et al., 2000). The present research examined the effects of infrahumanizing behaviors rather than persons, and tested hypotheses derived from terror management theory (TMT; Greenberg, Pyszczynski, & Solomon, 1986) that existential fear causes people to avoid infrahumanized behavior. In this case, the behavior under consideration was support for war.

In studies of the infrahumanization of persons, participants assign uniquely human qualities or non-uniquely human qualities to ingroup and outgroup members. Leyens et al. (2001) established the most widely used paradigm, having participants associate primary emotions (e.g., anger) and secondary emotions (e.g., ennu) with members of assorted ingroups and outgroups. They found

that people assign more secondary emotions to ingroup members and attribute mostly primary emotions to outgroup members. Viki et al. (2006) extended this paradigm by having participants link in- and outgroup members with human-related (e.g., person) and animal-related words (e.g., mongrel). This study conceptually replicated Leyens and colleagues' results and previous infrahumanization research in finding that ingroup members were most strongly associated with human-related words and qualities, whereas outgroup members were most strongly associated with animal-related words and qualities.

Research has demonstrated that viewing people as infrahuman increases aggression and support for violence against them. In a seminal study, Bandura, Underwood, and Fromson (1975) found that participants administered the most severe electric-shock punishments to confederates described in infrahuman terms, compared with confederates described in human or neutral terms. More recently, Castano and Giner-Sorolla (2006) found that participants primed to think of violence perpetrated by their ingroup against outgroups infrahumanized outgroup members more. Thus, viewing outgroups as less than human increases support for violence against outgroups both historically and in the laboratory.

Some individual difference variables, such as right-wing authoritarianism (RWA; Altemeyer & Hunsberger, 1992), are especially good predictors of people's willingness to both infrahumanize and support violence against outgroups (McFarland, 2005). RWA comprises people's support for authoritarian aggression, submission, and conventional social values, and in many countries, RWA relates positively to support for military action against outgroups (Henry, Sidanius, Levin, & Pratto, 2005), and negatively to perceiv-

* Corresponding author.

E-mail address: matt.motyl@gmail.com (M. Motyl).

ing outgroup members as human (Hodson & Costello, 2007). Research also suggests that high RWAs are more likely see themselves as distinct from animals, and respond to suggestions that they are similar to animals with negative affect (Hogan, 1980; Rothschild, 2008).

The present study examined this relationship between RWA, infrahumanization, and support for violence from a TMT perspective (Greenberg et al., 1986). TMT suggests that the human fear of death is managed by cultural worldviews, which give life meaning and individuals value, often by elevating humans over other animals and depicting humans as having souls, spirits, or some other essence that continues to exist after physical death but is thought to be lacking in other animals. A large body of research has shown that when people are primed with mortality salience (MS), they become defensive by increasing adherence to their equanimity-providing worldviews and hostility toward those with different worldviews (see Greenberg, Solomon, & Arndt, 2007). Such negative reactions are especially prominent among authoritarians (e.g., Greenberg et al., 1990); for instance, Rothschild (2008) found that MS led high RWAs to increase their support for war against Iran.

However, if, as TMT suggests, people cope with death anxiety by elevating themselves above the infrahuman, then people should distance themselves from animalistic things when thoughts of death are salient (cf. Goldenberg, Pyszczynski, Greenberg, & Solomon, 2000). Indeed, Goldenberg et al. (2001) found that following a death reminder, participants became more disgusted by animals and expressed increased preference for an essay describing human uniqueness over one emphasizing human–animal similarities. It therefore seems that MS increases people's need to emphasize their symbolic significance and minimize any similarity to animals, and this tendency should be especially pronounced among high RWAs. Consequently, active existential concerns (i.e., MS) may reduce RWAs' support of violence if they have been primed to think of it as infrahuman.

The current study presents a novel approach in the realm of infrahumanization research; instead of investigating the effect of infrahumanizing persons or groups, it assessed the effect of infrahumanizing behavior (i.e., aggression) on support for that behavior against a threatening outgroup. This highlights a potential pathway to promoting peace among high RWAs, who are especially strong advocates of violence after MS. Specifically, we hypothesized that high RWAs would exhibit reduced support for violence when they were primed with both MS and a passage infrahumanizing violence.

Method

Participants

One hundred thirty six (104 women) undergraduates participated for extra credit. Participants ranged in age from 17 to 46 years ($M = 23.01$, $SD = 5.77$).

Materials and procedure

Participants were informed that they were completing a study of "Personality and Social Attitudes" and began by completing the RWA scale (Altemeyer & Hunsberger, 1992).¹ The RWA scale

¹ Participants also completed the 22-item Neuroticism subscale of the Eysenck Personality Inventory (Eysenck & Eysenck, 1967) to help strengthen the cover story masking the true purpose of the experiment from the participants. Furthermore, neuroticism has been shown to sometimes moderate MS effects in previous TMT studies (e.g., Goldenberg et al., 2001). In the present study, neuroticism did not significantly predict support for war and did not moderate the effects of either prime, $R^2 = .01$, $F(1, 128) = 0.26$, $p = .38$.

consists of 20 items (e.g., "The only way our country can get through the crisis ahead is to get back to our traditional values") to which respondents rate their agreement on 9-point scales (9 = *strongly agree*, 1 = *strongly disagree*). This scale displayed excellent internal reliability (Cronbach's $\alpha = .94$).

Next, participants were given two separate tasks, each constituting one of the two manipulated independent variables. The first consisted of two open-ended questions asking participants to write about death or a parallel aversive control topic. Specifically, participants were asked to "Please briefly describe the emotions that the thought of death [dental pain] arouses in you," and to, "Jot down, as specifically as you can, what you think will happen to you as you physically die [experience dental pain] and once you have physically died [experienced dental pain]." These open-ended questions about death reliably elicit cultural worldview defense (Greenberg et al., 1990). The second part was either a short passage depicting human violence as very similar to animal violence, effectively *infrahumanizing* violence, or a passage depicting human violence as very different from animal violence, effectively *humanizing* violence. Participants in the infrahumanized violence condition read a passage claiming that:

... Close observation of primates and other animals has made it clear that violent acts committed by humans are quite similar to violent acts committed by animals—and the motivations behind violence are really the same instincts that drive violent behavior among all animals. Humans share most of their genes with other primates, and violent behavior is a good example of how humans are just another animal species.

And participants in the humanized violence condition read a passage claiming that:

... Close observation of primates and other animals has made it clear that violent acts committed by humans are unique acts usually with some abstract meaning motivating them as opposed to animals who just lash out without thinking about the consequences. Humans may share many genes with other primates, but human acts of violence are unique.

Subsequently, participants completed the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), to test whether any effects were driven by affect.² Participants then completed Rothschild's (2008) 11-item questionnaire in which they assumed the role of commander-in-chief and indicated (on 11-point scales; 11 = *strongly agree*, 1 = *strongly disagree*) how much they would support using military force in response to international scenarios that were potentially threatening to American security interests (e.g., "If Iran takes another American hostage"). This scale was highly reliable (Cronbach's $\alpha = .91$). Finally, participants provided demographic information.

Results

Primary analyses

A sequential regression analysis examined the effects of MS, violence prime (violence as an infrahumanized vs. humanized behavior), RWA, and their interactions, on support for military action against Iran. The first step included main effects, the second included the two-way interactions, and the third included the three-way interaction. Each categorical predictor (MS and violence prime) was dummy-coded and RWA was centered around the mean.

² Positive and negative affect were not significantly impacted by any of the predictor variables, nor the interactions between them, $R^2 = .01$, $F(1, 128) = 1.29$, $p = .25$ and $R^2 = .001$, $F(1, 128) = 1.05$, $p = .29$, respectively.

Together, these predictors accounted for a significant amount of variance in support for military action, $R^2 = .14$, $F(1, 128) = 6.37$, $p = .01$ (see Table 1 for individual predictors). In the first step, no individual predictors accounted for a significant amount of the variance in support for military action. In the second step, significant two-way interactions between MS and RWA and between the violence prime and RWA emerged, but these were qualified by the expected three-way interaction between MS, the violence prime, and RWA in the final step of the regression.

The interaction was examined by testing the effects of MS and the violence prime for participants high and low in RWA (1 SD above and below the RWA mean, respectively; Aiken & West, 1991), which revealed no significant effects of MS or the violence prime for low authoritarians ($ps > .14$). In contrast, MS led to decreased support for violence among high authoritarians primed with infrahumanized violence ($\beta = -.53$, $t = -3.50$, $p < .01$), but had no significant effect on support for violence among high authoritarians primed with humanized violence ($\beta = .14$, $t = 0.80$, $p = .43$). Thus, when high authoritarians were primed with MS and infrahumanized violence they became significantly less supportive of military action against Iran (see Fig. 1). High authoritarians primed with humanized violence tended to show greater support for war when primed with MS, but this difference was not statistically significant. Low authoritarians, however, did not exhibit any significant effects of MS or infrahumanized violence.

Looked at differently, high RWA predicted decreased support for violence among participants primed with MS and infrahumanized violence ($\beta = -.36$, $t = -2.23$, $p = .03$), while high RWA predicted increased support for war among participants primed with pain and infrahumanized violence ($\beta = .41$, $t = 2.65$, $p = .01$). Similarly, RWA was positively associated with support for war among participants primed with MS and humanized violence, ($\beta = .54$, $t = 3.58$, $p < .01$), but not among participants primed with pain and humanized violence ($\beta = .27$, $t = 1.52$, $p = .14$).

Table 1
Individual predictors of the sequential regression predicting support for military action.

	Standardized coefficient (β)	t	p
RWA	.16	1.81	.07
MS	-.09	-1.06	.29
Violence prime	.04	0.45	.65
MS \times violence	-.13	-0.92	.36
MS \times RWA	-.29	-2.36	.02
Violence \times RWA	-.33	-2.24	.03
MS \times violence \times RWA	-.52	-2.52	.01

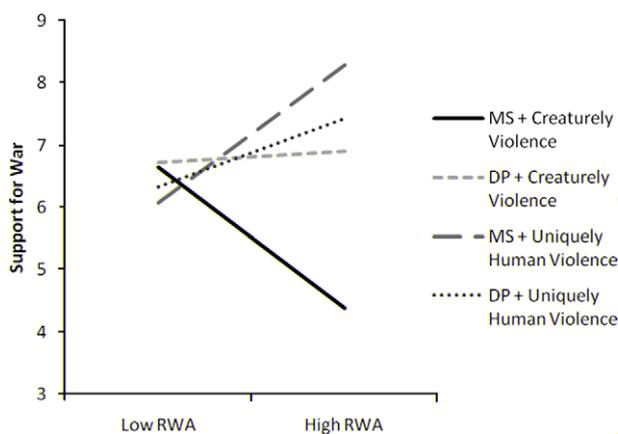


Fig. 1. Support for military action as a function of MS, violence prime, and RWA.

Discussion

As hypothesized, infrahumanizing violence reduced support for American military action against Iran among high RWAs in whom existential concerns had been activated by a mortality prime. High RWAs displayed the highest levels of support for military action, except when primed to think of violence as an infrahuman behavior and reminded of their mortality; under these conditions, high RWAs showed no more support for military action than low RWAs. It therefore appears that just as infrahumanizing people makes it easier to commit violence against them (Leyens et al., 2000), infrahumanizing violent behavior reduces support for violence when combined with reminders of death that increase the need to distinguish oneself from other animals.

The present study thus supports the finding that people distance themselves from animals following death reminders (Goldenberg et al., 2001), but it also suggests that some people exhibit this tendency more than others. Specifically, people high in RWA, who have been shown to think of animal words in negative terms (Hogan, 1980) and associate animal qualities with outgroup members (Hodson & Costello, 2007), exhibit an enhanced motive to distance themselves from animals. Although high RWAs typically show strong ingroup bias and support for violence against outgroups, their heightened need to view themselves as non-animals makes them reticent to demonstrate violence when it is linked to animality. Meanwhile, the finding that low RWAs do not respond in the same way to suggestions that violence is animalistic suggests that perhaps low RWAs may not have the same need to see themselves as distinct from animals. This is consistent with Hogan's (1980) finding that low RWAs do not evaluate animal words negatively, as high RWAs do. Future research should attempt to examine whether in fact low RWAs are comfortable with their own animal nature, and if so, why.

This research also contributes to a growing literature demonstrating that increased hostility is not an inevitable response to death reminders. For example, Motyl et al. (submitted for publication-a) demonstrated that when people are induced to consider the shared humanity between members of in- and outgroups, death reminders decrease inter-group prejudice on both implicit and explicit levels. Similarly, Motyl et al. (submitted for publication-b) found that superordinate threats, such as global climate change, can lead participants to decrease their inter-group hostility and increase their support for peaceful diplomatic relations (see Table 2).

Indeed, it is important to note that, unlike some previous studies (e.g., Pyszczynski, Solomon, Greenberg, & Maxfield, 2006), MS did not increase high RWA participants' support for war. We suspect this difference reflects differences in attitudes toward the war that have emerged as the toll of the war in Iraq increased and information about the manner in which it has been undertaken has emerged which has made it far less popular than it was when these earlier studies were conducted (Weise et al., 2008). Other recent studies in which MS did not produce reliable increases in support for war in the later part of this decade are consistent with this interpretation. These findings suggest that responses to existential threat depend heavily on the cultural and historical context in which they occur. This is consistent with the

Table 2
Estimated mean support for military action using projections from regression intercepts and coefficients.

	MS + infrahumanized violence	MS + humanized violence	DP + infrahumanized violence	DP + humanized violence
Low RWA	6.64	6.08	6.72	6.33
High RWA	4.38	8.29	6.90	7.43

TMT claim that people respond to existential threat by embracing or defending whatever aspects of their worldviews that are most likely to provide security at the time (cf., Pyszczynski, Solomon, Greenberg, & Maxfield, 2006).

Furthermore, this research suggests that it may be possible to prime people to view their behaviors as inhuman in experimental settings. Some inhumanization researchers (e.g., Tam et al., 2007) have already suggested that viewing certain behaviors (e.g., forgiveness) as uniquely human could have socially beneficial results. The present research is consistent with this possibility and suggests that support for violence can be decreased in a complementary manner.

Future research should examine alternate ways in which inhumanization and defensive aggression interact. Past research on inhumanization demonstrates that people view outgroup members as less human than fellow ingroup members (e.g., Viki et al., 2006). This is one way people rationalize violence against outgroups. It therefore seems possible that if outgroups are humanized, then aggression toward them would be mitigated in a similar way as in the present study; that is, people's affinity toward that which is distinctly human may inhibit aggressive impulses toward outgroups. Such research could help in devising practical strategies to promote inter-group harmony. Future research should also consider the impact of other types of inhumanized behaviors on people's support for them and possible differences in such behavior by ingroup and outgroup members.

Overall, these results suggest that reducing support for violence among RWAs may depend upon salient existential issues and the manner in which violence is portrayed. They suggest that by portraying violence as something instinctual and creaturely, it may be possible to reduce inter-group hostility and aggression, even among those who are typically among the most supportive of this aggression, particularly in the face of death that often exacerbates inter-group conflict.

Appendix A. Supplementary material

Supplementary data associated with this article can be found, in the online version, at [doi:10.1016/j.jesp.2009.08.012](https://doi.org/10.1016/j.jesp.2009.08.012).

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