

# Battle of Wits: Warfare Cues and Political Orientation Modulate the Perceived Intellect of Allies Versus Adversaries

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## Abstract

Political conservatism and threat salience have been consistently associated with intergroup bias. However, prior research has not examined potential effects of conservatism and/or threat on the attribution of relative in-group/out-group intelligence. In a cross-cultural study conducted in Spain and the United Kingdom, priming violent conflict with ISIS led participants to view an in-group ally as relatively more intelligent than an out-group adversary, in an effect mediated by feelings of anger (but not fear or general arousal). Conservatism similarly predicted biased perception of the ally's relative intellect, a tendency that was driven by militaristic (not social/fiscal) political attitudes but was not explained by associated increases in state anger following conflict cues. This overall pattern indicates that conflict cues and militaristic political orientation heighten assessments of relative intergroup intellect during warfare via distinct affective and attitudinal pathways.

## Keywords

political psychology, intergroup processes, applied social psychology, emotion, violence

The lives of my teammates and the success of our mission depend on me—my technical skill, tactical proficiency, and attention to detail.

—U.S. Navy SEAL Ethos/Creed

Political conservatism indexes individual differences in both prioritizing the welfare of the in-group (Graham, Haidt, & Nosek, 2009) and sensitivity to potential hazards (Hibbing, Smith, & Alford, 2014; Lilienfeld & Latzman, 2014). Relative to liberals, conservatives evince greater physiological reactivity to threatening imagery or noise bursts (Oxley et al., 2008), invest more time attending to threats (Dodd et al., 2012), are more implicitly distracted by threatening imagery (Cararro, Castelli, & Macchiella, 2011; McLean et al., 2014), and are more likely to believe claims regarding hazards (Fessler, Pisor, & Holbrook, 2017). Threat vigilance should not be mistaken for timidity, as conservatives generally favor aggressive responses to conflict (e.g., Altemeyer, 1998; Herrmann, Tetlock, & Visser, 1999; Johnson, McDermott, Cowden, & Tingley, 2012; Jost & Amodio, 2012). Indeed, conservatives in both the United States and Spain were found to regard refugees (whom they categorized as likely terrorists) to be physically small and weak, in an effect mediated by confidence in their nation's ability to defeat terrorist organizations (Holbrook, López-Rodríguez, Fessler, Vázquez, & Gómez, 2017). In sum, relative to liberals, conservatives appear more intensely reactive and aggressive toward potential threats, including adversarial out-groups.

Cues of threat can similarly exacerbate coalitional bias against out-groups (Jonas et al., 2014). Coalitional bias may be understood according to the functional logic of coalitional assortment. In-group members gain access to both material and informational resources (i.e., culturally transmitted knowledge). As providing resources to others renders one vulnerable to exploitation, coalition members are motivated to ascertain which individuals share a positive investment in a common in-group and to ethnocentrically regard these in-group members as more valuable than members of out-groups, thereby enhancing in-group coordination (Darwin, 1873; Efferson, Lalive, & Fehr, 2008). Conversely, ethnocentrism may also manifest as devaluation of individuals aligned with out-groups who are perceived as undeserving of in-group resources and/or as threats (Dovidio & Gaertner, 2010; Fiske, 2002). If in-group favoritism advanced reproductive fitness over deep time, then selection may have shaped the human brain to support ethnocentrism (Hammond

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& Axelrod, 2006; Neuberg, Kenrick, & Schaller, 2010) and to intensify baseline coalitional biases when threatened to increase the individual's ability to draw on group alliances (Navarrete & Fessler, 2005), given that threats are often best addressed coalitionally. Indeed, numerous studies attest that individuals parochially favor in-group members and/or derogate out-group members to a greater extent following primes of various threats (for reviews, see Holbrook, 2016; Jonas et al., 2014; Riek, Mania, & Gaertner, 2006; Stephan, Ybarra, & Rios Morrison, 2009). Thus, much as political conservatism is associated with group bias as a stable trait, contexts of threat can trigger a facultative shift toward increased group bias. Here, we extend the aforementioned discoveries regarding political orientation, threat salience, and coalitional bias to the perceived intellectual ability of in-group versus out-group fighters engaged in violent conflict.

Consistent with chauvinistic group ideologies, individuals typically conceptualize members of their own coalition as relatively more mentally sophisticated than out-group members (De Dreu, Greer, Van Kleef, Shalvi, & Handgraaf, 2011; Haslam, 2006; Vaes, Paladino, Castelli, Leyens, & Giovanazzi, 2003). As political conservatives tend to favor aggressive solutions to coalitional conflict, conservatives should view in-group fighters as relatively more intellectually capable than out-group enemies, inasmuch as intelligence connotes competence to form and execute effective combat strategies (for a review of the social evaluative dimension of *competence*, see Cuddy, Fiske, & Glick, 2008). Similarly, with respect to the influence of primes making salient the prospect of intergroup warfare, people are generally overconfident in their expectations of coalitional victory (Johnson et al., 2006), a pattern theorized to reflect an evolved bias that, although disastrous in particular cases, has generated aggregate adaptive benefits (e.g., by boosting resolve to fight) over our species' long history of warfare (Wrangham, 1999). Accordingly, cues of group conflict may heighten baseline biases in the perceived relative intellect of in-group versus out-group fighters. On the other hand, underestimating the intellectual ability of adversaries during active conflict would appear to be clearly maladaptive. For example, Hackel, Looser, and Van Bavel (2014) recently manipulated intergroup enmity according to self-reported affiliation with either the Democratic or Republican Party and found that participants who perceived out-group members to pose a high level of threat were more likely to attribute to them uniquely human mental abilities. With consideration of the potential costs of underestimating adversaries in mind, militaristic responses to intergroup conflict may heighten perceptions of the intellectual ability of allies more than decrease perceptions of the intellectual ability of adversaries.

To test our hypotheses that political conservatism and cues of intergroup conflict would increase the intellect attributed to in-group allies relative to out-group adversaries, we randomly assigned participants to view a brief video of warfare or control imagery, estimate the intellectual capacities of an in-group soldier and an out-group terrorist, and report their political attitudes. This design enabled us to

explore potential interactions between political orientation and exposure to cues of coalitional warfare on perceptions of the relative intellect of intergroup combatants. We conducted the study in two societies, the United Kingdom (UK) and Spain, to assess the extent to which links between political orientation, conflict cues, and perceived intellect generalize, and because both societies are currently engaged in conflict with a shared antagonist, ISIS (the acronym commonly used to designate the jihadist militant group known as the Islamic State of Iraq and Syria). In both societies, we expected militaristic orientation to influence judgments relevant to violent intergroup conflict more so than covarying, but less germane, social/fiscal political attitudes.

We also collected measures of state negative emotional reactions to the video stimuli in order to test the distinct roles of conflict-engendered fear versus anger. Should we find that state fear primarily drives the effects of conflict cues on perceived relative intellect, then the dynamic might be interpreted as psychologically "defensive" (i.e., fearful participants view the ally as relatively more intelligent as a way of palliating anxiety). However, given the distinct functional role of anger in retaliatory aggression (Sell, 2011), and prior research showing that state anger increases support for military intervention (Lerner, Gonzalez, Small, & Fischhoff, 2003), we hypothesized that feelings of anger—not fear—would mediate the predicted effect of condition on perceived relative intellect. If so, then the perception of the ally as relatively more intelligent following the conflict prime would be straightforwardly interpretable as reflecting anger-enhanced confidence in coalitional aggression. In light of the established theoretical and empirical links between conservatism and intergroup aggression, we hypothesized that conservatism would interact with the manipulation to engender greater feelings of anger and bias in perceived relative intellect in the aftermath of witnessing coalitional violence.

To summarize, the study tested the following six predictions:

1. Participants will regard the in-group ally as relatively more intelligent than the out-group adversary at baseline.
2. Exposure to cues of violent intergroup conflict will increase the extent to which the ally is perceived to be more intelligent than the adversary.
3. Feelings of anger will predict perceiving the ally as relatively more intelligent to a greater extent than feelings of fear or general arousal.
4. Militaristic conservatism will positively correlate with perceptions of the ally as relatively more intelligent than the adversary.
5. Militaristic conservatism will interact with condition to heighten the difference in perceived relative intellect upon exposure to cues of violent intergroup conflict.
6. Militaristic conservatism will interact with condition to heighten the degree of anger experienced upon exposure to cues of violent intergroup conflict.

## Study

### Method

Twelve hundred and eleven participants were recruited (Spanish participants via snowball sampling through online social media; British participants via Prolific Academic in exchange for £1). We sought large samples because no prior studies have assessed the effects of conflict primes or political orientation on attribution of intellectual ability. Data were pre-screened for completeness, taking at least 5 min, and correctly answering two “catch questions.” The final Spanish sample consisted of 564 adults (59.6% female; age 18–75 [ $M = 34.66$ ,  $SD = 12.29$ ]). The final British sample consisted of 394 adults (54.1% female; age 18–72 [ $M = 38.44$ ,  $SD = 12.70$ ]).

In a between-subjects design, participants were randomly assigned to view a brief video (control vs. threat). The control video (Spain:  $n = 297$ ; UK:  $n = 211$ ) depicted mundane highway traffic; the conflict video (Spain:  $n = 267$ ; UK:  $n = 183$ ) showed an improvised explosive device detonating near coalition troops in Iraq (to access the videos, see the Supplemental Online Materials [SOM]).

We next confirmed that participants had attended to the video by asking them to identify which of the following they had viewed: “trees,” “cars,” a “cloud of smoke,” and a “shaking camera.” Participants who failed to report viewing cars were dropped from the study prior to analysis, as were any individuals assigned to the conflict condition who failed to report viewing a cloud of smoke or a shaking camera.

State affect following the video manipulation was then assessed by soliciting self-reported levels of anger, fear, and arousal (tense) rated on a 5-point scale (1 = *not at all*, 2 = *a little*, 3 = *moderately*, 4 = *quite a bit*, 5 = *extremely*). We included a measure of general arousal to assess the role of arousal covarying with both anger and fear.

Next, in counterbalanced order, participants read about an ISIS militant and an in-group soldier combating ISIS, henceforth identified as the *ally* and the *adversary* (see SOM). After reading each vignette, attributions of intellectual ability were assessed according to averaged ratings of how “clever,” “intelligent,” and “skillful” the participants envisioned each character to be, according to the same 5-point scale (Spain: Ally  $\alpha = .87$ , Adversary  $\alpha = .82$ ; UK: Ally  $\alpha = .90$ , Adversary  $\alpha = .90$ ). To capture the relative intellect attributed to the ally and the adversary, a difference score was created by subtracting the composite intellectual ability of the adversary from that of the ally (i.e., higher values reflect greater in-group bias).

Next, political orientation was measured according to modified versions of a previously validated political attitude index (Dodd et al., 2012). The initial measure, developed for use in the United States, was customized for applicability to each society, resulting in slightly different versions being employed in Spain versus the UK (see SOM). Participants rated whether they agreed, disagreed, or were uncertain about an array of topics presented in random order, half of which were conservative in nature (e.g., “school prayer,” “tax cuts,” and “military

attack on foreign enemies”) and half of which were liberal in nature (e.g., “abortion rights,” “socialism,” and “compromise with enemies”). For each conservative topic, agreement was scored as +1 and disagreement was scored as –1. For each liberal topic, agreement was scored as –1 and disagreement was scored as +1. All “uncertain” responses were scored as zero. The responses were then tallied such that positive values indicate conservatism (Spain:  $\alpha = .69$ ; UK:  $\alpha = .82$ ). In the Spanish sample, several items were dropped to optimize scale reliability (see SOM for details). We then created subscales distinguishing militaristic political orientation from social and/or fiscal attitudes. The responses yielded reliable militarism subscales (Spain:  $\alpha = .69$ ; UK:  $\alpha = .77$ ) and a reliable British social/fiscal subscale ( $\alpha = .73$ ). However, in the Spanish sample, the social/fiscal subscale was only marginally reliable ( $\alpha = .57$ ; see SOM).<sup>1</sup> Finally, participants answered demographic items and were debriefed. (The data sets and full materials are provided in the SOM.)

## Results

To facilitate comparison of the results in each society, and to provide a more rigorous test of our predictions by assessing replicability between distinct societies, we present separate analyses of the Spanish and British samples side by side. Analyses pooling samples, with society included as a predictor variable, produce equivalent results (see SOM). As our research questions are not directed at potential cross-cultural differences, we report exploratory analyses of potential effects of society and of interactions between society, conflict condition, and political orientation, in the SOM.

Preliminary tests of potential effects of sex, including sex as a between-subjects factor in mixed-design analyses of variance (ANOVAs), revealed no one-way or two-way interactions between sex and either the target’s identity or the conflict prime on appraisals of intellect in either society,  $ps .12-.64$ ,  $\eta_p^2s < .01$ . Consequently, sex is not considered in subsequent analyses. In the analyses which follow, all models which include interaction terms to assess potential moderation utilize standardized variables ( $z$ -scores).

*Effect of target identity and conflict condition on perceptions of intellectual ability.* Mixed-design ANOVAs, with target identity (ally vs. adversary) as a within-subjects factor and conflict condition as a between-subjects factor, confirmed Prediction 1: The ally was regarded as relatively more intelligent in both societies, Spain:  $F(1, 562) = 130.62$ ,  $p < .001$ ,  $\eta_p^2 = .19$ ; UK:  $F(1, 392) = 316.05$ ,  $p < .001$ ,  $\eta_p^2 = .45$  (see Table 1 for descriptives and statistical comparisons). Consistent with Prediction 2, the effect of target identity was also qualified by interactions between target identity and conflict condition. The relative intellect attributed to the ally over the adversary was greater in the conflict condition relative to control in both societies. In the Spanish sample, the effect of condition on perceived relative intellect was driven by an increase in the envisioned intellectual ability of the ally, with no effects of condition observed for assessments of the

**Table 1.** Effects of Condition on the Estimated Intellect of the Ally and the Adversary.

	Control Mean (SD)	Conflict Mean (SD)	F	p	$\eta_p^2$	95% CI
Spain						
Ally–adversary	0.29 (.77)	0.46 (.78)	6.49	.011	.01	[−.29, −.04]
Ally	3.14 (.95)	3.40 (.85)	11.17	.001	.02	[−.40, −.11]
Adversary	2.85 (.95)	2.94 (.94)	1.21	.271	.00	[−.25, .07]
UK						
Ally–adversary	0.69 (.85)	0.92 (.95)	6.15	.014	.02	[−.40, −.05]
Ally	3.48 (.89)	3.57 (.86)	1.08	.299	.00	[−.27, .08]
Adversary	2.79 (.98)	2.66 (.94)	1.85	.175	.01	[−.06, .32]

Note. Spain:  $N = 564$ . UK:  $N = 394$ . “Ally–adversary” indicates a difference score reflecting the attribution of intellect to the ally relative to the adversary in each condition. Analyses of the ally–adversary difference score capture the interaction between condition and target identity (i.e., ally vs. adversary) on attributions of relative intellect in the mixed-design analysis of variance. CI = confidence interval.

**Table 2.** Effects of Condition on State Anger, Fear, and Arousal.

	Control Mean (SD)	Conflict Mean (SD)	F	p	$\eta_p^2$	95% CI
Spain						
Anger	1.18 (.53)	2.62 (1.40)	271.46	<.001	.33	[−1.62, −1.27]
Fear	1.28 (.64)	2.36 (1.22)	175.81	<.001	.24	[−1.23, −.91]
Arousal	1.91 (.96)	3.10 (1.19)	173.05	<.001	.24	[−1.37, −1.01]
UK						
Anger	1.08 (.32)	2.87 (1.42)	294.22	<.001	.45	[−2.01, −1.59]
Fear	1.09 (.37)	2.46 (1.21)	226.74	<.001	.39	[−1.54, −1.20]
Arousal	1.36 (.61)	3.36 (1.14)	477.15	<.001	.55	[−2.17, −1.82]

Note. Spain:  $N = 564$ . UK:  $N = 394$ . CI = confidence interval.

adversary. In contrast, there was no significant effect of the manipulation on individual assessments of either the ally or the adversary in the British sample.

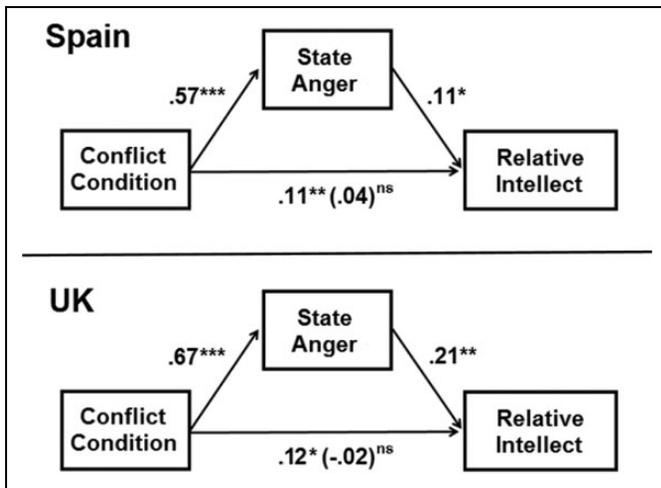
**Effects of the conflict prime on state negative affect.** State fear, anger, and arousal were all substantially greater in the conflict condition relative to control in both societies (see Table 2) and were positively correlated (Spain:  $r_s$  .52 to .61,  $p_s < .001$ ; UK:  $r_s$  .67 to .75,  $p_s < .001$ ).

**State negative affect and perceptions of relative intellect.** We next assessed the unique contributions of state anger, fear, and arousal to perceptions of relative intellectual ability by entering all three affective states into simultaneous regressions (VIFs = 1.62–3.48), with condition included as a covariate. Consistent with Prediction 3, only anger significantly correlated with perceiving the ally as relatively more intelligent (Spain:  $b = .08$ ,  $SE = .04$ ,  $\beta = .14$ ,  $p = .02$ ; UK:  $b = .17$ ,  $SE = .05$ ,  $\beta = .25$ ,  $p = .001$ ), with no such relationship observed for fear or arousal in either society ( $p_s = .60$  to  $.65$ ,  $b_s = -.03$  to  $-.02$ ,  $SE_s = .04$  to  $.06$ ,  $\beta_s = -.05$  to  $-.03$ ). We observed no significant interactions between condition and anger on perceptions of relative intellect (Spain:  $p = .08$ ,  $b = .20$ ,  $SE = .12$ ,  $\beta = .46$ ; UK:  $p = .18$ ,  $b = -.36$ ,  $SE = .27$ ,  $\beta = -.72$ ).

**Feelings of anger mediate the effect of the conflict prime on perceived relative intellectual ability.** We conducted a mediation test to assess whether heightened feelings of anger mediated the

effect of the conflict condition on perceived relative intellect. We utilized the bias-corrected bootstrapping procedure (5,000 samples) found in the INDIRECT macro for SPSS (Version 23) (Preacher & Hayes, 2008). We entered condition as the independent variable, state anger as the mediating variable, and perceived relative intellect as the dependent variable. In both societies, feelings of anger fully mediated the effects of the video condition on perceived relative intellect (see Figure 1). In the Spanish sample, the direct effect of condition on perceived relative intellect ( $b = .17$ ,  $SE = .07$ ,  $\beta = .11$ ,  $p = .011$ ) was no longer significant in the model ( $b = .07$ ,  $SE = .08$ ,  $\beta = .04$ ,  $p = .40$ ), whereas the indirect effect of anger on perceived relative intellect remained significant ( $b = .07$ ,  $SE = .03$ ,  $\beta = .11$ ,  $p = .028$ ), and the confidence intervals (CIs) did not overlap with zero (95% CI = [.01, .20]). Likewise, in the British sample, the direct effect of condition on perceived relative intellect ( $b = .22$ ,  $SE = .09$ ,  $\beta = .12$ ,  $p = .014$ ) was no longer significant in the model ( $b = -.03$ ,  $SE = .12$ ,  $\beta = -.02$ ,  $p = .79$ ), whereas the indirect effect of anger on perceived relative intellect remained significant ( $b = .14$ ,  $SE = .05$ ,  $\beta = .21$ ,  $p = .002$ ), and the CIs did not overlap with zero (95% CI = [.08, .45]).

**Political orientation and perceived relative intellect.** As intended, there were no effects of condition on self-reported overall political orientation nor on either of the political orientation subscales, in either society,  $p_s = .14$ –.93,  $\eta_p^2 < .01$  (see SOM Table S1 for descriptives).



**Figure 1.** Standardized regression coefficients for the relationship between conflict condition and perceptions of relative intellect as mediated by feelings of anger (top panel: Spain; bottom panel: UK). The standardized regression coefficients between conflict condition and perceptions of relative intellect with the mediator included in the model are given in parentheses. In both societies, state anger engendered by the conflict manipulation fully mediated the positive correlation between condition and attributions of greater intellect to the ally (an in-group soldier) relative to the adversary (an ISIS militant). See text for details.

Next, we entered overall political orientation, the conflict manipulation, and the interaction between the two as predictors in simultaneous regression models, with appraisals of relative intellect as the dependent variable. In the models, the effect of the conflict condition remained significant in both societies (Spain:  $b = .16, SE = .06, \beta = .10, p = .014$ ; UK:  $b = .23, SE = .09, \beta = .13, p = .008$ ), but we observed no significant relationships between overall political orientation and perceived relative intellect (Spain:  $p = .172, b = .13, SE = .10, \beta = .17$ ; UK:  $p = .204, b = .18, SE = .14, \beta = .19$ ), nor did we observe interactions between political orientation and the conflict condition (Spain:  $p = .624, b = .03, SE = .06, \beta = .06$ ; UK:  $p = .444, b = .07, SE = .09, \beta = .12$ ).

To assess the potential contributions of militaristic versus social/fiscal orientation, we conducted a series of regression models entering each political subscale, the conflict condition, and their interaction term as predictors, with relative intellectual ability as the outcome variable. Consistent with Prediction 4, we observed significant relationships between militarism and perceived relative intellect in both societies. However, against Prediction 5, there was no interaction between militarism and the conflict condition in either society (see Table 3). No significant relationships between perceived relative intellect and social/fiscal orientation, nor interactions between social/fiscal orientation and the conflict condition, were observed in either society ( $ps = .15-.99, bs = .00-.13, SEs = .02-.14, \beta s = .00-.25$ ).

We next ran follow-up tests with individual assessments of the ally versus the adversary as separate outcome variables to assess whether militarism predicted perceived

**Table 3.** Simultaneous Regression of Condition, Militarism, and Their Interaction on the Perceived Intellect of the Ally Relative to the Adversary.

	<i>b</i>	<i>SE</i>	$\beta$	<i>p</i>
Spain				
Condition	.14	.06	.09	.028
Militarism	.26	.10	.33	.008
Condition $\times$ Militarism	-.02	.06	-.05	.704
UK				
Condition	.24	.09	.13	.005
Militarism	.30	.14	.33	.031
Condition $\times$ Militarism	-.01	.09	-.01	.954

Note. Spain:  $N = 564$ . UK:  $N = 394$ . Larger coefficients indicate the attribution of greater intellectual ability to the ally than to the adversary. The militarism and perceived relative intellect variables are standardized.

relative intellect due to a positive correlation with the ally, a negative correlation with the adversary, or both. In both societies, we observed a positive association between militarism and attributions of intellect to the ally (Spain:  $b = .11, SE = .02, \beta = .25, p < .001$ ; UK:  $b = .04, SE = .01, \beta = .25, p < .001$ ), but no significant relationship to perceptions of the adversary’s intellectual ability (Spain:  $p = .89, b = .00, SE = .02, \beta = -.01$ ; UK:  $p = .15, b = -.01, SE = .01, \beta = -.07$ ). Thus, the link between militarism and perceptions of the ally as relatively more intelligent was driven by positive assessments of the ally rather than negative assessments of the adversary.

**Militarism and state negative affect.** We next conducted an exploratory analysis to assess whether feelings of anger evinced a particular association with militarism, given that both anger and militarism are directly related to physical aggression and that anger predicted attributions of greater relative intellectual ability to the ally in a parallel manner in both Spain and the UK. Indeed, in simultaneous regressions including state anger, fear, and arousal as predictors, only anger was significantly positively correlated with militarism (Spain:  $b = .23, SE = .09, \beta = .15, p = .007$ ; UK:  $b = .61, SE = .28, \beta = .17, p = .028$ ), with no such links obtaining for fear or arousal ( $ps = .10$  to  $.98, bs = -.50$  to  $-.01, SEs = .09$  to  $.35, \beta s = -.11$  to  $.00$ ). Follow-up models (also including fear and arousal as covariates) confirmed that no significant associations obtained between anger and social/fiscal orientation (Spain:  $p = .707, b = .05, SE = .13, \beta = .02$ ; UK:  $p = .357, b = .24, SE = .26, \beta = .07$ ).

**State anger and interactions between conflict condition and political orientation.** We next tested whether the conflict manipulation interacted with individual differences in militarism to influence the extent to which participants experienced anger. Consistent with Prediction 6, in models including conflict condition, militarism, and the interaction between the two, significant interactions were observed in both societies (Spain:  $b = .16, SE = .07, \beta = .25, p = .019$ ; UK:  $b = .20, SE = .07, \beta = .33, p = .006$ ). Militarism positively correlated with

**Table 4.** Summary of Findings.

Predictions	Supported?
1. Ally intellect appraised > adversary at baseline	Yes
2. Conflict cues heighten appraisals of ally > adversary intellect	Yes
3. State anger (not fear) predicts appraisals of ally > adversary intellect	Yes
4. Trait militarism predicts appraisals of ally > adversary intellect	Yes
5. Conflict cues moderates effect of militarism on perceived intellect	No
6. Conflict cues heightens correlation between militarism and anger	Yes
<i>Key exploratory findings</i>	
* State anger mediates effect of conflict cues on appraisals of ally > adversary intellect	
* Militarism predicts appraisals of ally > adversary intellect independently of state anger	
* Militarism predicts appraising ally as intelligent, but no effect on adversary appraisal	

Note. All of the above results were observed in both the Spanish ( $N = 564$ ) and British ( $N = 394$ ) samples.

feelings of anger in the conflict condition (Spain:  $b = .09$ ,  $SE = .04$ ,  $\beta = .13$ ,  $p = .037$ ; UK:  $b = .06$ ,  $SE = .02$ ,  $\beta = .21$ ,  $p = .005$ ), but not in the control condition (Spain:  $p = .421$ ,  $b = -.01$ ,  $SE = .02$ ,  $\beta = -.05$ ; UK:  $p = .788$ ,  $b = .00$ ,  $SE = .01$ ,  $\beta = .02$ ). Follow-up tests confirmed that there were no such interactions between militarism, condition, and state fear or arousal, nor any interactions between condition, social/fiscal orientation, and any affective state in either society ( $ps = .20$  to  $.97$ ,  $bs = -.10$  to  $.04$ ,  $SEs = .07$  to  $.08$ ,  $\beta s = -.15$  to  $.06$ ).

*Militarism predicts perceived relative intellect independently of state anger.* Despite the association with conflict-engendered anger, militaristic conservatism was comparably correlated with the perceived difference in relative intellect in both the conflict and control conditions in both societies ( $bs = .06$ – $.12$ ,  $SEs = .01$ – $.02$ ,  $\beta s = .27$ – $.33$ ,  $ps < .001$ ), and follow-up tests confirmed that these correlations hold when controlling for state anger. Thus, militarism predicted greater feelings of anger evoked by the conflict prime, but the link between militarism and perceived relative intellect was not mediated by anger.

## Discussion

As hypothesized, in both Spain and the UK, participants estimated the intellectual capacities of their in-group ally to be greater than those of an out-group adversary, and this difference was significantly exaggerated in participants randomly assigned to view a brief video depicting violent intergroup conflict. Feelings of anger mediated the effect of the conflict manipulation on perceived relative intellect, with no such

effect observed for fear or general arousal. Akin to the effect of the conflict manipulation, conservatism significantly predicted perceiving the in-group ally as relatively more intelligent than the adversary (see Table 4 for a summary of the key findings).

Notably, the effect of political orientation on perceived relative intellect was strongly driven by militarism in both societies, with no discernable effects of social/fiscal political orientation. Likewise, militarism consistently predicted feeling more intense anger upon viewing a violent intergroup conflict. Indeed, a special relationship appears to obtain between militarism and anger, as anger (but not fear or arousal) was significantly associated with militarism (but not social/fiscal conservatism). The thematic similarities between angry feelings and militaristic attitudes may account for their unique association and for their parallel effects on perceived relative intellect, as anger has been linked not only with behavioral aggression in response to conflict (Archer, 2009; Sell, 2011) but also with optimistic appraisals of the utility of military force (Lerner et al., 2003).

It is also remarkable that, in both societies, individual differences in overall or militaristic conservatism were correlated with heightened perceptions of the in-group soldier's intellect but did not influence appraisals of the ISIS adversary. This pattern is consistent with the possibility that, in explicitly conflictual contexts, humans are adaptively motivated not to underestimate the strategic cunning of their opponents, as some "infrahumanization" approaches to threat and group bias might predict. Instead, militaristic conservatives' confidence in using force to resolve intergroup conflict appears related to optimistically assessing in-group forces' intellectual prowess without discounting the guile of adversaries.

The observed relationship between militaristic attitudes and perceived relative intellect appears independent of primes of intergroup warfare as, against expectations, militarism did not interact with the conflict manipulation. The influence of military orientation on perceived relative intellect appears to have been similarly orthogonal to experiences of anger. Although militarism correlated with state anger and significantly interacted with condition such that the association between militarism and anger was more pronounced in the conflict condition, militarism was comparably predictive of biased perceptions of relative intellect in the control condition. Militarism therefore appears to modulate perceived relative intellect via an attitudinal pathway separate from that of covarying state anger evoked by cues of coalitional conflict.

## Future Directions

The present findings invite several additional lines of further inquiry. First, because we primed coalitional warfare by depicting an attack on in-group forces, the observed effects may reflect responses particular to cues of the in-group having been attacked or defeated. Future investigations might assess the effect of cues of in-group victory, as this context may evoke

shifts in perceived relative intellect mediated by distinct affective pathways (e.g., victory-related happiness or pride).

Second, although the impact of our conflict manipulation on perceived relative intellect replicated in two societies, the effect sizes were quite small. In place of the relatively pale stimulus used here (i.e., a brief, silent video), further research might utilize more immersive primes (e.g., recalled or simulated experience of violent conflict) to potentially evoke larger—and more translationally valid—effects. It bears noting, however, that video stimuli of the kind employed here are faithful to the indirect, screen-mediated manner in which many millions encounter group violence and that small effects may ramify into large consequences with regard to support for intergroup conflict when manifesting in large populations.

Third, in a pattern consonant with the present findings, Mackie, Devos and Smith (2000) found that anger elicited by group conflict as defined by divergent ideological values (e.g., support for marriage equality) mediated inclinations to confront the opposing group. Interestingly, in Mackie et al.'s studies, participants who perceived the in-group as strong relative to the out-group were more prone to anger and confrontation, suggesting that perceptions of relative group strength may similarly modulate the effects of conflict cues on anger and support for violent aggression in contexts of group warfare (see also Maitner, Ackie, & Smith, 2006).

Fourth, the pattern of findings with regard to both the conflict manipulation and the political measures replicated in both societies to a remarkable extent (see Table 4), particularly given that somewhat different political attitude measures were employed in each country (see SOM), that the Spanish sample appeared somewhat more conservative overall than the British sample (see SOM Table S1), and that the studies were presented in distinct languages. However, although Spain and the UK differ along a number of cultural dimensions, they are comparable in many respects (e.g., as Western European industrialized democracies). Further cross-cultural work in disparate societies is needed to assess the cultural boundedness of the effects observed here.

Finally, our investigation of the attribution of relative intellect should be extended to test the effects of violent conflict and militarism on representation of the mental states of in-group versus out-group antagonists (i.e., via “theory of mind” mechanisms), as conflict should motivate investment of neurocognitive resources in accurately representing the goals, beliefs, desires, and intentions of both teammates and enemies (see Bruneau, Dufour, & Saxe, 2012).

Perceptions of relative intellect within circumstances of potential violent conflict may stem from a psychology attuned to adaptive challenges specific to conflict rather than a domain-general group bias response (Holbrook, 2016). Note, for example, that a domain-general approach positing anxiety palliation as motivating threat-modulated biases in perceptions of the intellect of in-group versus out-group members would predict equivalent or stronger effects of fear (see Jonas et al., 2014), whereas only anger influenced perceived relative intellect in the present findings. If our findings are indeed

reflective of a conflict-specific threat psychology, then non-conflictual threats or judgment targets may yield differing effects. For instance, cues of natural disasters may not heighten the perceived intellect of in-group soldiers, and militaristic conservatism may not correlate with perceiving in-group civilians as relatively intelligent. Such functional differences notwithstanding, there are also likely to be family resemblances between the effects of cues of intergroup warfare and other sorts of threat primes, given the benefits of coalitional support in addressing various challenges (Navarrete & Fessler, 2005) and given the extensive degree of psychobiological co-optation obtaining between threat management systems (Holbrook & Fessler, 2015; Holbrook, Izuma, Deblieck, Fessler, & Iacoboni, 2016).

## Conclusion

This study constitutes the first investigation of the influence of either political orientation or war primes on perceptions of the intellectual ability of in-group versus out-group combatants. Understanding the determinants of perceptions of the mental life of allies versus enemies may ultimately contribute to identifying evolved algorithms—and potentially disastrous judgment biases—informing our decisions regarding whether to engage in coalitional violence.

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## Supplemental Material

The supplemental material is available in the online version of the article.

## Note

1. Future cross-cultural studies should prevalidate measures of political attitudes generated in any given cultural context (e.g., our U.S.-based measure) to ensure their reliability in other societies. In the present case, with regard to the marginal reliability of the Spanish social/fiscal political orientation submeasure, it should be borne in mind that (i) the research questions motivating these studies primarily concern militarism and (ii) the results produced with the Spanish social/fiscal measure are equivalent to those derived from the reliable social/fiscal submeasure used in the British sample.

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