Uncertainty and Status-Based Asymmetries in the Distinction Between the “Good” Us and the “Bad” Them: Evidence That Group Status Strengthens the Relationship Between the Need for Cognitive Closure and Extremity in Intergroup Differentiation

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In this article, we look at how a key index of discomfort with uncertainty—the need for cognitive closure—interacts with perceived group status to influence a key antecedent of extremism: intergroup differentiation. Because high status provides people with a clear basis for superiority claims, we predicted that individuals with a high need for closure would accentuate intergroup differences in favor of the ingroup when they believe the latter to have higher status relative to outgroups. Two studies provided support for this hypothesis. In Study 1, Whites who were high in need for closure differentiated in favor of the ingroup when they perceived a larger status difference between the high-status ingroup and lower-status Black and Latino outgroups. In Study 2, individuals high in need for closure who were

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What is the psychological basis of extremism in the sociopolitical realm? While the answer to this question is obviously complex, a key ingredient in the genesis of extremism is a polarization in evaluations of the ingroup and outgroup—that is, a tendency to parse the social world in binary, black-and-white terms, as a Manichean confrontation between a “good” us and “bad” them (Hogg, 2012; Hogg & Blaylock, 2012). Of course, this tendency toward “group-centrism” is ubiquitous and does not always rise to the level of pathology implied by the term “extremism” (Hogg, 2003; Mullen, Brown, & Smith, 1992; Tajfel & Turner, 1986; Yzerbyt & Demoulin, 2010). Nevertheless, the crucial role of the evaluatively laden division of the world into ingroup and outgroup in extremist outlooks raises the question of what leads this division to be stronger in some cases than in others.

In this study, we address this question by examining how individual differences related to one’s orientation toward uncertainty explain variation in the tendency to differentiate between ingroup and outgroup that is one of the “deep” roots of extreme outlooks (e.g., Golec de Zavala, Federico, Cislak, & Sigger, 2008; Hogg, 2012; Sidanius & Pratto, 1999). In this vein, recent studies have focused on how individual differences in the need for cognitive closure—the desire for knowledge that is certain and firm—influence intergroup differentiation (Kruglanski, 2004). This work suggests that ingroups are epistemic providers: they offer their members a consensually validated shared reality, overcoming uncertainty. As a result, individuals with a high need for closure—who possess a stronger need to overcome uncertainty—differentiate between ingroup and outgroup more extremely (Kruglanski, Pierro, Mannetti, & DeGrada, 2006; Shah, Kruglanski, & Thompson, 1998). Nevertheless, recent findings also suggest that the relationship between the need for closure and polarized responses to the ingroup and outgroup may depend on the characteristics of groups individuals belong to (Golec de Zavala et al., 2008; Kruglanski et al., 2006). Interestingly, no research has focused on how this relationship may be affected by one of the most important aspects of intergroup relations in the real world: differences in group status. We argue that high-status ingroups may be better providers of certainty than low-status ingroups, leading individuals with a high need for closure to be more extreme in differentiating ingroup from outgroup when they perceive the ingroup to have greater status relative to outgroups. We begin by reviewing previous work on our key uncertainty-related variable: the need for cognitive closure.

Uncertainty and Intergroup Differentiation: The Role of Individual Differences in Need for Closure

Individual differences in the experience of uncertainty relate in important ways to intergroup differentiation. As noted above, one of the most important
Asymmetrical Effects of the Need for Closure

indices of one’s orientation toward uncertainty in the current literature is the need for cognitive closure. Broadly speaking, individuals under a high need for closure tend to find uncertainty aversive, which motivates them to reduce uncertainty as quickly and decisively as possible (Kruglanski, 2004; Kruglanski & Webster, 1996; Webster & Kruglanski, 1994). Indeed, the notion of uncertainty avoidance is central to the definition of need for closure, which is commonly described as a “desire for any firm belief on a given topic, as opposed to confusion and uncertainty” (Jost et al., 2003, p. 348). Those high in the need for closure overcome uncertainty (1) by “seizing” quickly on available cues in order to reach conclusions and by “freezing” in a relatively unbending way on these conclusions once they are reached; and (2) by seeking out social contexts that are orderly, predictable, and familiar.

Importantly, group membership is a major source of certainty-providing knowledge. The beliefs, norms, and valued social identities consensually shared by members of a group provide people with certainty about what the world is like, what they should do in various situations, and who they are and why they are important. As a result, ingroups should be more extremely valued relative to outgroups by those who strongly seek certainty and closure. Consistent with this expectation, the need for closure tends to promote a syndrome of “group-centrism” in intergroup contexts—a disproportionate tendency to differentiate between the ingroup and the outgroup and rely on the ingroup as a reference point for judgments and behavior (Kruglanski et al., 2006; see also Hogg & Adelman, 2013).

For example, a more extreme differentiation between the ingroup and outgroup on affective and evaluative dimensions in favor of the ingroup enhances the subjective worth of the ingroup by reinforcing the perceived superiority of its character, aims, and values. Moreover, it provides a perceived hedge against threats from outside the group and helps group members avoid the uncertainty and risk associated with a more cooperative orientation. Accordingly, those with a high need for closure—who should especially desire the certainty provided by group membership—show more extreme ingroup biases along a variety of dimensions (e.g., Kruglanski et al., 2006; Shah et al., 1998; see also Jost, Glaser, Kruglanski, & Sulloway, 2003) and a more extreme tendency to deal with outgroups in a competitive fashion (de Grada, Kruglanski, Mannetti, & Pierro, 1999; Federico, Golec, & Dial, 2005; Golec & Federico, 2004; Golec de Zavala, 2006; Golec de Zavala et al., 2008; see also de Dreu, Koole, & Oldersma, 1999). Similarly, individuals with a high need for closure are more extreme in their identification with and attraction to ingroup versus outgroup members (Federico et al., 2005; Kruglanski et al., 2006; Kruglanski, Shah, Pierro, & Mannetti, 2002; Shah et al. 1998; see also Kruglanski & Mayseless, 1987; Kruglanski & Webster, 1991; see also Kosic, Kruglanski, Pierro, & Mannetti, 2004; Van Oudenhoven, Prins, and Buunk, 1998).

Thus, the distaste for uncertainty associated with a high need for closure sharpens the tendency to differentiate between a “good” us and a “bad” them
that is so central to many forms of extremism. However, recent studies also suggest that the tendency for a high need for closure to be related to polarized responses to the ingroup and outgroup depends on the characteristics of the groups individuals belong to. For example, the need for closure more strongly predicts extreme intergroup differentiation when the ingroup is relatively homogenous in its makeup and beliefs, since a cohesive group is a stronger source of certainty (Kruglanski et al., 2002, 2006; Shah et al., 1998). Moreover, those with a high need for closure favor ingroup over outgroup they belong to groups whose norms and beliefs endorse hostile approaches to intergroup conflict; in these cases, the explicit normative support for intergroup differentiation reinforces its certainty-providing effect (Federico et al., 2005; Golec & Federico, 2004; Golec de Zavala, 2006; see also Golec de Zavala et al., 2008; see also Jost et al., 2003).

**Perceived Group Status, the Need for Closure, and Intergroup Differentiation**

Surprisingly, studies of the interface between the need for closure and the tendency to sharply differentiate between a “good” ingroup and a “bad” outgroup have overlooked a signal feature of most real-world intergroup contexts: namely, differences in *group status*, or the relative amount of prestige attributed to a group along valued dimensions of social comparison (Jost, Banaji, & Nosek, 2004; Tajfel & Turner, 1986). By and large, research on the consequences of the uncertainty aversion associated with the need for closure has focused on intergroup contexts in which the ingroup and outgroup were assumed to have equal status, and no studies have directly compared the relationship between the need for closure and extremity in intergroup differentiation across groups differing in status. This is a notable omission, given that most glaring examples of extremism in intergroup relations—such as a genocide—occur most frequently in the context of group hierarchy (Sidanius & Pratto, 1999).

Nevertheless, there are sound reasons to expect that the perceived status of the ingroup may moderate the relationship between the need for closure and intergroup differentiation. As we have seen, the impact of the need for closure differs as a function of ingroup characteristics. When characteristics of the ingroup—such as internal homogeneity and strong normative support for intergroup hostility—make it a “better” provider of certainty, the relationship between the need for closure and polarized views of the ingroup and outgroup is stronger (Golec de Zavala, 2006; Kruglanski et al., 2006). Similarly, we argue that groups that are relatively high in perceived status should be more valuable as sources of certainty, strengthening the tendency for those high in the need for closure to accentuate differences between the ingroup and outgroup.

But why should high-status groups be particularly valuable as certainty providers? All other things being equal, the advantages implied by an intergroup status difference make sharp differentiation in favor of the ingroup a more
“realistic” response for members of high-status groups (Mullen et al., 1992; Tajfel & Turner, 1986; Sachdev & Bourhis, 1991). If a group is perceived to have relatively high status, it is easier for members to evaluate that group more positively than outgroups and justify a more extreme identification with and attraction to ingroup versus outgroup members; their position in the status hierarchy provides them with a clear basis for the superiority claims inherent in ingroup bias. Conversely, if a group is perceived to have relatively low status, it is more difficult for group members to “deny reality” and differentiate between groups in ways that imply ingroup superiority (Spears, Jetten, & Doosje, 2001). Consistent with these arguments, members of high-status groups show more extreme biases in the form of (1) more polarized evaluations of the ingroup and outgroups and (2) stronger attraction to ingroup members (Jost, Pelham, & Carvallo, 2002; Sachdev & Bourhis, 1991; Turner, 1978; Turner & Brown, 1978; van Knippenberg & van Oers, 1984; for reviews, see Jost et al., 2004; Mullen et al., 1992; Sidanius & Pratto, 1999; Sidanius, Pratto, van Laar, & Levin, 2004). This tendency is particularly evident in situations where the status distinction is perceived to have a legitimate basis (Jost et al., 2004; Sidanius et al., 2004; Tajfel & Turner, 1986; Turner & Brown, 1978).

In sum, the prestige attributed to high-status groups should make them a more plausible basis for sharp distinctions between a “good” ingroup and a “bad” outgroup than comparable low-status groups. If this is the case, then membership in a high-status group should be particularly valuable to those who seek certainty. In turn, this suggests that the tendency for those high in the need for closure to more extremely accentuate ingroup-outgroup differences should be more pronounced among members of groups that are perceived to be higher in status relative to an outgroup. When the ingroup is relatively high in status, membership should furnish group members with a fair degree of certainty, leading those with a high need for closure to show more extreme biases. However, when the ingroup is relatively low in status, its role as a provider of certainty may be limited, weakening the tendency for those with a high need for closure to evaluatively differentiate between ingroup and outgroup.

The goal of the studies reported here was to explore one key foundation of extremism by examining this hypothesis about the bases of the tendency to divide the world into a “good” us and a “bad” them. Study 1 focused solely on members of a high-status racial group and looked at the extent to which the perceived size of the ingroup’s status advantage moderated the tendency for participants with a greater distaste for uncertainty—i.e., those high in need for closure—to adopt polarized views of the ingroup and outgroup. Study 2 experimentally manipulated the status of the ingroup to provide a more rigorous test of the moderating role of group status. In both studies, intergroup differentiation was operationalized in terms of ingroup bias in evaluations of the groups and the attribution of positive versus negative traits to the groups. In addition, Study 2 examined one other
dependent measure: namely, the extent to which group members favored working with ingroup versus outgroup members.

Study 1

In Study 1, we used a survey to examine the moderating role of individual differences in the extent to which members of a high-status racial group (i.e., White Americans) perceived a relatively large status difference between the ingroup and two low-status outgroups (i.e., African Americans and Latinos). Our prediction was that certainty-oriented Whites—i.e., those high in the need for closure—would differentiate between the groups in favor of the White ingroup when they also perceived a larger status advantage for their group vis-à-vis African Americans and Latinos.

Method

Participants

The survey respondents were 204 students at a large Midwestern university. The number of racial minority students in this sample was too small to conduct a statistically powerful analysis (5 African-American students, 2 Hispanic students, 17 Asian students, and 12 students who reported their race as “other”). Therefore, we analyzed only the responses of the 164 participants who identified as White. These students were split evenly by gender (81 male and 83 female). Their mean age was 20.34 years (SD = 2.94).

Procedure and Measures

Participants were recruited from introductory psychology courses and given extra credit for participating in the study. After giving informed consent, participants completed a pencil-and-paper survey. Below, we describe our key variables.

Need for closure. This was measured using the 42-item Need for Cognitive Closure Scale (Webster & Kruglanski, 1994). All items were answered on a 7-point response scale ranging from 1 (strongly disagree) to 7 (strongly agree). Responses were coded such that higher scores indicated a higher need for closure and averaged ($\alpha = .83, M = 4.17, SD = .52$).

Perceived status differences. In order to operationalize perceived status differences between the White ingroup and two lower-status outgroups—i.e., African Americans and Latinos—participants were asked to rate the status of the groups “as you think most people see them.” Participants rated each group on
a 7-point scale ranging from 1 (low status) to 7 (high status). Two difference scores were then generated by subtracting (1) participants’ ratings of African Americans from their ratings of Whites and (2) their ratings of Latinos from their ratings of Whites. Since the difference scores were highly correlated ($r = .74$), they were averaged to form a composite measure of perceived status differences. Higher scores indicate a larger status difference ($\alpha = .85; M = 2.83, SD = 1.46$).

**Intergroup differentiation in evaluative ratings.** Participants were also asked to indicate how positively or negatively they felt about each group on a feeling thermometer: “How positively or negatively do you feel toward the following groups?” The response scales ranged from 1 (very negative) to 7 (very positive). Difference scores were generated by subtracting (1) participants’ ratings of African Americans from their ratings of Whites and (2) their ratings of Latinos from their ratings of Whites. Since the two differences were highly correlated ($r = .79$), they were averaged to form a composite measure of intergroup differentiation in evaluative ratings. Higher scores indicate a more polarized tendency to see the ingroup positively and the outgroup negatively ($\alpha = .88; M = .55, SD = 1.28$).

**Intergroup differentiation in trait ratings.** Participants were asked to rate each group on four dimensions: violent/not violent, unintelligent/intelligent, lazy/hardworking, and untrustworthy/trustworthy. Responses were provided on a 7-point scale, with opposing traits anchoring each end of the scale (e.g. 1 = violent, 7 = not violent). Items were recoded where needed so higher numbers indicated more positive ratings of the group, and the four items for each group were averaged to form a composite trait rating of each group ($\alpha = .73$, for Whites; $\alpha = .87$, for African Americans; $\alpha = .79$, for Latinos). Difference scores were generated by subtracting (1) participants’ trait ratings of African Americans from their trait ratings of Whites and (2) their trait ratings of Latinos from their trait ratings of Whites. Since the two scores were correlated ($r = .73$), they were averaged to form a composite measure of intergroup differentiation in trait ratings. Higher scores indicate a greater tendency to see the ingroup positively and the outgroup negatively ($\alpha = .84; M = .12, SD = 1.14$).

**Results**

**Preliminary Analyses**

We began by confirming the existence of an average perceived status difference and tendency toward intergroup differentiation in favor of the ingroup on each of the dependent measures. First, confirming a perceived status gap, paired-samples $t$-tests (two-tailed) indicated that participants’ status ratings of African
Table 1. Intercorrelations for Study Variables (Study 1)

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Need for closure</td>
<td>–</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Composite status difference</td>
<td>.10</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>3. Intergroup differentiation: Evaluative ratings</td>
<td>.36***</td>
<td>.10</td>
<td>–</td>
</tr>
<tr>
<td>4. Intergroup differentiation: Trait ratings</td>
<td>.30***</td>
<td>.17*</td>
<td>.57***</td>
</tr>
</tbody>
</table>

Note. All coefficients are Pearson correlations. *p < .05; ***p < .001.

Americans ($M = 3.47$, $SD = 1.17$) and Latinos ($M = 3.07$, $SD = 1.00$) were significantly lower than their status rating of Whites ($M = 6.09$, $SD = .94$), with $t(202) = 23.10, p < .001$, Cohen’s $d = 1.62$, for the White–African American comparison; and $t(202) = 28.72, p < .001$, Cohen’s $d = 2.02$, for the White–Latino comparison. Second, paired-samples $t$-tests (two-tailed) indicated that participants’ evaluative ratings of African Americans ($M = 4.88$, $SD = 1.23$) and Latinos ($M = 4.89$, $SD = 1.12$) were significantly lower than their rating of Whites ($M = 5.44$, $SD = 1.09$), with $t(202) = 5.72, p < .001$, Cohen’s $d = .40$, for Whites versus African Americans; and $t(202) = 5.99, p < .001$, Cohen’s $d = .42$, for Whites versus Latinos. Finally, with respect to trait ratings, $t$-tests (two-tailed) indicated a less consistent pattern of ingroup bias than was found with the evaluative ratings. Participants’ trait ratings of African Americans ($M = 4.09$, $SD = .98$) were significantly lower than their trait rating of Whites ($M = 4.37$, $SD = .86$), $t(193) = 3.08, p < .01$, Cohen’s $d = .22$; but their trait ratings of Latinos were not ($M = 4.40$, $SD = .92$), $t(193) = –.39, p > .30$, Cohen’s $d = –.03$.

Intercorrelations among variables. Before turning to the main analyses, we also examined the correlations between our key variables; these are displayed in Table 1. The two differentiation measures were highly correlated ($r = .57$). Moreover, consistent with prior work, the need for closure was associated with more extreme differentiation on both measures ($r = .36$, with differentiation in evaluative ratings; $r = .30$, with differentiation in trait ratings). Finally, the composite measure of perceived status differences was significantly associated with more extreme intergroup differentiation in trait ratings ($r = .17$).

Need for Closure, Perceived Status Differences, and Intergroup Differentiation

A series of hierarchical ordinary-least squares regressions was used to examine the hypothesis that individuals with a higher need for closure would more extremely differentiate between ingroup and outgroup when they attributed a larger status advantage to the White ingroup versus the Black and Latino outgroups. In
Table 2. Need for Closure, Perceived Status Differences, and Intergroup Differentiation (Study 1)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Intergroup differentiation: Evaluative ratings</th>
<th>Intergroup differentiation: Trait ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td></td>
<td>b     SE</td>
<td>b     SE</td>
</tr>
<tr>
<td>Need for closure (NFC)</td>
<td>1.00*** (.16)</td>
<td>.95*** (.16)</td>
</tr>
<tr>
<td>Composite status difference</td>
<td>.04 (.06)</td>
<td>.05 (.06)</td>
</tr>
<tr>
<td>NFC × Composite status difference</td>
<td>–     –</td>
<td>.25* (.11)</td>
</tr>
<tr>
<td>(Constant)</td>
<td>.68*** (.08)</td>
<td>.66*** (.08)</td>
</tr>
<tr>
<td>F (degrees of freedom)</td>
<td>20.42 (2, 159)***</td>
<td>15.57 (3, 158)***</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>.194</td>
<td>.214</td>
</tr>
<tr>
<td>N</td>
<td>162</td>
<td>162</td>
</tr>
</tbody>
</table>

Note. Entries are unstandardized OLS regression coefficients. In each model, perceived status differences and the dependent variable are a composite of difference scores comparing Whites to Blacks and Whites to Latinos.

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

these models, each differentiation measure was regressed on the need for closure and the composite status difference in a first step, while the product term for the interaction between these two independent variables was added on a second step. All independent variables were centered, and the product term was constructed from the centered variables.

The results of this analysis for evaluative ratings are summarized in the top panel of Table 2. In Model 1, which contained only the main-effect terms, the estimates indicate that the need for closure was significantly associated with intergroup differentiation in favor of the ingroup ($b = 1.00, p < .001$; partial $\eta^2 = .20$). Model 2 added the interaction. The estimates from this model indicate that the main effect was qualified by a significant Need for Closure × Composite Status Difference interaction ($b = .25, p < .05$; partial $\eta^2 = .03$). To probe this interaction, simple slopes for the relationship between the need for closure
and evaluative differentiation in evaluative ratings were computed one standard deviation above and below the mean of the composite status difference measure (Aiken & West, 1991). The analyses indicated that the relationship between the need for closure and differentiation in evaluative ratings was more than twice as strong among those who saw a larger status difference between ingroup and outgroup ($b = 1.32, SE = .21, p < .001; \text{partial } \eta^2 = .20$) than those who saw a smaller status difference between the groups ($b = .59, SE = .25, p < .05; \text{partial } \eta^2 = .04$).

The results for differentiation in trait ratings—summarized in the bottom panel of Table 2—were similar. In Model 1, the need for closure was significantly associated with differentiation in favor of the ingroup ($b = .78, p < .001; \text{partial } \eta^2 = .17$). However, in Model 2, this main effect was qualified by a significant Need for Closure $\times$ Composite Status Difference interaction ($b = .21, p < .01; \text{partial } \eta^2 = .03$). Simple slope analyses similar to those carried out above indicated that the relationship between the need for closure and trait differentiation was almost three times larger among those who perceived a large status difference between the groups ($b = 1.03, SE = .19, p < .001; \text{partial } \eta^2 = .17$) than those who saw a smaller status difference between the groups ($b = .44, SE = .22, p < .05; \text{partial } \eta^2 = .03$).

Robustness Checks

As a final step, all of the above models were checked for dependent-variable outliers by computing the externally studentized residuals for the full model for each dependent variable (Cohen, Cohen, West, & Aiken, 2003). An examination of these residuals for each dependent variable revealed no large outliers (none had absolute values $> 5$). Moreover, further analyses for both dependent variables that excluded outliers selected using a more liberal criterion (i.e., residuals with absolute values $> 3$) produced identical results.

Discussion

The results of Study 1 provide consistent support for our hypothesis. While individuals with a greater aversion to uncertainty—as measured by the need for closure—generally showed a more extreme tendency to differentiate between ingroup and outgroup, this relationship was much stronger among those who saw a larger status gap between the high-status White ingroup and the low-status Black and Latino outgroups. Moreover, this relationship held across two different dependent measures. Thus, the relationship between the need for closure and the tendency to divide the social world into an evaluatively polarized “us” and “them” is contingent on group-status perceptions.
Study 2

Although the results of Study 1 are supportive, the study is not without its shortcomings. Rather than directly comparing members of different groups with varying levels of perceived status, we simply capitalized on individual differences among high-status group members in the extent to which they perceived a large status advantage in favor the ingroup. This is at best an indirect way of examining the moderating role of the perceived status of the ingroup. Moreover, despite the relatively low full-sample correlations between the status-difference measure and the intergroup differentiation measures in Study 1 (i.e., rs of .10 and .17), the absence of an experimental manipulation of status raises the possibility that the two sets of measures are really just different indices of the same thing—intergroup differentiation. As such, it would be helpful to subject the status variable to greater experimental control. In order to deal with these issues, Study 2 replaced Study 1’s real-world groups with lab-generated groups. Specifically, we led participants to believe their performance on a cognitive task classified them as part of an ingroup of “deductive thinkers,” and then randomly assigned them to receive feedback indicating this ingroup either had stronger abilities (high ingroup status) or weaker abilities (low ingroup status) than an outgroup of “inductive thinkers.” We then examined the relationship between the need for closure and several indices of intergroup differentiation. We predicted that individuals with a greater aversion to uncertainty—as indicated by a high need for closure—would show more a polarized orientation to the ingroup versus the outgroup in the high-status (vs. low-status) condition.

Method

Participants

One hundred and sixty-nine undergraduates at a large Midwestern university participated in this experiment. Twelve participants who expressed suspicion about the status manipulation (see below) were excluded from the analyses, leaving us with a final sample of \( N = 157 \). Of these, there were 114 White students, 5 African-American students, 5 Hispanic students, 17 Asian-American students, 2 Native American students, and 14 students who reported their race as “other.” The final sample was comprised disproportionately of women (106 females, 41 males, with 10 who did not report gender), with a mean age of 20.1 (\( SD = 3.66 \)).

Procedure and Measures

Participants were recruited from introductory psychology courses and given extra credit for participating. The experimenter told students that the study was
about personality difference and problem-solving abilities. Participants completed the experiment in a computer lab where MediaLab software administered all measures and manipulations.

Participants first completed the Need for Cognitive Closure Scale (Webster & Kruglanski, 1994). As in Study 1, all items were answered on a 7-point response scale ranging from 1 (strongly disagree) to 7 (strongly agree). Responses were coded such that higher scores indicated a higher need for closure and averaged to form a composite ($\alpha = .88, M = 4.21, SD = .63$). Participants then completed a 17-item measure of “reasoning styles” ostensibly designed to differentiate between deductive and inductive thinkers. Sample items included “Which word do you associate most closely with the keyword Apple? Seed, tree, fruit, red” and “Which number do you associate most closely with the number 12? 11, 6, 13, 24.” After the computer ostensibly tabulated their score, all participants saw a screen indicating that they were deductive thinkers. At this point, participants received the status manipulation, which randomly indicated whether deductive thinkers were higher or lower status compared to inductive thinkers:

Your results indicate that you are a DEDUCTIVE reasoner. In general, deductive reasoners perform worse (better) than inductive reasoners on tasks of cognitive ability, verbal ability, and spatial reasoning. As a result, deductive thinkers also tend to attain less (greater) occupational status in everyday life. Specifically, compared to inductive thinkers, deductive thinkers tend to earn 10% lower (higher) salaries, have significantly lower (higher) rates of acceptance to graduate and professional schools, and to demonstrate smaller (greater) rates of career advancement and promotion.

To reinforce the manipulation, participants subsequently received false feedback for their performance on 10 spatial-reasoning problems. Participants had 10 seconds to solve each problem, which progressed from easy to very difficult. Participants then received false feedback in accordance with their status condition: that they scored in the 80th percentile of undergraduates (high status), or in the 30th percentile (low status). For both conditions, the feedback stated that the participant’s performance was consistent with the performance of other deductive thinkers, who tend to do better (worse) than inductive thinkers on tests measuring spatial reasoning ability. To assess whether participants believed our status manipulation, participants first read the following instructions: “There are many people who believe that members of different groups enjoy different amounts of social status in our society. We know that you may not be very familiar with the concepts of deductive and inductive thinkers, but we would like you to put forth your best guess. If you had to rate each group as you see them, how would you do so?” Participants then rated both inductive and deductive thinkers on a scale of 1 (low status) to 7 (high status).

For our dependent measures, intergroup differentiation in evaluative ratings was assessed by asking participants to indicate how positively or negatively they generally felt about the ingroup—i.e., deductive thinkers—and the
outgroup—i.e., inductive thinkers—on 7-point feeling thermometer scales identical to those used in Study 1. A final measure of differentiation in evaluative ratings was generated by subtracting participants’ ratings of inductive thinkers from their ratings of deductive thinkers. Higher scores indicate greater differentiation in favor of the ingroup ($M = .04$, $SD = 1.05$). Second, intergroup differentiation in trait ratings was assessed by asking participants to rate each group on ten trait items: unfriendly/friendly, insincere/sincere, lazy/hardworking, cold/warm, closedminded/open minded, unkind/kind, unreliable/reliable, impolite/polite, unlikeable/likeable, and uninteresting/interesting. The trait ratings were prefaced with the following text: “We know you may not be very familiar with the idea of inductive and deductive thinkers. Even if this is the case, we ask you to put forth your best guess as to what deductive and inductive thinkers would be like.” Responses were provided on a 7-point scale, with the opposing traits anchoring each end of the scale (e.g., 1 = unkind, 7 = kind). Items were recoded where needed so that higher numbers indicated more positive ratings of the group. The 10 appropriately coded items for each group were then averaged to form a composite trait rating of each group ($\alpha = .89$, for both groups). A final measure of intergroup differentiation in trait ratings was generated by subtracting participants’ trait ratings of inductive thinkers from their ratings of deductive thinkers. Higher scores indicate greater differentiation in favor of the ingroup ($M = .23$, $SD = .87$).

Finally, we told participants that we would like to solicit their feedback on some studies we were currently designing to investigate how people work in groups of majority deductive thinkers or majority inductive thinkers. We asked participants the following: “In your place of employment, would you prefer to work with a majority of inductive thinkers or to work in a group with a majority of deductive thinkers?” Participants answered on a scale ranging from 1 (strongly prefer majority inductive thinkers) to 7 (strongly prefer majority deductive thinkers). Higher scores indicate a stronger preference for working with an ingroup member ($M = 4.33$, $SD = 1.24$).

After completion of the study, the experimenter probed participants for suspicion of deception and then debriefed participants about the nature of the study. Ten participants expressed suspicion that the deductive feedback had been false. We removed these participants from subsequent analyses.

Results

Manipulation Checks and Preliminary Analyses

Manipulation checks. To assess whether participants believed our status manipulation, we subtracted ratings of inductive thinkers’ status from ratings of deductive thinkers’ status, forming a relative status variable in which positive
numbers correspond to greater relative status of deductive over inductive thinkers. A two-sample \( t \)-test (two-tailed) revealed that participants rated deductive thinkers relatively higher than inductive thinkers in the high status condition \((M = 1.41, SD = 1.40)\) and relatively lower than inductive thinkers in the low status condition \((M = -1.23, SD = 1.61)\), a difference that was significant, \( t(155) = 10.94, p < .001\), Cohen’s \( d = 1.75\). Moreover, a regression of the status-difference variable on the need for closure indicated no significant effect, \( b = .24, SE = .25, p > .30\); and a regression of the status-difference variable on the need for closure, a dummy variable for status condition, and the interaction between the two revealed no significant interaction, \( b = .16, SE = .19, p > .30\); partial \( \eta^2 = .01 \).

**Basic patterns of intergroup differentiation.** Collapsing across the conditions, a paired-samples \( t \)-test (two-tailed) indicated that participants’ evaluative ratings of the ingroup \((M = 4.42, SD = 2.07)\) were slightly but nonsignificantly higher than ratings of the outgroup \((M = 4.36, SD = .91)\), \( t(156) = .75, p > .40\), Cohen’s \( d = .06\). However, this result obscures starkly different patterns of differentiation within each condition. While participants in the high-status condition evaluated the ingroup \((M = 4.82, SD = 1.06)\) more positively than the outgroup \((M = 4.48, SD = 1.00)\), \( t(78) = 3.41, p < .001\), Cohen’s \( d = .38\), those in the low-status condition displayed a marginal tendency to evaluate the outgroup \((M = 4.23, SD = .80)\) more positively than the ingroup \((M = 4.01, SD = .93)\), \( t(77) = -1.68, p < .10\), Cohen’s \( d = -.19\). Turning to the trait ratings, a paired-samples \( t \)-test (two-tailed) indicated a pattern of intergroup differentiation in favor of the ingroup even when collapsing across conditions. Participants’ trait ratings of the ingroup \((M = 4.99, SD = .84)\) were higher than ratings of the outgroup \((M = 4.73, SD = .89)\), \( t(156) = 3.70, p < .001\), Cohen’s \( d = .30\). Subsequent analyses indicated a similar pattern of differentiation in both conditions. Participants in the high-status condition evaluated the ingroup \((M = 4.96, SD = .84)\) more positively than the outgroup \((M = 4.72, SD = .93)\), \( t(78) = 2.36, p < .05\), Cohen’s \( d = .27\), as did those in the low-status condition \((M = 5.02, SD = .85; \text{vs.} M = 4.74, SD = .86)\), \( t(77) = 2.88, p < .01\), Cohen’s \( d = .33\). Finally, collapsing across conditions, a mean comparison \( t \)-test (one-tailed) confirmed that the mean on the work-preference measure \((M = 4.34, SD = .10)\) was significantly greater than the neutral score of 4, \( t(156) = 3.42, p < .001\), Cohen’s \( d = .27\), indicating a preference for working with the ingroup. Moreover, a two-sample \( t \)-test (two-tailed) indicated that individuals in the high-status condition showed a more extreme relative preference for working with a member of the ingroup \((M = 4.80, SD = 1.25)\) than individuals in the low-status condition (who actually preferred working with an outgroup member; \(M = 3.88, SD = 1.09\)), \( t(155) = 4.86, p < .001\), Cohen’s \( d = .78\).
Table 3. Need for Closure, Group Status, and Intergroup Differentiation (Study 2)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>SE</td>
<td>b</td>
<td>SE</td>
</tr>
<tr>
<td>0</td>
<td>.04</td>
<td>(.12)</td>
<td>.04</td>
<td>(.12)</td>
</tr>
<tr>
<td>Group status</td>
<td>.25***</td>
<td>(.08)</td>
<td>.23**</td>
<td>(.08)</td>
</tr>
<tr>
<td>NFC × Group status</td>
<td>–</td>
<td>–</td>
<td>.33**</td>
<td>(.12)</td>
</tr>
<tr>
<td>(Constant)</td>
<td>.09</td>
<td>(.08)</td>
<td>.11</td>
<td>(.08)</td>
</tr>
<tr>
<td>F (degrees of freedom)</td>
<td>5.34 (2, 153)**</td>
<td>6.16 (3, 152)***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>.053</td>
<td></td>
<td>.091</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>156</td>
<td></td>
<td>156</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Entries are unstandardized OLS regression coefficients. Results for intergroup differentiation on trait ratings are not shown; for both of the models using this dependent measure, $F < 1$.

**$p < .01$; ***$p < .001$.

Need for Closure, Group Status, and Intergroup Differentiation

The main analyses in this study were similar to those conducted in Study 1, with one major change: the continuous status difference measure from Study 1 was replaced with the dichotomous group-status variable. In a series of regression models, each dependent measure was regressed on the need for closure and group-status variable in a first step, while the product term for the interaction between these two independent variables was added on a second step. The need for closure was centered and the group status variable was effects-coded ($-1 = low, 1 = high$); the product term was constructed from these recoded variables.

The first two analyses looked at the effects of the need for closure and group status on the two differentiation measures. For intergroup differentiation in evaluative ratings, the results are shown in Table 3. Model 1, which contained only the main-effect terms, revealed only a significant effect of group status, such that individuals who received high status feedback showed a more extreme tendency to differentiate in favor of the ingroup ($b = .25, p < .001$; partial $\eta^2 = .07$); this confirms the results of the t-tests presented above. In turn, Model 2 revealed the predicted Need for Closure × Group Status interaction ($b = .33, p < .01$; partial $\eta^2 = .05$). To probe this interaction, simple slopes for the relationship between the need for closure and differentiation in evaluative ratings were computed for each of the two experimental groups (Aiken & West, 1991). The analyses indicated that the relationship between need for closure and differentiation in favor of the ingroup in evaluative ratings was positive and significant among individuals assigned to the high-status condition ($b = .37, SE = .17, p < .05$; partial $\eta^2 = .03$), but
negative among those assigned to the low-status condition \( (b = -0.29, SE = 0.17, p < 0.10; \text{partial } \eta^2 = 0.02) \). In contrast, the analyses for ingroup bias in trait ratings indicated no significant effects. None of the coefficients in either model reached significance (all \( p_s > 0.20; \text{both } F_s < 1 \)); these estimates are not presented.

Finally, we examined one additional dependent variable: the extremity of participants’ preference for working with an ingroup member on a hypothetical task. The results of the analyses using this variable are summarized in Table 4. As before, Model 1 revealed only a significant effect of group status, with individuals in the high-status condition showing a more extreme preference for working with an ingroup versus an outgroup member \( (b = 0.46, p < 0.001; \text{partial } \eta^2 = 0.14) \); this confirms the t-test results above. In turn, Model 2 revealed a significant Need for Closure × Group Status interaction \( (b = 0.59, p < 0.001; \text{partial } \eta^2 = 0.10) \).

Simple slope analyses indicated that the relationship between the need for closure and preference for working with an ingroup member was positive and highly significant among individuals assigned to the high-status condition \( (b = 0.73, SE = 0.20, p < 0.001; \text{partial } \eta^2 = 0.08) \), but negative among those assigned to the low status condition \( (b = -0.45, SE = 0.20, p < 0.05; \text{partial } \eta^2 = 0.03) \).

**Robustness Checks**

All models were again checked for dependent variable outliers by computing externally studentized residuals. The residuals for the full trait-differentiation and task-preference models revealed no large outliers (none had absolute values > 5). However, examination of the studentized residuals for the full

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<table>
<thead>
<tr>
<th>Predictor</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>( b )</td>
<td>( SE )</td>
</tr>
<tr>
<td>Need for closure (NFC)</td>
<td>0.13</td>
<td>0.15</td>
</tr>
<tr>
<td>Group status</td>
<td>0.46***</td>
<td>0.09</td>
</tr>
<tr>
<td>NFC × Group status</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>(Constant)</td>
<td>4.33***</td>
<td>0.09</td>
</tr>
<tr>
<td>( F ) (degrees of freedom)</td>
<td>12.16 (2, 154)**</td>
<td>14.56 (3, 153)**</td>
</tr>
<tr>
<td>Adjusted ( R^2 )</td>
<td>0.125</td>
<td>0.207</td>
</tr>
<tr>
<td>( N )</td>
<td>157</td>
<td>157</td>
</tr>
</tbody>
</table>

*Note.* Entries are unstandardized OLS regression coefficients. ***p < 0.001.
evaluative-differentiation model revealed one case with a large negative residual \((d_i = -5.38)\) that also split off from the others in a scatterplot. This case was deleted in the analyses presented in Table 3. Further analyses that retained the outlier produced similar results, albeit with a slightly weaker Need for Closure \(\times\) Group Status interaction in the full model \((b = .23, SE = .13, p = .08;\) partial \(\eta^2 = .02\)) and a smaller \(R^2\) due to added error (i.e., adjusted \(R^2 = .077\)). Again, supplementary analyses that excluded outliers selected using a more liberal cutoff (residuals with absolute values > 3) produced results identical to those reported in above.

**Discussion**

In Study 2, our analyses indicated that uncertainty-averse participants—those with a high need for closure—(1) differentiated more sharply between ingroup and outgroup in evaluative ratings and (2) showed a more extreme preference for working with members of the ingroup when they were randomly assigned to receive feedback indicating that their ingroup of “deductive thinkers” had higher (vs. lower) status than an outgroup of “inductive thinkers.” These findings provide additional evidence for the general hypothesis that perceptions of high relative ingroup status should strengthen the tendency for individuals with a distaste for uncertainty to differentiate between ingroup and outgroup more extremely.

**General Discussion**

A growing body of work suggests that individuals who experience uncertainty more aversively—such as those high in the need for closure—differentiate between ingroup and outgroup more severely, potentially making them more prone to extremism in sociopolitical domains (Kruglanski et al., 2002; see also Doosje, Loseman, & van den Bos, 2013; Hogg & Adelman, 2013). Moreover, this tendency is stronger when the ingroup possesses characteristics that make it a better provider of certainty, such as internal homogeneity and norms that strongly support intergroup hostility. Here, in an effort to further explore the roots of the tendency to accentuate the difference between “us” and “them” that is central to extreme attitudes and behaviors, we explore the role of another factor that should increase a group’s ability to provide its members with certainty: perceived group status. Specifically, we report the results of two studies aimed at examining the hypothesis that individuals with a high need for closure should differentiation more extremely between ingroup and outgroup—in favor of the ingroup—when they perceive the ingroup to be higher in status relative to outgroups.

In our first study, we found correlational evidence that uncertainty-averse Whites accentuate evaluative differences between the ingroup and Blacks and Latinos when they perceived the ingroup to have greater relative status. To
more explicitly examine the causal role of status, we experimentally manipulated perceived group status in a second study. This experiment revealed that participants high in the need for closure were also more polarized in their evaluations of the ingroup and outgroup—with a bias in favor of the ingroup—when they were assigned to the high-status group. In addition, individuals with a high need for closure who were assigned to the high ingroup status condition showed a more extreme preference for working with fellow ingroup members in an employment setting.

Thus, these two studies provide persuasive evidence that people who experience the aversion to uncertainty characteristic of a high need for closure polarize more sharply in their views of the ingroup and outgroup when they believe the ingroup to have relatively high status. In doing so, they add to a growing body of evidence for the argument that variables related to the management of uncertainty may play an important role in extremizing intergroup attitudes and behaviors (Doosje, Loseman, & van den Bos, 2013; Esses, Mediano, & Lawson, 2013; Hogg & Adelman, 2013; Kruglanski et al., 2006). Qualifying this, however, our results also suggest that the tendency to differentiate between ingroup and outgroup in binary, Manichean fashion is not merely a function of individual differences, but an interactive function of individual differences and social structure. Hence, policies that target inequities in the social structure—or at least those that help provide equal-status in the context of intergroup contact (Allport, 1954)—might provide a way to mitigate the tendency for those high in the need for closure to differentiate more extremely between ingroup and outgroup.

Despite these contributions, we have not yet examined this issue in all possible ways. For example, our studies rely solely on explicit measures of intergroup differentiation. Nevertheless, studies using measures of the degree to which people implicitly associate groups with positive or negative attributes have also found a positive relationship between ingroup status and implicit bias (Jost et al., 2004; Rudman, Feinberg, & Fairchild, 2002). Thus, given that “group-centrism” appears to be the high-status default with respect to implicit biases as well, we would also expect individuals with a high need for closure to differentiate more extremely between ingroup and outgroup when they perceive the ingroup to have higher status. Future research should consider these implicit measures as alternative outcome variables, as well as subtle behavioral measures associated with implicit attitudes. Such subtle changes in behavior, such as physical distance or lack of eye contact, can create discomfort and make it less likely that people with different group identities will interact smoothly (Fazio & Olson, 2003). To illuminate how these tendencies play out in the real world, future research should also examine people’s explicit behavior in group settings with status differences, particularly in scenarios where valued resources must actually be allocated between groups and with respect to the actual extremist preferences that should follow from extreme intergroup differentiation.
On another front, findings suggesting that the need for closure promotes conformity with dominant cultural norms (e.g., Chiu et al., 2000; Fu et al., 2007) are also relevant to further exploration the hypotheses tested in the present study. In this vein, social norms should generally favor high-status groups—and the hierarchical status quo—in societies with long-standing systems of social inequality (Jost et al., 2004). Norms of this sort should reinforce the status-based “reality constraints” governing the extent to which group members can achieve certainty by favoring the ingroup. Indeed, support for these norms should be most pronounced among members of high-status, who are most likely to benefit from the hierarchical status quo (Sidanius & Pratto, 1999); this would contribute to the asymmetrical relationship between need for closure and group-centrism that we observe here. Nevertheless, to the extent that dominant cultural norms associated with social hierarchy play a role in this process, future research will need to zero in more carefully on the moderating role of individual differences in support for dominant norms favoring inequality. For instance, we may find that status-based asymmetries in the relationship between need for closure and group-centrism are more pronounced among individuals who endorse group-based hierarchy, but less pronounced among those with a more egalitarian outlook on intergroup relations.

This is not to say that our findings have no important implications for real-world intergroup relations and for policies to promote quality intergroup interaction. We found that people high in need for closure were more likely to evaluatively differentiate between racial ingroups and outgroups; we interpreted this effect as a result of an interaction between the uncertainty aversion typical of those high in need for closure and perceptions of larger social status differences. However, it is plausible that people may also use group evaluations and trait attributions to further justify existing status inequality. In other words, there may be a cyclical effect such that beliefs about group stereotypes and perceived status differences perpetuate and reinforce each other, especially for those high in need for closure who rely on such cues to determine their attitudes. Similarly, the dependent measures employed in Study 2 also suggest the potential for further polarization in views of the ingroup and outgroup and the perpetuation of social inequality. In this experiment, we found differences in participants’ preferences for future interactions with ingroup versus outgroup members. Assuming this preference for working with ingroup members translates to behavior, such an attitude would likely decrease intergroup contact. Members of high-status groups may thus self-segregate and deny themselves the opportunity to learn counter-stereotypical information about the outgroup—maintaining and even strengthening the extremity-feeding tendency to split the world into a “good” and a “bad” them. As noted above, to counter this, it may be necessary to institute policies that mitigate status differences between groups or at least the relevance of those differences in contact situations. Such implications demonstrate the importance of continuing research on the
dynamics of epistemic motivation and group status. By examining the effects of the uncertainty aversion associated with a high need for closure and perceived status differences on both attitudes and behavior, we should be better able to understand the implications for real-world intergroup hostilities in which extremism often manifests itself.

References


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