Perceiving Others’ Feelings: The Importance of Personality and Social Structure

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Abstract

Recent research has explored the relationship between social hierarchy and empathic accuracy—the ability to accurately infer other people’s mental states. In the current research, we tested the hypothesis that, regardless of one’s personal level of status and power, simply believing that social inequality is natural and morally acceptable (e.g., endorsing social dominance orientation, or SDO) would be negatively associated with empathic accuracy. In a sample of managers, a group for whom empathic accuracy is a valuable skill, empathic accuracy was lower for managers who possessed structural power and also for managers who endorsed social dominance, regardless of their structural power. Moreover, men were less empathically accurate than women, a relationship that may be explained by men’s higher SDO and greater structural power. These findings suggest that for empathic abilities, it matters just as much what you think about social hierarchies as it does where you stand within them.

Keywords

social dominance, hierarchy, power, empathy, empathic accuracy

Jay Gatsby, Ebenezer Scrooge, and Don Quixote, three of literature’s most famous protagonists, come from vastly different eras and places. Yet they share one notable feature. All three come from positions of extraordinary power and privilege—Gatsby, a member of New York City’s wealthy elite; Scrooge, a money lender; Quixote, a member of the Spanish nobility—and all three struggle to accurately understand the social world around them. Gatsby emerges as an aloof host with an unrealistic vision of the woman he pursues, Scrooge fails to sympathize with the needs of others until a supernatural experience forcibly changes his perspective, and Quixote exhibits an inability to see the world that borders on insanity. This tendency for privilege and status to come with an impaired understanding of other people’s experiences is not simply a literary trope. According to recent research, powerful or high-status individuals are—at least under some conditions—empathically challenged; they are ignorant of, and sometimes indifferent to, the feelings and thoughts of those around them (Galinsky, Magee, Inesi, & Gruenfeld, 2006; Hogeveen, Inzlicht, & Obhi, 2014; Kraus, Cote, & Keltner, 2010; Van Kleef et al., 2008). Despite this rich literature on how and when status and power impact empathic processes, little attention has been paid to whether one’s dispositional preferences regarding power, status, and social inequality bear on such processes. Regardless of their personal level of power, individuals vary in how comfortable they are with inequalities in the distribution of power. This individual difference has been fruitfully explored by researchers studying social dominance orientation (SDO), an ideological orientation grounded in the belief that social inequalities are appropriate and even preferable (Pratto, Sidanius, Stallworth, & Malle, 1994).

Because of SDO’s focus on group-based social hierarchies, its proponents tend to perceive other people not as individuals with idiosyncratic thoughts and feelings but as representatives of social groups (Carter, Hall, Carney, & Rosip, 2006; Tausch, & Hewstone, 2010). This focus on decoding group membership cues may hamper empathic abilities, which depend on being attuned to the exact information—people’s individuating mental states—that SDO deemphasizes. Based on this rationale, which we develop below, we tested the hypothesis that high-

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SDO individuals, regardless of their structural power, would display poorer empathic accuracy than their low-SDO counterparts.

**Empathy**

Empathy encompasses several distinct but related processes, including sympathy for another person (i.e., empathic concern; Davis, 1983) and the ability to accurately infer someone else’s mental states (i.e., empathic accuracy; Ickes, Stinson, Bissonenette, & Garcia, 1990; Levensen & Reuf, 1992). We focus on the latter construct. Empathic accuracy requires actively attending to the thoughts, feelings, and needs of others as well as their social context (Kraus et al., 2010). It facilitates many aspects of social life, namely, the fulfillment of individual goals (e.g., Gleason, Jensen-Campbell, & Ickes, 2009; Lorimer & Jowett, 2009; Papp, Kouros, & Cummings, 2010; Simpson et al., 2011; Verhofstadt, Buysse, Ickes, Davis, & Devoldre, 2008), affect regulation (e.g., Simpson et al., 2011), therapeutic success (e.g., Rogers, 1957), effective social support (Verhofstadt et al., 2008), and positive relationship outcomes (e.g., Gleason et al., 2009; Haugen, Welsh, & McNulty, 2008; Kilpatrick, Bissonenette, & Rusbult, 2002; Lorimer & Jowett, 2009; Verhofstadt et al., 2008).

Several theoretical frameworks describe the neural and biological basis of empathic processes (e.g., Bartz et al., 2010; Decety & Chaminade, 2003; Keysers & Gazzola, 2007; Levenson & Reuf, 1992; Preston & de Waal, 2002; Zaki, Weber, Bolger, & Ochsner, 2009), and research suggests that many factors contribute to variation in empathic accuracy. These predictors include (1) motivational forces (e.g., the need to belong; Pickett, Gardner, & Knowles, 2004), (2) situational cues (e.g., attraction; Ickes et al., 1990), (3) individual or group differences, such as gender (Klein & Hodges, 2001; Stinson & Ickes, 1992), education level (Thomas, Fletcher, & Lange, 1997), self-monitoring (Ickes et al., 1990), and culture (Ma-Kellams & Blascovich, 2012), and (4) relationship-specific factors (e.g., relationship length; Marangoni, Garcia, Ickes, & Teng, 1995; Thomas et al., 1997).

**Power and Empathic Accuracy**

In the study of empathic accuracy, one factor that has garnered increasing attention is social power. A growing body of research has compellingly demonstrated that power can affect various empathy-related outcomes. The empirical literature is mixed, with three types of findings emerging. First, there is evidence that power can decrease empathic accuracy, principally by increasing egoistic focus. For example, people who are made to feel powerful relative to others exhibit less perspective taking and worse empathic accuracy (Galinsky et al., 2006). They also display reduced motor resonance, a neural response to observing others engaging in action (Hogeveen et al., 2014). Motor resonance is thought to support effective motor simulation (Hogeveen et al., 2014) and empathy (Preston & de Waal, 2002). Consistent with these findings, additional research has shown that individuals who are higher in socioeconomic status (SES) also display poorer empathic accuracy when compared to lower SES individuals (Kraus et al., 2010). Second, Schmid Mast, Jonas, and Hall (2009) found support for the view that power can increase empathic accuracy if the powerful person feels responsible for the people over which she or he has influence. Third, some researchers have argued that power can either increase or decrease empathic accuracy depending on an individual’s goals: For individuals who strive to be empathic, power increases empathic accuracy; for those who do not hold this goal, power decreases accuracy (Cote et al., 2011).

**Ideology, SDO, and Social Cognition**

Beyond the effect of having power, there is reason to suspect that one’s ideological beliefs about power, particularly about social inequality, may be important for empathic accuracy. Researchers working within the ideology-as-motivated-social-cognition framework (Jost & Amodio, 2012) have theorized, and shown, that ideologies are shaped by basic motivational drives (e.g., uncertainty reduction, threat management) and predict a host of motivated thoughts and behaviors. Consequently, people who differ in ideology also differ in basic social–cognitive processes, such as sensitivity to emotions (Helzer & Pizarro, 2011; Hodson & Costello, 2007; Inbar, Pizarro, & Bloom, 2009; Inbar, Pizarro, Knobe, & Bloom, 2009; Terrizzi Jr., Shook, & Ventis, 2010; Tybur et al., 2010) and accuracy in processing novel and unexpected information (Amodio, Jost, Master, & Yee, 2007). Ideologies can also have personal consequences, affecting relational outcomes and social functioning (for review, see Schlenker, Chambers, & Le, 2012).

If ideology shapes social–cognitive processes in ways that impact social functioning, then SDO is a prime candidate to potentially shape empathic accuracy. Individuals who endorse SDO beliefs regard some groups as naturally superior to others, view group-level inequality as inevitable and morally acceptable, and tend to pursue occupations that enhance or affirm existing social inequalities (Pratto et al., 1994). Individual differences in SDO affect many intergroup behaviors (Levin, Federico, Sidanius, & Rabinowitz, 2002; Sidanius, Pratto, & Mitchell, 1994) and perpetuate oppression, inequality, and group-based conflict (Guimond, Dambrun, Michinov, & Duarte, 2003; Pratt et al., 2000). Critically, SDO beliefs shape social perception. High-SDO individuals tend to see the social world in terms of groups, seeing people not as individuals but as representatives of their social categories. High-SDO individuals tend to believe that boundaries between social groups are clear (Haslam & Levy, 2006) and that race is a fundamental and biologically determined—rather than socially constructed—category (Williams & Eberhardt, 2008). Accordingly, they tend to perceive people in terms of their group memberships rather than their individual characteristics. Indeed, high-SDO individuals are especially prone to making group-based stereotypes (Carter et al., 2006; Tausch, & Hewstone, 2010) and resist...
changing their stereotype-based judgments when presented with disconfirming information (Tausch & Hewstone, 2010). High-SDO individuals use these stereotypes to legitimate group-based status differences (Pratto et al., 1994) and to support prejudiced attitudes toward lower status groups (Guimond et al., 2003; Whitley, 1999).

To make stereotype-based inferences, one must attend to group membership cues, such as age, gender, or race. People’s thoughts and feelings are irrelevant and attending to them may even interfere with group-level generalizations. Not surprisingly then, high-SDO individuals report making relatively few attempts to understand another person’s point of view (Nicol & Rounding, 2013). They also report experiencing infrequent and diminished feelings of empathic concern (Chiao, Mathur, Harada, & Lipke, 2009; Heaven & Bucci, 2001; McFarland, 2010; Nicol & Rounding, 2013; Pratto et al., 1994). In short, high-SDO individuals seem to neglect individuating information about other people and care less about other people’s experiences. Do these tendencies translate into an impaired ability to read other people’s mental states?

If high-SDO individuals focus on group diagnostic cues, they may be particularly poor at attending to idiosyncratic cues that signal what someone is thinking or feeling. Empathic accuracy typically entails decoding nonverbal cues (e.g., eye gaze, facial muscle movements) that signal subtle, transient, shifts in thoughts and feelings. A high-SDO individual may, for example, be quick to decode cues that a person is middle-aged, Caucasian, and female but be relatively oblivious to her changes in eye gaze or her fleeting expression of emotion. In this way, by engendering a chronic fixation on group membership cues, SDO may interfere with empathic accuracy.

**The Present Study**

In the present study, we explored whether SDO relates to empathic accuracy, over and above any potential effect of power. We tested our hypothesis in a sample of real managers, a highly relevant group that has a number of advantages over typical student samples.

First, SDO may be well represented in management positions, as high-SDO individuals tend to value power and status (Duriez & Van Hiel, 2002; Duriez, Van Hiel, & Kossowska, 2005) and tend to attain high-status roles (e.g., emerging as group leader; Son Hing, Bobocel, Zanna, & McBride, 2007). Moreover, empathic accuracy is central to many challenges of management. A manager who lacks empathic accuracy may struggle in numerous ways, from failing to detect dissatisfaction among subordinates to missing opportunities to create and claim value in negotiations (Elfenbein, Foo, White, Tan, & Aik, 2007; Galinsky, Maddux, Gilin, & White, 2008; Neale & Bazerman, 1983). Poor empathic accuracy among managers could have concrete organizational consequences, including inefficient coordination among team members, less satisfied subordinates (at least for female managers; Byron, 2007), suboptimal negotiations (Elfenbein et al., 2007; Galinsky et al., 2008; Neale & Bazerman, 1983), and general deficits in workplace performance (Elfenbein & Ambady, 2002; Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979). Clearly, there are many incentives for managers to be good at reading other people’s mental states. If high-SDO managers nevertheless struggle with empathic accuracy, this finding would underscore the importance of accounting for dispositional preferences for social hierarchy when trying to predict differences in empathic accuracy.

Moreover, by studying managers, we were able to assess natural variation in the actual power that individuals possess within their organizations. By studying power in an ecologically valid way, we could test the replicability of previous studies of power and empathic accuracy, which have typically relied on lab-based manipulations of power in student samples (Galinsky et al., 2006; Hogeveen et al., 2014; cf. Cote et al., 2011; Schmid Mast, Jonas, & Hall, 2009).

We made two primary predictions about the empathic accuracy of managers. First, based on the findings of past research (Galinsky et al., 2006; Hogeveen et al., 2014), we predicted that having power in one’s organizational role, which we assessed in terms of the number of subordinates a manager has and the authority the manager has over those subordinates, would be associated with poorer empathic accuracy. Second, we predicted that managers who score high on SDO would also show poorer empathic accuracy. By examining both power and SDO, we were able to test the prediction that SDO relates to empathic accuracy over and above any effect of power. We also measured two control variables. First, we measured SES (education and family income) to test whether the predicted relationships were independent of any potential relationship between empathic accuracy and SES (Kraus et al., 2010). Second, because our measure of empathic accuracy featured some fairly uncommon words (e.g., aghast), we measured participants’ verbal knowledge to rule it out as a potential confound.

**Method**

**Participants**

In targeting a manager sample, we used the same methodology used by Sherman et al., (2012, Study 2). Specifically, we recruited from several executive education programs at Harvard (designed for public-sector professionals) and also from the greater Boston area. Managers were those who answered yes to the question “Are you responsible for managing others?” (n = 84). Individuals who were not fluent in English (n = 2) were excluded, leaving a final sample of 82 managers (63 male; M_{age} = 44.68, SD_{age} = 6.72; range = 30–59).

**Criteria for Outlier Exclusion and Data Transformation**

For all variables, we set a priori thresholds for identifying outliers and extreme skewness. We set an outlier threshold of the mean ± 3 SDs. Although we excluded any outliers from analysis involving that variable, we also report whether the results were different if the outliers were included. We also transformed variables for which skewness exceeded 3 (Kline,
The only variables to exceed this threshold were the two quantitative estimates of power (number of subordinates).

**Primary Measures**

**Empathic accuracy.** Participants completed the revised “Reading the Mind in the Eyes” test (the Eyes test: Baron-Cohen, Wheelwright, Hill, Raste, & Plumb, 2001). In each of the 36 trials, participants were shown an photograph of an individual’s eye region and indicated which of four words best described the target’s current mental state (see Figure 1 for a sample trial). Performance was measured as the number of correct responses (Kuder–Richardson 20 coefficient \(r = .86\)). There was one outlier on this measure.

**SDO.** Participants completed the 14-item SDO scale (Pratto et al., 1994). Participants indicated their degree of positivity versus negativity toward each statement (e.g., “Some people are just inferior to others.”) using a 7-point scale (1 = very negative, 7 = very positive). Items were averaged into a composite (\(\alpha = .87\)). There were no outliers on this measure.

**Number of subordinates.** Participants answered the following two questions: “How many people do you, yourself, manage?” and “How many people are subordinate to you within your line of management (i.e., direct and indirect reports)?” These two measures differ in subtle but potentially meaningful ways. For someone scoring high on the first measure (direct reports), power comes from directly overseeing and managing many subordinates (making empathic abilities highly relevant). Someone scoring high on the second measure (total subordinates), however, may occupy an elevated but relatively detached position in the hierarchy (with many total subordinates but perhaps few to directly oversee). Because these variables were positively skewed (skewness values of 4.85 and 4.14, respectively), responses were log-transformed, successfully reducing skew (the skewness values of the transformed variables were 1.22 and .12, respectively). There were two outliers on the number of direct reports variable. Given their modest correlation (\(r = .30\)) and interesting conceptual differences, we kept the two variables separate rather than aggregate them.

**Authority over subordinates.** Participants responded to the following four statements: “I can punish or reward subordinates,” “I can promote or demote subordinates,” “I am expected to motivate my subordinates,” and “I supervise subordinates and evaluate or correct their work as necessary” (7-point scales: 1 = much less than others in my organization, 7 = much more than others in my organization). Items were averaged into a single authority composite measure (\(\alpha = .86\)). There was one outlier on this variable.

**Control Measures**

**Verbal knowledge.** A large subset of participants (\(n = 63\)) completed 29 items from the vocabulary subtest of the Wechsler Adult Intelligence Scale, Third Edition (Wechsler, 1997). Participants were shown a word and asked to define it. Performance was untimed, and participants completed the task at their own pace. Performance was scored, following the scoring manual (each definition scored from 0 to 2) by two coders (intercoder reliability was .70). There were no outliers on this measure.

**Socioeconomic status.** Participants indicated their education level (1 = high school, 2 = some college, 3 = 2-year degree, 4 = 4-year degree, 5 = post-graduate/professional degree, or other), and family income (1 = US$0–US$24,999, 2 = US$25,000–US$49,999, 3 = US$50,000–US$74,999, 4 = US$75,000–US$99,999, 5 = US$100,000–US$149,999, 6 = US$150,000–US$249,999, 7 = US$250,000–US$499,999, 8 = US$500,000+). Because these two measures were not highly correlated (\(r = .37\)), we kept them separate rather than aggregate them. There were two outliers on the education measure.

**Results**

**Power, SDO, and Empathic Accuracy**

Of the 36 trials in the empathic accuracy task, participants, on average, provided a correct response on approximately 26 trials (\(M = 26.10, SD = 3.73\)). Bivariate correlations among the primary variables (see Table 1) revealed that empathic accuracy was negatively associated with SDO (\(r = -.28, p = .01\)) and with authority (\(r = -.22, p = .05\)). These relationships are depicted in Figure 2. Empathic accuracy was unrelated to the two quantitative measures of power (\(ps > .86\)). SDO and authority were unrelated (\(r = -.05, p = .64\)), suggesting that each was independently related to empathic accuracy. We tested this independence using follow-up regression analyses that focused specifically on these two significant correlates of empathic accuracy. To account for the potential influence of demographic variables, we tested a three-step regression model, entering age, education level, and family income in Step 1,\(^2\) adding authority in Step 2, and then adding SDO in Step 3. The Step 1 model was nonsignificant, \(F(3, 75) = .54, p = .65, R^2 = .02\). In Step 2, however, the addition of authority produced a marginally significant increase in the variance...
explained \((R^2\) change = .047, \(F(1,74) = 3.71, p = .058\)), indicating that it was a marginally significant negative predictor of empathic accuracy \((\beta = -.24, p = .058)\). Finally, our primary hypothesis was supported in Step 3: The addition of SDO significantly increased the amount of variance explained, \(R^2\) change = .083, \(F(1,73) = 6.60, p = .009\). In this final model, both authority and SDO were significant negative predictors of empathic accuracy \((\beta = -.30, p = .009, for SDO; \beta = -.24, p = .049, for authority)\). Thus, SDO predicted poorer empathic accuracy over and above the effect of having authority. Neither relationship varied significantly as a function of the gender of the target in the empathic accuracy task. Moreover, the results were unchanged if verbal knowledge (a factor relevant to understanding mental state terms) was added as a control variable in Step 1 and if all outliers were included. Finally, if the control variables were removed altogether (leaving a 2-step model), the results were similarly unchanged. In Step 1, with authority as the sole predictor, authority remained a significant negative predictor \((\beta = -.23, p = .04, R^2 = .05)\). The addition of SDO significantly increased the amount of variance explained, \(R^2\) change \(= .083, F(1,76) = 7.33, p = .008\), and both variables predicted empathic accuracy \((\beta = -.29, p = .008, for SDO; \beta = -.21, p = .05, for authority)\).

### Discussion

In the current research, we tested whether the empathic accuracy of managers was related to their beliefs about social
inequality, regardless of their structural power. We found that the more managers endorsed social inequality, and the more they held authority over subordinates, the more they struggled to accurately infer the mental states of target individuals in static photographs. These relationships were not explained by age, SES, or verbal knowledge. Thus, the study identifies a stable personality characteristic on which managers vary that can predict empathic accuracy. Moreover, these results show that managers need not have great power to display poor empathic accuracy. For empathic accuracy, it matters just as much what you think about the existence of social hierarchies as it does where you stand within those hierarchies.

These findings are consistent with the results of studies showing that temporarily boosting one’s sense of power via short-lived laboratory manipulations can decrease perspective taking and empathic accuracy (Galinsky et al., 2006; Hogeveen et al., 2014). The present findings extend this work by showing that this pattern applies to power that arises from occupying a management position within an organization.

Multiple causal pathways could contribute to the relatively low empathic accuracy of high-SDO individuals. First, by encouraging people to ignore the individuating traits of other people, SDO may directly impair empathic accuracy. Second, impairments in empathic abilities may predispose one to SDO. Indeed, it may be easier to accept social inequalities if one is largely blind to other people’s mental states. Conversely, people who are highly attuned to what others are thinking and feeling may readily perceive the impact of such inequalities on lower status individuals and groups. As a result, they may find inequalities harder to justify. Future experimental research is needed to explore these possibilities.

The present study also contributes to our understanding of the link between gender and SDO. We found that high-SDO managers struggled to decode the mental states of both men and women, suggesting that the empathy deficit of high-SDO individuals does not depend on the target’s membership in a low-status group. Yet the perceiver’s gender did matter: Men were less accurate than women. Although this finding is consistent with past research (Galinsky et al., 2006, Study 3; Hall, 1978), gender differences in empathic accuracy may not be hard-wired but rather due to more fluid contextual and individual difference variables, such as empathic motivation (Hall & Mast, 2008; Ickes, Gesn, & Graham, 2000; Klein & Hodges, 2001). That men tended to struggle with empathic accuracy, have more power, and score higher on SDO points to several possible causal explanations. Perhaps the psychological changes that come with possessing authority or endorsing social inequality make men less empathically accurate. Alternatively, men’s lower empathic accuracy may facilitate their attainment of high-authority positions, especially if ignorance of other people’s mental states reduces the aversiveness of certain interpersonal tasks that are central to such positions, such as demoting or firing a subordinate.

The current findings align with recent work highlighting the interpersonal manifestations of SDO. SDO research has typically focused on intergroup dynamics—how the thoughts, feelings, and behaviors of high-SDO individuals help sustain inequality between groups (for a review, see Ho et al., 2012). An exception is a recent study that tested a related but distinct component of empathy: empathic concern (Sidanius et al., 2013). Individuals who were lower in compassion and empathic concern tended to exhibit higher levels of SDO. The current findings and those of Sidanius et al. (2013) suggest that SDO has both intergroup and interpersonal ramifications.

Our sample of real managers had a number of strengths, including ecological validity. Nevertheless, our sample size was relatively small, an important limitation. Future research must replicate these findings in larger and more diverse samples.
manager samples. Doing so will increase confidence in the magnitude and generalizability of the observed relationships.

This limitation notwithstanding, the fact that these observed relationships emerged among real managers highlights the potential impact on organizations. SDO and authority are highly relevant factors within organizational hierarchies. High-SDO individuals value power and status (Duriez & Van Hiel, 2002; Duriez et al., 2005) and may pursue management roles frequently and successfully (Son Hing et al., 2007). Whether they rise to the top or remain in low-level managerial roles, they may struggle with tasks that depend on accurately inferring what other people are thinking and feeling.

More broadly, these findings contribute to a growing body of work on social intelligence (Goleman, 2006) and its predecessor, emotional intelligence (Goleman, 1995; Salovey & Mayer, 1989; Ickes, 1997, 2003). Although emotional and social intelligence differ in their level of analyses (emotional intelligence focuses on intra-individual forces whereas social intelligence focuses on interindividual connections), the ability to accurately understand others’ experiences plays a crucial role in both, impacting individuals’ social adjustment across numerous life domains (Goleman, 1995). Importantly, empathic accuracy is a particularly powerful predictor of leadership outcomes (see Goleman & Boyatzis, 2008, for review). This relationship, considered alongside our findings, suggests that people’s dispositional preferences regarding hierarchy and their level of structural power may have implications for their success in leadership roles.

In sum, our findings reveal that one’s abstract belief system—whether one believes that social inequality is morally acceptable or not—is associated with one’s capacity to empathize. This knowledge advances both theory and practice, illuminating a novel factor relating to empathy and providing concrete guidance to those striving to build successful organizations.

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Notes

1. Since the individual items are binary (0 = incorrect, 1 = correct), the measure of internal consistency is the Kuder–Richardson 20 coefficient (KR-20: a special case of Cronbach’s alpha, Kuder & Richardson, 1937). When test items vary in difficulty, as was the case here (the easiest item was answered correctly by 90% of participants; the hardest by 31%), the KR-20 underestimates the true reliability of the test (Gulliksen, 1945; Guttman, 1945). The reliability estimate for the Eyes test in our study was comparable to previous estimates (e.g., Gooding & Pflum, 2011; Vellante et al., 2012). To further examine the reliability of the Eyes test, we performed confirmatory factor analysis (CFA), testing a single-factor model (all items loading onto a single latent variable). Using the lavaan package (Rosseel, 2012) for R (R Core Team, 2014), we conducted CFA using the robust weighted least squares method (the WLSMV estimator; Muthén, 1984), which is designed to handle dichotomous indicators. The single-factor model had good fit as indicated by the nonsignificant chi-square statistic ($\chi^2 = 618.07, df = 594, p = .24$) and by the root mean square error of approximation ($\rho_{RMSEA} = .022; 90\%$ confidence interval $= [.00, .043]$; Browne & Cudeck, 1993). The good fit of the single-factor model is consistent with evidence that the Eyes test relates to other measures of social cognition (de Achaval et al., 2010; Medina-Pradas, Blas Navarro, Alvarez-Moya, Grau, & Obiols, 2012), has good test–retest reliability (Fernández-Abascal, Cabello, Fernandez-Berrocal, & Baron-Cohen, 2013; Hallerbäck, Lugnegård, Hjärthag, & Gillberg, 2009; Vellante et al., 2012; Yildirim et al., 2011) and has been successfully used cross-culturally (Adams et al., 2010; Bora et al., 2005; Havet-Thomassin, Allain, Etcherry-Bouyx, & Le Gall, 2006; Kunhihira, Senju, Dairoku, Wakabayashi & Hasegawa, 2006).

2. Verbal knowledge was not included in the model. Because only a subset of participants took the measure, its inclusion would have sacrificed both power and the robustness of the model. Nevertheless, as we report later, when we run the model with verbal knowledge added in Step 1, the results are unchanged (in Step 3, both authority and SDO were statistically significant predictors).

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