Supporting Information

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SI Methods

Faux Pas Stories Task. Participants were given an abbreviated version of the faux pas story task (1). In this task, participants were presented with short stories and then were asked whether anyone in the story said something awkward. Participants were scored based on their ability to correctly identify whether a faux pas occurred and, if one did occur, to correctly answer a series of questions about the mental states of the characters in the story. Participants also were asked a series of control questions to ensure that they were paying attention. Each participant was shown four stories in which a faux pas did occur and two control stories in which no faux pas occurred.

PCL-R Factor Scores. Some investigators advocate parsing psychopathy into dimensional traits so that a more nuanced assessment of relevant correlates may be identified (2). Early work with the PCL-R revealed a replicable two-factor structure with factor 1 items assessing interpersonal–affective traits (e.g., glib, callous, superficial charm, blunted affect) and factor 2 items relating to impulsive–antisocial behavior (e.g., irresponsible, impulsivity, poor behavior control, criminality) (3). In the present study, interrater reliability for PCL-R factor 1 scores and PCL-R factor 2 scores were 1.00 and 0.99, respectively.

Data Analysis.

Faux pas stories. Two ratio scores were generated for each story: faux pas detection and belief. First, the faux pas detection score was calculated by creating sums for the faux pas and controls stories from the questions "Did anyone say something they shouldn't have said?" and "Who said something they shouldn't have said?" (1 = correct, 0 = incorrect), and then dividing by the number of correct control questions for faux and control stories (Perfect Faux Pas Detection Score = 1.0). Any story on which a control question was incorrect was not included in the sum. Second, the belief score was calculated by summing the score from the question "Did x know that y?" (1 = correct, 0 = incorrect) for each faux pas and control story, then dividing that sum by the number of correct control questions for faux pas and control stories (perfect score for this "belief" ratio = 1.0). The belief score represents whether the participant could accurately track the story characters' knowledge and belief states, viewing the faux pas as unintentional.

PCL-R factors. We ran two types of models using the PCL-R factors. First, to examine the independent associations between the factors and task performance, we used two separate repeated-measures GLM with interference type (altercentric vs. egocentric) as a within-subjects factor and factor 1 scores and Shipley IQ (z-scored) as continuous covariates, and a second GLM with factor 2 scores with Shipley IQ (z-scored) included as continuous covariates. Second, to examine the unique associations between the factors and task performance, we used a GLM with interference type (altercentric vs. egocentric) as a within-subjects factor and factor 1, factor 2, and Shipley IQ as simultaneous continuous covariates (all z-scored).

SI Results

Faux Pas Stories. To confirm that participants high on psychopathy were able to engage in controlled ToM (i.e., when deliberately asked to do so), we examined responses to faux pas stories. Consistent with hypotheses and previous research, there was no PCL-R score-related difference in ability to detect the occurrence of a faux pas on the stories [B = −0.004, SE = 0.002, 95% CI (−0.008, 0.0010, $z = -1.42$, $P = 0.150$). Notably, participants high on the PCL-R were less likely to view the faux pas as unintentional [B = −0.003, SE = 0.002, 95% CI (−0.006, −0.001), $z = -2.33$, $P = 0.020$]. That is, although participants high on the PCL-R were able to notice when a faux pas occurred, they perceived this behavior as intentional. Moreover, altercentric interference on the Visual Perspective Taking Task mediated the relationship between PCL-R scores and belief that something intentional occurred [indirect effect: 0.0004, SE = 0.0003, 95% CI (0.0001, 0.0014)], suggesting that for participants with higher PCL-R scores, their reduced altercentric interference accounts for their difficulty in accurately tracking the knowledge and belief states of others.

PCL-R Factor Effects. For the independent effect of factor 1 scores, there was no main effect of PCL-R factor 1 [$P = 0.157$, 95% CI (0.000, 0.098)]. Moreover, the interaction between interference type and factor 1 was not significant [$F(1, 103) = 3.45$, $P = 0.066$; 95% CI (0.000, 0.123)]. Given the a priori prediction related to altercentric interference, we examined the simple main effects within interference type. Like the PCL-R total score, PCL-R factor 1 score was significantly and negatively associated with altercentric interference [B = −0.005, SE = 0.002, 95% CI (−0.010, −0.001), $z = -2.16$, $P = 0.031$]. PCL-R factor 1 was unrelated to egocentric interference [B = 0.000, SE = 0.002, 95% CI (−0.004, 0.005), $z = 0.06$, $P = 0.949$].

For the independent effect of factor 2 scores, there was no main effect of PCL-R factor 2 [$P = 0.064$, 95% CI (000, 0.126)]. Moreover, the interaction between interference type and factor 2 was not significant [$F(1, 101) = 0.245$, $P = 0.622$; 95% CI (0.000, 0.068)]. Examination of the simple main effects within interference type, revealed that PCL-R factor 2 score was not associated with altercentric interference [B = −0.004, SE = 0.002, 95% CI (−0.008, 0.001), $z = -1.66$, $P = 0.094$] or egocentric interference [B = −0.002, SE = 0.002, 95% CI (−0.006, 0.002), $z = -1.69$, $P = 0.242$].

Finally, the simultaneous-effects model of the factors revealed no significant interactions between interference type and factor 1 [$P = 0.120$, 95% CI (0.000, 0.109)] or factor 2 [$P = 0.839$, 95% CI (0.000, 0.017)]. Moreover, none of the simple main effects for either factor were significant [factor 1 altercentric: B = −0.012, SE = 0.009, 95% CI (−0.031, 0.006), $z = -1.34$, $P = 0.185$, factor 1 egocentric: B = 0.005, SE = 0.009, 95% CI (−0.012, 0.022), $z = -0.625$, $P = 0.533$; factor 2 altercentric: B = −0.009, SE = 0.009, 95% CI (−0.028, 0.009), $z = -0.980$, $P = 0.329$, factor 2 egocentric: B = −0.012, SE = 0.009, 95% CI (−0.029, 0.006), $z = -1.32$, $P = 0.188$].

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