



# Seeing and Feeling Your Way to Accurate Personality Judgments: The Moderating Role of Perceiver Empathic Tendencies

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## Abstract

Empathy, the practice of taking and emotionally identifying with another's point of view, is a skill that likely provides context to another's behavior. Yet systematic research on its relation with accurate personality trait judgment is sparse. This study investigated this relation between one's empathic response tendencies (perspective taking, empathic concern, fantasy, and personal distress) and the accuracy with which she or he makes judgments of others. Using four different samples ( $N = 1,153$ ), the tendency to perspective take ( $d_s = .23-.27$ ) and show empathic concern ( $d_s = .28-.42$ ) were all positively related meta-analytically to distinctive accuracy, normative accuracy, and the assumed similarity of trait judgments. However, the empathic tendencies for fantasy and personal distress showed more complex patterns of relation. These findings are discussed in relation to previous literature, and in particular, why it is reasonable for empathy to be related to the accuracy of trait judgments.

## Keywords

judgment accuracy, good judge, interpersonal reactivity, empathy, social accuracy model

Does the *good judge*, someone who consistently sees others with a greater degree of accuracy, really exist? If so, what skills might underlie this ability? Anecdotally, we have all thought and maybe even said: *If only you could see my point of view!* Is there some legitimacy to this proposition? Do individuals with higher empathy form more accurate impressions of the personalities of others? In other words, does the ability to understand and identify with another's perspective provide an avenue for attaining consistently accurate judgments of personality? Empathy, the practice of taking and emotionally identifying with another's point of view, is a key skill exhibited by socially adept individuals (Riggio, Tucker, & Coffaro, 1989) and holds important consequences for interpersonal relations (Eisenberg & Fabes, 1990; Feshbach, 1975; Rothenberg, 1970).

Empathic accuracy, the ability to accurately infer the thoughts and feelings of others (Hodges, Lewis, & Ickes, 2015; Ickes, 1993), has been theorized to be the focal connection between empathy and interpersonal judgments. This skill has been suggested as a "prerequisite to the accurate perception of traits" (Ickes, 1993, p. 587). Yet the empirical link between empathic accuracy and trait judgment accuracy is tenuous, given the difficulty and complexity of the required research designs. Furthermore, the few studies that have simultaneously examined empathic accuracy and trait judgment accuracy reveal inconsistent results (Flury, Ickes, & Schweinle, 2008; Lewis, 2014; Thomas, 1999). Alternatively, research has attempted to identify the relation between empathy and the

good judge. This research suggests that measures of individual differences in empathy are inconsistent in the prediction of empathic accuracy (Davis & Kraus, 1997; Hodges et al., 2015; Zaki, Bolger, & Ochsner, 2008), however, some evidence exists indicating a positive relation with trait accuracy (Bernstein & Davis, 1982; Hall, Goh, Mast, & Hagedorn, 2015).

Such a pattern of results is not surprising, given the levels of measurement across these constructs. Specifically, measures of empathy are predominately interested in trait-level rather than state-level aptitude. However, empathic accuracy is inherently a state-focused paradigm, in that the interest is in the ability to identify transient affect, thoughts, and feelings. Therefore, measurement specificity might be a key reason for the attenuated relation between empathy and empathic accuracy, but the somewhat more consistent relation with trait accuracy. Thus, *if* empathic accuracy is related to trait judgment accuracy *and* individual difference measures of empathic ability are valid (e.g., Davis, 1983; Mehrabian & Epstein, 1972), *then* such

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measures should be related to trait judgment accuracy. Given this logic, this article provides a much-needed systematic empirical investigation with large sample sizes of the association between judges' empathic response and the accuracy of personality judgments.

The search for the good judge of personality began in the early 20th century (e.g., Adams, 1927; Allport, 1937) then faded by mid-century due to methodological issues (see Cronbach, 1955). But research has renewed toward an understanding of accurate interpersonal perceptions (see Back & Nestler, 2016, for a review), and evidence has accumulated for the existence of the good judge in particular (e.g., Christiansen, Wolcott-Burnam, Janovics, Burns, & Quirk, 2005; Letzring, 2008). With this renewed interest came new approaches to understanding interpersonal judgment. One conceptual framework is the realistic accuracy model (RAM; Funder, 1995), which describes a four-stage process in which the person being perceived (i.e., target) makes cues that are *relevant* to the trait *available* for the person making the perceptions (i.e., judge) to *detect* and correctly *utilize*.

The crux of early critiques on person perception research was that accuracy is composed of numerous components, which should be evaluated individually rather than as one latent construct (Cronbach, 1955). Herein we focus specifically on (a) distinctive accuracy—the ability to judge others' unique level of traits, (b) normative accuracy—the degree of correspondence between ratings of targets' characteristics and an estimate of the *normative* target, and (c) assumed similarity—the degree of projection of one's self-perceived personality when judging others. All three of these components contribute to judgments of personality and are reasoned to be associated with judge's empathic tendencies, although no a priori hypotheses were made.

Literature on empathy has developed on two separate but related conceptualizations of the construct: one of a cognitive and intellectual nature and the other of emotional and visceral responses (Davis, 1983). However, a merger of these traditions has led to understanding empathy as a multidimensional construct (Davis, 1983; Deutsch & Madle, 1975), for which the Interpersonal Reactivity Index (IRI; Davis, 1980) is arguably the most widely used measure. The IRI assesses four aspects of the empathic response to others—perspective taking, empathic concern, fantasy, and personal distress.

Perspective taking is a process by which one temporarily takes a point of view of another person in an effort to gain insight (Davis, 1983; Galinsky, Maddux, Gilin, & White, 2008), which might increase judges' detection of cues emitted by targets and should provide context for interpretation. Empathic concern is the tendency to experience feelings of concern and compassion for others by understanding of the target's emotional frame, while the fantasy scale assesses the tendency to imaginatively immerse oneself into the actions and feelings of fictional characters (Davis, 1983). Clearly these two domains are related, and thus it has been suggested that fantasy and empathic concern are largely differentiated by the locus of the emotional identification (e.g., real vs. fictitious other;

Nomura & Akai, 2012). Lastly, personal distress is marked by feelings of unease or anxiety in tense interpersonal situations (Davis, 1980, 1983), which is considered a negative indicator of the empathic response.

The RAM framework proposes that the availability of more information increases one's ability to make accurate judgments (Letzring, Wells, & Funder, 2006). Thus, a person with a greater proclivity for empathy should be able to detect and utilize more cues (e.g., thoughts and feelings of the target), which should result in more accurate judgments of traits. However, an early meta-analysis found that empathy (broadly defined) was not a reliable indicator of interpersonal judgment accuracy (Davis & Kraus, 1997). Yet it was recognized that a multifaceted approach to empathy might reveal reliable relations with interpersonal judgment accuracy. Indeed, a later meta-analysis revealed positive relationships between interpersonal sensitivity and the facets of empathic concern and perspective taking (Hall, Andrzejewski, & Yopchick, 2009).

The perspective-taking process has been shown to increase active listening (Wachi, Watanabe, Yokota, Otsuka, & Lamb, 2016), facilitate relations among in- and out-group members (Galinsky & Moskowitz, 2000; Wang, Tai, Ku, & Galinsky, 2014), and reduce both negative and positive stereotypes (Wang, Ku, Tai, & Galinsky, 2014), all of which are conduits for increasing the accuracy of interpersonal judgments. Indeed, Bernstein and Davis (1982) found that judges' tendency to perspective take was significantly related to their correct identification of three-word descriptors of targets. Bringing these findings together, perspective taking was found to increase self-other overlap (Galinsky & Moskowitz, 2000). Thus, it would be reasonable for perspective taking to be positively related to the use of assumed similarity in judgments of others. However, perspective taking increases perceived closeness not the overlapping representations of selves (Myers & Hodges, 2012). Therefore, it is conceivable those with a higher perspective-taking tendency perceive themselves less in others allowing for normative and distinctive accuracy to be greater.

Unlike perspective taking, the literature on the relationship of empathic concern, personal distress, and fantasy with trait judgment accuracy is extremely limited. However, research has shown that judges' awareness and recognition of emotions in others are related to accuracy of judgments based on textual information (Borkenau, Mosch, Tandler, & Wolf, 2014). In particular, those who engage in reading fiction novels more often, and thus could be assumed to score higher on the fantasy facet, as well as those with increased empathic concern were especially accurate in their judgments from text-based information (Hall et al., 2015). Given these findings, it would be reasonable to find an association for empathic concern and fantasy with trait accuracy.

Finally, from a conceptual standpoint, those with a greater personal distress tendency are more egocentrically focused on their negative reactions to the tense situation (Davis, 1983) and are thus less perceptive of targets. Therefore, individuals with greater personal distress are less likely to detect and correctly utilize relevant cues when making trait judgments

(Funder, 1999, p. 130). From this, one would expect a negative relationship between judges' propensity for personal distress and accuracy. However, neither state nor trait anxiety has been shown to effect the overall perceptions of a stimulus target's traits (Letzring, Rone, & Colman, 2016). Thus, it might also be reasonable for those high on the Personal Distress subscale to use available heuristics in their perceptions. Namely, seeing targets more normatively (increased normative accuracy) and as similar to themselves (increased assumed similarity) but less uniquely (decreased distinctive accuracy).

## Summary

The tendency to understand and sympathize with another's point of view is a theoretically important and integral part of the interpersonal perception process. Rationale as to why levels of interpersonal judgment accuracy should be associated with one's self-reported empathic tendencies have been presented. Perceptual components of interpersonal perception (i.e., normative accuracy, distinctive accuracy, and assumed similarity) are reasoned to be greater for those exhibiting greater proclivity for perspective taking, empathic concern, and fantasy. Less clear, however, is the relation with distress. On the one hand, greater levels of personal distress might produce a decrease in each perceptual component, while on the other hand, a decline in only distinctive accuracy could be expected. Given both the empirical evidence and conceptual arguments above, this study examined the relation between empathy and judgmental accuracy of traits using four different samples. Two of the samples were collected simultaneously—one via Amazon's Mechanical Turk (MTurk;  $n = 264$ , power = .91)<sup>1</sup> and one traditional college sample ( $n = 253$ , power = .90). The third ( $n = 433$ , power = .93) and fourth ( $n = 203$ , power = .82) samples were collected via MTurk in the context of other studies. All four samples were collected to primarily address questions unrelated to the current analyses.

## Method

All participants experienced a half-block design for the assessment of interpersonal judgment accuracy. Specifically, participants watched videos 3- to 5-min in length of an interpersonal interaction. Judges in Samples 1 and 2 watched a common set of six 5-min videos of individuals experiencing a mock job interview, which were created specifically for the project from which these samples were gleaned. Judges in Sample 3 watched ten 3-min videos (three of which were seen by participants in Samples 1 and 2), and judges in Sample 4 watched six 3-min videos (three were seen in Samples 1 and 2 and four were used in Sample 3). The stimulus videos in Samples 3 and 4 were selected to create variability across traits and for equal numbers of males and females. Altogether, 14 unique target videos were used that depicted individuals engaged in several situations (i.e., mock job interview, unstructured conversation, behavioral discussion, get-to-know-you conversation, and discussion of hobbies). Across samples, the general procedure

involved participants observing each video, providing impressions of each target's personality, and then completing self-report measures. Note that the IRI was among these self-report measures, and each instance was completed after the judgment phase of the procedure.

## Participants

A total of 1,153 participants were recruited from two sources: a university research pool for Sample 1<sup>2</sup> and MTurk for the other samples. All participants were required to correctly answer at least 80% of attention checks and complete at least 80% of the procedure. Research pool participants earned course credits and MTurk participants were compensated with US\$0.50 or US\$1.00 depending on sample. Table 1 displays sample characteristics.

## Measures

**Big Five Inventory (BFI).** The 44-item BFI (John, Naumann, & Soto, 2008) measures the big five personality traits of openness, conscientiousness, extroversion, agreeableness, and neuroticism, using short phrases of basic vocabulary on a Likert-type scale from 1 (*disagree strongly*) to 5 (*agree strongly*). This measure was used to capture self- and acquaintance-reported personality of the majority of targets used in this study as well as perceivers' judgments of those targets. Finally, judges rated their own personality using this measure. Internal consistency of self-reports from this study was considered adequate for each subscale ( $\alpha = .73-.88$ ).

**International Personality Item Pool (IPIP) version of the NEO Personality Inventory - Revised (NEO-PI-R).** Personality of two targets from Sample 3 and one target from Sample 4 was assessed using the IPIP (Goldberg et al., 2006) version of the NEO-PI-R facets (Costa & McCrae, 1992), which will be referred to as the IPIP-NEO-PI-R. This 300-item scale assesses the big five traits using ratings of single-item adjectives. A shortened, 60-item version was used by judges to decrease the burden and time needed to rate multiple targets. The 60 items were chosen such that 2 items for each facet were selected for each trait and balanced normal and reverse-scored items as much as possible. All ratings (i.e., targets' self-, acquaintance, and judgment ratings) were made on Likert-type scales ranging from 1 (*very inaccurate*) to 5 (*very accurate*).

**IRI.** The 28-item IRI (Davis, 1980) assesses four domains of the empathic response—perspective taking, empathic concern, fantasy, and personal distress—with seven questions each. Self-reports by judges were made on a Likert-type scale from 1 (*does not describe me well*) to 5 (*describes me very well*). Across all samples in this study, internal consistency was adequate for each subscale ( $\alpha = .75-.86$ ).

**Table 1.** Sample, Judge, and Target Characteristics.

Characteristic	Sample			
	1	2	3	4
Source of judges	Research pool	MTurk	MTurk	MTurk
<i>n</i> of judges	253	264	433	203
<i>n</i> of targets	6	6	10	6
Judge characteristics				
Age (SD)	22.08 (5.48)	35.54 (12.19)	37.46 (12.72)	39.16 (13.31)
Gender (n)				
Male	71	88	121	63
Female	182	173	307	138
Unknown	0	3	5	2
Ethnicity (n)				
Caucasian	201	210	351	161
Black/African American	2	19	28	13
Hispanic <sup>a</sup>	31	10	NA	NA
Asian	2	8	20	9
Other	17	17	34	20
Target characteristics <sup>b</sup>				
Age (SD)	20.83 (4.26)	20.83 (4.26)	23.50 (5.10)	21.67 (4.18)
Gender (n)				
Male	3	3	5	3
Female	3	3	5	3

Note. SD = standard deviation; MTurk = Mechanical Turk; NA = not applicable.

<sup>a</sup>This category was only included for Samples 1 and 2. It is assumed that an unknown proportion of the “other” category in Samples 3 and 4 were Hispanic.

<sup>b</sup>The same set of targets were used for Samples 1 and 2.

## Data Analytic Procedures

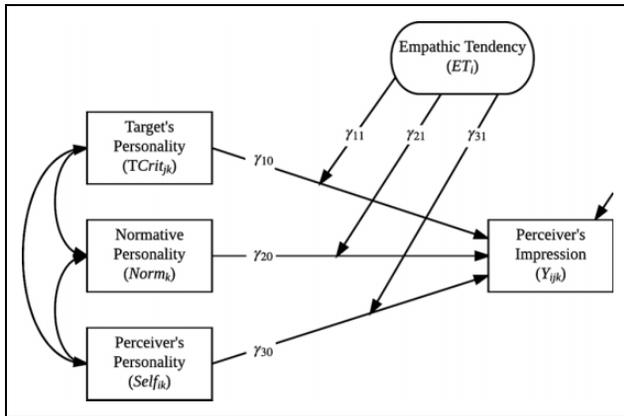
To examine the impact of empathic tendencies on the accuracy of personality judgments, the current study used the social accuracy model (Biesanz, 2010),<sup>3</sup> which allows for the simultaneous analysis of multiple components of interpersonal perceptions. The current study encompassed three perceptual components—distinctive accuracy, normative accuracy, and assumed similarity. Distinctive accuracy is the degree of correctness in judging others’ level of a trait compared to the normative level (Biesanz, 2010; Cronbach, 1955; Furr, 2008), and by extension also “denotes the perceiver’s ability to order the targets accurately on each trait” (Zebrowitz, 1990, p. 81), on average across personality traits. Normative accuracy is defined as the correspondence between the judge’s rating of targets and an estimate of the normative profile (Furr & Wood, 2013) and also reflects the favorability of impressions because the normative profile is highly favorable (Rogers & Biesanz, 2015). Finally, assumed similarity is the degree of correspondence between one’s own self-perceived personality profile and his or her judgments of the targets’ personality profile. The model is expressed using the following regression equation:

$$Y_{ijk} = \beta_{0ij} + \beta_{1ij}TCrit_{jk} + \beta_{2ij}Norm_k + \beta_{3ij}Self_{ik} + \varepsilon_{ijk}. \quad (1)$$

For this model,  $Y_{ijk}$  is judge  $i$ ’s rating of target  $j$  (the judge–target pair) on item  $k$  of the personality measure.  $TCrit_{jk}$  is the accuracy criterion for target  $j$  on item  $k$ . Considering the work of Kolar, Funder, and Colvin (1996), targets’ accuracy criteria

were derived by averaging his or her self-rating with the mean rating from two individuals (e.g., friends) who were acquainted with the target for at least 6 months.  $Norm_k$  is an estimate of the average personality profile for item  $k$  of the personality measure. This estimate was computed by averaging the criterion scores on item  $k$  of (a) the BFI across a different sample of 227 individuals or (b) the IPIP-NEO-PI-R across a sample of 184 individuals. Finally,  $Self_{ik}$  is judge  $i$ ’s self-rating on item  $k$  of the personality measure.<sup>4</sup> It is important to note that prior to analysis,  $Norm_k$  was subtracted from both  $TCrit_{jk}$  and  $Self_{ik}$ . Doing so adjusted  $TCrit_{jk}$  and  $Self_{ik}$  to match the definition of distinctive accuracy (how accurately judge  $i$  differentiates target  $j$  from the normative person) and assumed similarity (how judge  $i$ ’s personality is reflected in his or her assessment of target  $j$ , beyond the normative profile). After this adjustment, each predictor ( $TCrit_{jk}$ ,  $Norm_k$ , and  $Self_{ik}$ ) was grand mean centered.

Each of these Level 1 predictors were modeled as random effects. Specifically, the intercept ( $\beta_{0ij}$ ) is the average predicted value of judge  $i$ ’s rating of target  $j$  on item  $k$  when  $TCrit_{jk}$ ,  $Norm_k$ , and  $Self_{ik}$  are at their mean level. In a similar vein,  $\beta_{1ij}$  is the estimate of distinctive accuracy and represents the average change (slope) of judge  $i$ ’s rating of target  $j$  on item  $k$  for a one-unit increase in the target’s criterion value on item  $k$  while holding the normative estimate and self-rating on item  $k$  at the mean value. Likewise,  $\beta_{2ij}$  is the estimate of normative accuracy and corresponds to the average change (slope) in judge  $i$ ’s rating of target  $j$  on item  $k$  for a one-unit increase in the estimate of the normative profile on item  $k$  while holding the target’s criterion and self-rating on item  $k$  at the



**Figure 1.** The social accuracy model extended herein to include assumed similarity as a predictor of perceiver impressions, as expressed in equations 1 and 2. Judge's level of empathic tendency is shown as a moderator of distinctive accuracy ( $\gamma_{11}$ ), normative accuracy ( $\gamma_{21}$ ), and assumed similarity ( $\gamma_{31}$ ). Each empathic tendency is a latent variable, specifically the constructs of perspective taking, empathic concern, fantasy, and personal distress as measured by the Interpersonal Reactivity Index (Davis, 1980).

mean value. Finally,  $\beta_{3ij}$  is the estimate of assumed similarity and signifies the average change (slope) of judge  $i$ 's rating of target  $j$  on item  $k$  for a one-unit increase in his or her self-rated value on item  $k$ , again holding the other predictors at the mean value for item  $k$ .

$$\begin{aligned}\beta_{0ij} &= \gamma_{00} + \gamma_{01}ET_i + u_{0i} + u_{0j} \\ \beta_{1ij} &= \gamma_{10} + \gamma_{11}ET_i + u_{1i} + u_{1j} \\ \beta_{2ij} &= \gamma_{20} + \gamma_{21}ET_i + u_{2i} + u_{2j} \\ \beta_{3ij} &= \gamma_{30} + \gamma_{31}ET_i + u_{3i}.\end{aligned}\quad (2)$$

The addition of the empathic tendencies ( $ET_i$ ) at Level 2 (Equation 2) provided an avenue to test for moderation of the perceptual components by each IRI subscale (see Figure 1 for a visualization of the model). Specifically, the coefficients  $\gamma_{11}$ ,  $\gamma_{21}$ , and  $\gamma_{31}$  represent the change in distinctive accuracy, normative accuracy, and assumed similarity, respectively, for a one-unit change in the given empathic tendency.

## Results

Each sample of judges achieved significant levels of distinctive accuracy and assumed similarity. Furthermore, significant levels of normative accuracy were achieved by judges in Samples 1, 3, and 4, while judges in Sample 2 approached the conventional level of significance (see fixed effects estimates in Table 2). Because the current investigation focused on the good judge of personality, variability in the perceptual components among judges suggests there may be characteristics that moderate accuracy—such as one's empathic tendencies. Indeed, there was substantial variability in each perceptual component between judges and across targets for each sample (see random effects estimates in Table 2). Thus, we proceeded to test each for moderation by the four empathic tendencies. The

coefficients and standardized effect size<sup>5</sup> for each Component  $\times$  Empathic Tendency interaction were meta-analytically combined, and the presented results are based upon these combined estimates. Table 3 shows the moderation coefficients from each sample as well as the meta-analytically combined estimates. We illustrate these general results using Sample 3 for each Perceptual Component  $\times$  Empathic Concern interaction in Figures 2–4.<sup>6</sup> These display the relation between judges' level of empathic concern and their slope for distinctive accuracy, normative accuracy, and assumed similarity, respectively. While linear relations were modeled, we display the nonparametric (loess) line of best fit and its 95% confidence interval, which show little departure from linearity.

### Perspective Taking

Participants' propensity to perspective take significantly moderated each of the perceptual components tested herein. Specifically, those exhibiting a greater tendency to perspective take showed increased levels of distinctive accuracy,  $\gamma_{11} = .0296$ ,  $d = .23$ ,  $t(1,114) = 4.66$ ,  $p < .0001$ , normative accuracy,  $\gamma_{21} = .1013$ ,  $d = .27$ ,  $t(1,114) = 6.83$ ,  $p < .0001$ , and assumed similarity,  $\gamma_{31} = .0171$ ,  $d = .24$ ,  $t(1,114) = 3.52$ ,  $p = .0005$ .

### Empathic Concern

Like perspective taking, judges' tendency for empathic concern also significantly moderated each perceptual component—greater empathic concern was associated with increased levels of distinctive accuracy,  $\gamma_{11} = .0487$ ,  $d = .39$ ,  $t(1,114) = 8.26$ ,  $p < .0001$ , normative accuracy,  $\gamma_{21} = .1479$ ,  $d = .42$ ,  $t(1,114) = 10.51$ ,  $p < .0001$ , and assumed similarity,  $\gamma_{31} = .0189$ ,  $d = .28$ ,  $t(1,114) = 4.04$ ,  $p < .0001$ . Notably, the moderation of distinctive and normative accuracy was stronger for empathic concern than perspective taking.

### Fantasy

Participants' propensity for fantasy significantly moderated each of the perceptual components. Specifically, those exhibiting a greater tendency for fantasy had increased levels of distinctive accuracy,  $\gamma_{11} = .0334$ ,  $d = .30$ ,  $t(1,113) = 5.84$ ,  $p < .0001$ , and normative accuracy,  $\gamma_{21} = .0417$ ,  $d = .14$ ,  $t(1,113) = 3.08$ ,  $p = .002$ , but decreased assumed similarity,  $\gamma_{31} = -.0156$ ,  $d = -.28$ ,  $t(1,113) = -4.45$ ,  $p < .0001$ . These results are similar to those found for empathic concern for normative and distinctive accuracy but opposed for assumed similarity.

### Personal Distress

Contrary to the tendency to perspective take or show empathic concern, personal distress did not consistently moderate the perceptual components. Increased personal distress was associated with reduced distinctive accuracy,  $\gamma_{11} = -.0171$ ,  $d = -.14$ ,  $t(1,114) = -2.92$ ,  $p = .004$ , but was unrelated to normative accuracy,  $\gamma_{21} = .0183$ ,  $d = .06$ ,  $t(1,114) = 1.29$ ,  $p = .20$ ,

**Table 2.** Social Accuracy Model Parameter Estimates for the Base Model for Each Sample.

Estimate	Sample			
	1	2	3	4
<b>Fixed effects</b>				
Distinctive accuracy ( $\gamma_{10}$ )	.2274 (.0386)***	.2994 (.0566)***	.2344 (.0425)***	.2315 (.0519)***
Normative accuracy ( $\gamma_{20}$ )	.5258 (.1006)***	.4634 (.2627) <sup>†</sup>	.5699 (.1514)***	.4342 (.2141)*
Assumed similarity ( $\gamma_{30}$ )	.1035 (.0078)***	.0589 (.0076)***	.0668 (.0065)***	.0669 (.0096)***
<b>Judge random effects</b>				
$\tau$ Distinctive	.1996***	.1516***	.1376***	.1382***
$\tau$ Normative	.3232***	.3701***	.4064***	.3894***
$\tau$ Assumed similarity	.0978***	.1064***	.1209***	.1194***
<b>Target random effects</b>				
$\tau$ Distinctive	.0882***	.1361***	.1182***	.1132***
$\tau$ Normative	.2402***	.6408***	.4244***	.4743***

Note. These models were estimated under Restricted Maximum Likelihood (REML). Standard errors of the fixed effects are in parentheses. Target random effects were not modeled for assumed similarity because this is an idiosyncratic characteristic of the judge and thus was not expected to vary systematically across targets. Significance of random effects was tested using nested  $\chi^2$  difference tests (Hox, 2010, pp. 47–50), after being reestimated using Maximum Likelihood (ML).  
<sup>†</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Table 3.** Social Accuracy Model Moderator Parameter Estimates.

Moderator	Distinctive Accuracy $\gamma_{11}$ (SE)	Normative Accuracy $\gamma_{21}$ (SE)	Assumed Similarity $\gamma_{31}$ (SE)
<b>Perspective taking</b>			
Sample 1	.0212 (.0180)	.0222 (.0291)	.0160 (.0099)
Sample 2	.0297 (.0130)*	.1167 (.0293)***	.0199 (.0092)*
Sample 3	.0363 (.0098)***	.1386 (.0267)***	.0082 (.0087)
Sample 4	.0210 (.0140)	.1302 (.0354)***	.0304 (.0118)**
Meta-analysis	.0296 (.0064)***	.1013 (.0148)***	.0171 (.0049)***
<b>Empathic concern</b>			
Sample 1	.0268 (.0209)	.0796 (.0334)*	.0250 (.0114)*
Sample 2	.0391 (.0116)***	.0901 (.0267)***	.0088 (.0084)
Sample 3	.0577 (.0086)***	.2160 (.0228)***	.0226 (.0078)**
Sample 4	.0485 (.0136)***	.1612 (.0346)***	.0242 (.0118)*
Meta-analysis	.0487 (.0059)***	.1479 (.0141)***	.0189 (.0047)***
<b>Fantasy</b>			
Sample 1	.0519 (.0151)***	.0188 (.0249)	-.0211 (.0084)*
Sample 2	.0275 (.0113)*	-.0069 (.0262)	-.0074 (.0081)
Sample 3	.0400 (.0086)***	.0897 (.0240)***	-.0267 (.0076)***
Sample 4	.0069 (.0146)	.0788 (.0394)*	-.0114 (.0054)*
Meta-analysis	.0334 (.0057)***	.0417 (.0135)**	-.0156 (.0035)***
<b>Personal distress</b>			
Sample 1	-.0066 (.0188)	.0845 (.0299)**	-.0119 (.0103)
Sample 2	-.0276 (.0131)*	.0074 (.0303)	-.0067 (.0093)
Sample 3	-.0159 (.0083) <sup>†</sup>	-.0135 (.0231)	-.0046 (.0072)
Sample 4	-.0146 (.0129)	.0154 (.0337)	-.0097 (.011)
Meta-analysis	-.0171 (.0058)***	.0183 (.0142)	-.0074 (.0046)

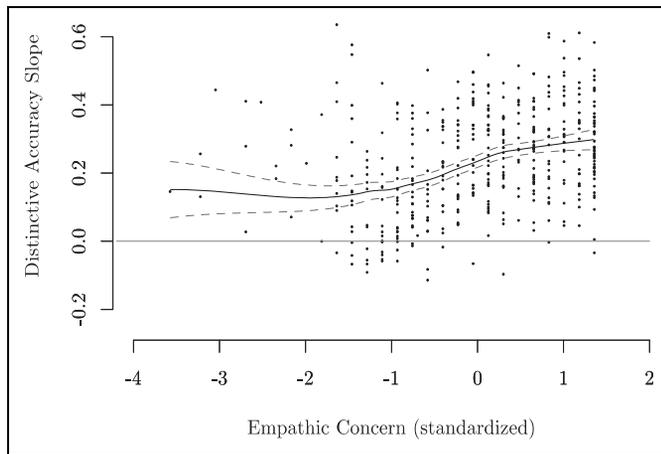
Note. Target random effects were not modeled for assumed similarity because this is an idiosyncratic characteristic of the judge and thus was not expected to vary systematically across targets. SE = standard error.  
<sup>†</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

and assumed similarity,  $\gamma_{31} = -.0074$ ,  $d = .11$ ,  $t(1,114) = -1.62$ ,  $p = .10$ .

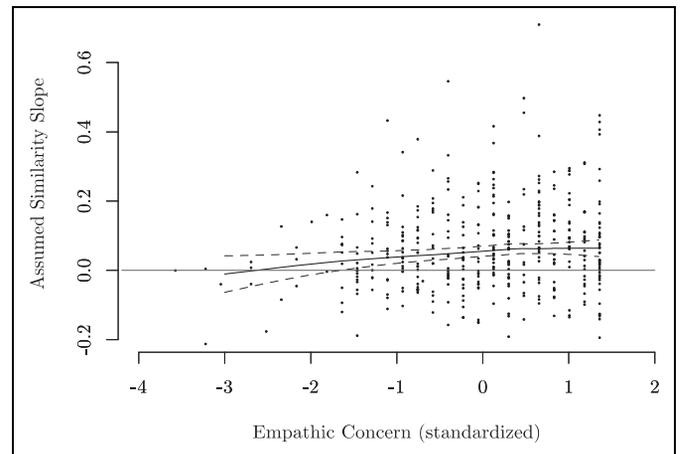
## Discussion

This multisample study provides evidence that empathy, broadly speaking, is reliably associated with the accuracy with

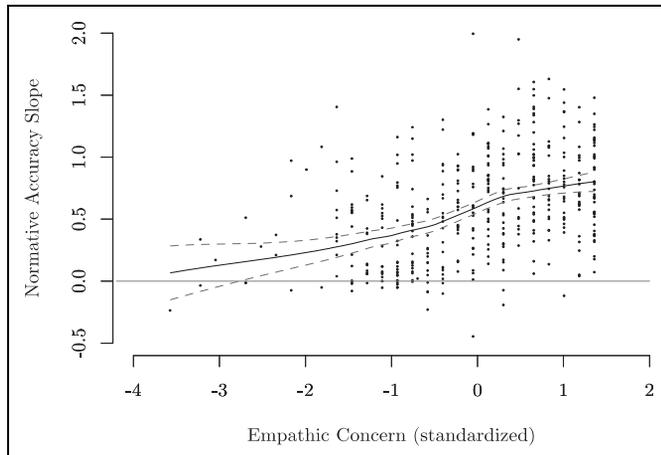
which individuals perceive others. In particular, the tendencies to perspective take and show empathic concern had systematically positive relationships with distinctive accuracy, normative accuracy, and assumed similarity. Further, the propensity for fantasy was positively linked to distinctive and normative accuracy but negatively related to projection of the self in perceptions of others (i.e., assumed similarity). Lastly, the



**Figure 2.** Distinctive accuracy slope as a function of judges' standardized empathic concern tendency for Sample 3. Plotted curve is the nonparametric loess relationship (smoothing parameter = .80, polynomial = 1) and its 95% confidence interval.



**Figure 4.** Assumed similarity slope as a function of judges' standardized empathic concern tendency for Sample 3. Plotted curve is the nonparametric loess relationship (smoothing parameter = .80, polynomial = 1) and its 95% confidence interval.



**Figure 3.** Normative accuracy slope as a function of judges' standardized empathic concern tendency for Sample 3. Plotted curve is the nonparametric loess relationship (smoothing parameter = .80, polynomial = 1) and its 95% confidence interval.

tendency for personal distress was only significantly related to distinctive accuracy. Specifically, those who tended to experience greater anxiety and distress in tense social settings perceived others with less distinctive accuracy.

The results of this study are in opposition to the meta-analysis by Davis and Kraus (1997), yet correspond well with the results of the later meta-analysis by Hall, Andrzejewski, and Yopchick (2009). As noted by Davis and Kraus (1997), a multifaceted approach to empathy would likely help relations to emerge, which was done in this study. However, another key difference between these two meta-analyses was the ways in which accuracy (or *interpersonal sensitivity*) was measured. Major analytical shifts were occurring in the 1990s and 2000s in regard to the measurement of interpersonal perceptions (e.g., Biesanz, 2010; Furr, 2008; Kenny, 1991); it was during this time that Davis and Kraus (1997) conducted their

meta-analysis. Thus, much of the included research used standardized assessments of accuracy, not a realistic approach which is based upon real, unscripted interactions. Alternatively, most of the additional studies included by Hall et al. (2009) implemented assessments of accuracy based upon realistic accuracy criteria (e.g., use of multiple sources of information of target's personality). Furthermore, judges assessed multiple targets who were actual, rather than hypothetical, people. In short, by using more powerful and reliable methodology, much like that used in this study, identifying the connection between empathy and interpersonal judgment accuracy has become a viable endeavor.

The theoretical and empirical links between perspective taking and accuracy of trait judgments were clear. Indeed, one study (Bernstein & Davis, 1982) had already revealed that they are positively related. Nonetheless, the contribution of this study is an understanding of how each accuracy component was moderated by changes in one's proclivity for perspective taking. Increases to all the components—distinctive accuracy, normative accuracy, and assumed similarity—were found. This finding suggests that those with a greater tendency for perspective taking better utilize cues—perhaps by gaining context and insight from inferred thoughts and feelings—on which they form judgments of personality characteristics. Furthermore, judges who are trying to put themselves in another person's shoes may detect more cues as a result of attending to more information, and this increase in detection is also likely to lead to increased accuracy. While behavioral information seems to be best for making accurate judgments (Letzring & Human, 2014), it would be interesting to investigate the possible interaction between this empathic tendency and the type of information revealed during interactions. It is possible that the best type of information for making trait judgments depends on perspective-taking tendencies.

Further exemplifying the importance of perspective taking, it has been proposed that empathic concern (i.e., the emotional

matching aspect of empathy) is contingent upon the occurrence of perspective taking (Stiff, Dillard, Somera, Kim, & Sleight, 1988). That is, an understanding of another's point of view is necessary for one to develop sympathy and feelings of concern for him or her. Therefore, empathic concern should not only provide context for another's actions but also insight into his or her emotional frame. From a theoretical standpoint, this should be advantageous as one is making judgments (Funder, 1995; Hall, Gunnery, Letzring, Carney, & Colvin, 2016; Letzring et al., 2006). Indeed, the results of this study lend indirect support to this notion, as empathic concern exhibited the same pattern of results as perspective taking, but with stronger effect sizes.

Previous work has suggested that the fantasy domain of the IRI be combined with the empathic concern domain, as the two seem to represent similar psychological phenomena which happen to map onto difference situational spheres—one of a human interpersonal nature, the other fictional and imaginary (Nomura & Akai, 2012). In light of this, it is not surprising that fantasy, like empathic concern and perspective taking, was significantly positively associated with both distinctive and normative accuracy. However, unlike those two empathic tendencies, there was an inverse relation with assumed similarity. Considering that a key theoretical difference between the empathic concern and fantasy domains is the locus of the emotional connection (Nomura & Akai, 2012), this finding seems reasonable. Specifically, one who tends to engage and identify with fictitious others is less likely to see one's own traits in those characters as they understand the others are imaginary. Nevertheless, it would be reasonable to expect this tendency to transfer into one's perceptive practices with nonfictitious, human others. Under this logic, the results from this study make conceptual sense.

Unlike perspective taking, empathic concern, and fantasy, those who often become overwhelmed by feelings of unease or anxiety in tense interpersonal situations (i.e., greater personal distress tendency; Davis, 1983) were found to have reduced distinctive accuracy, but there were not relations with levels of normative accuracy and assumed similarity. This significant decrease in distinctive accuracy may reflect fewer cues being detected or the incorrect utilization of these cues. Previous research has indicated that the good judge elicits more cues from targets (Letzring, 2008). However, because this study used videos of interactions, judges could not impact the amount of cues elicited. Thus, on the other side of this coin, it may be the case that those who have this tendency to become distressed during interpersonal interactions are therefore less skillful in detecting and utilizing cues. This proposition, however, remains untested.

Ultimately, the fact that each component of empathy was related to the accurate perception of others opens new avenues for research. Aside from those noted in the preceding discussion, one interesting line of investigation would be establishing the causal direction of the relations found in this study. Empathic accuracy is required to achieve accurate trait judgment (Ickes, 1993), which by definition requires some degree of empathy. Thus, it can be presumed that the causal direction is from empathy to accurate judgment, although this proposition requires empirical evaluation. However, if this is indeed

the case, and because empathy is a trainable construct (Poole & Sanson-Fisher, 1980; Teding van Berkhout & Malouff, 2016), empathy could be a useful mechanism for increasing interpersonal accuracy. Altogether, the pattern of results in this study supports the intuitive declaration that is thought, felt, and said by nearly everyone; it seems as though the tendency to see the point of view and emotionally identify with others does help one understand their dispositions.

### Authors' Note

We value openness and transparency in psychological science. As such, we have provided commentary to meet the 21 Word Solution (Simmons, Nelson, & Simonsohn, 2012) and have developed a Statement of the Limits of Generality for this study. Refer to these and other project files (i.e., raw data, R script, and materials) for this manuscript stored on the Open Science Framework (OSF) (<https://osf.io/6xg27/>).

### Declaration of Conflicting Interests

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### Notes

1. The critical elements of interest for this study were the relations between perceivers' empathic tendencies and the perceptual components. As such, power for each sample was approximated using the point biserial correlational model in G\*Power (Faul, Erdfelder, Lang, & Buchner, 2007) assuming a Type I error rate of  $\alpha = .05$  and an effect size of  $\rho = .20$ , which is typical of social and personality psychology research (Richard, Bond, & Stokes-Zoota, 2003).
2. Participants were recruited from the same participant pool as targets, so it was possible for judges to recognize targets. Thus, participants were instructed to leave ratings of targets they recognized blank and these were treated as missing data.
3. Multilevel models were estimated using the lme4 package (version 1.1.12) for R (version 3.3.0) with the lmerTest package (version 2.0.32) attached so that *dfs* via Satterthwaite's approximation and *p* values for fixed effects are available in summary output.
4. Self-ratings of personality were only made by judges on the Big Five Inventory (BFI) in each study. While this does not impact Sample 1 or 2, it does affect Samples 3 and 4 as the target criterion, normative, and judgment measure for a subset of targets was the IPIP-NEO-PI-R. Therefore, assumed similarity was estimated for these samples based on targets with BFI data and ratings.
5. Effect sizes were calculated as the change in slope ( $\gamma_{11}$ ,  $\gamma_{21}$ , or  $\gamma_{31}$ ) for a two standard deviation (*SD*) change in the associated empathic

tendency divided by an estimate of the random effect *SD* for that slope, following Gelman (2008), Marsh et al. (2009), and Tymms (2004).

6. Graphs paralleling those in Figures 2–4 were similar for the remaining samples.

## References

- Adams, H. F. (1927). The good judge of personality. *The Journal of Abnormal and Social Psychology*, 22, 172–181.
- Allport, G. W. (1937). *Personality: A psychological interpretation*. New York, NY: Holt, Reinhart, & Winston.
- Back, M. D., & Nestler, S. (2016). Judging personality. In J. A. Hall, M. Schmid Mast, & T. V. West (Eds.), *The social psychology of perceiving others accurately* (pp. 98–124). Cambridge, England: Cambridge University Press.
- Bernstein, W. M., & Davis, M. H. (1982). Perspective-taking, self-consciousness, and accuracy of person perception. *Basic and Applied Social Psychology*, 3, 1–19.
- Biesanz, J. C. (2010). The social accuracy model of interpersonal perception: Assessing individual differences in perceptive and expressive accuracy. *Multivariate Behavioral Research*, 45, 853–885. doi:10.1080/00273171.2010.519262
- Borkenau, P., Mosch, A., Tandler, N., & Wolf, A. (2014). Accuracy of judgments of personality based on textual information on major life domains. *Journal of Personality*, 84, 214–224.
- Christiansen, N. D., Wolcott-Burnam, S., Janovics, J. E., Burns, G. N., & Quirk, S. W. (2005). The good judge revisited: Individual differences in the accuracy of personality judgments. *Human Performance*, 18, 123–149. doi:10.1207/s15327043hup1802\_2
- Costa, P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI): Professional manual*. Odessa, FL: Psychological Assessment Resources.
- Cronbach, L. J. (1955). Processes affecting scores on “understanding of others” and “assumed similarity.” *Psychological Bulletin*, 52, 177–193.
- Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *JSAS Catalog of Selected Documents in Psychology*, 10, 85–103.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44, 113–126.
- Davis, M. H., & Kraus, L. A. (1997). Personality and empathic accuracy. In W. Ickes (Ed.), *Empathic accuracy* (pp. 144–168). New York, NY: Guilford Press.
- Deutsch, F., & Madle, R. A. (1975). Empathy: Historic and current conceptualizations, measurement, and a cognitive theoretical perspective. *Human Development*, 18, 267–287.
- Eisenberg, N., & Fabes, R. A. (1990). Empathy: Conceptualization, measurement, and relation to prosocial behavior. *Motivation and Emotion*, 14, 131–149. doi:10.1007/Bf00991640
- Faul, F., Erdfelder, E., Lang, A., & Buchner, A. (2007). G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39, 175–191.
- Feshbach, N. D. (1975). Empathy in children: Some theoretical and empirical considerations. *The Counseling Psychologist*, 5, 25–30.
- Flury, J. M., Ickes, W., & Schweinle, W. (2008). The borderline empathy effect: Do high BPD individuals have greater empathic ability? Or are they just more difficult to “read”? *Journal of Research in Personality*, 42, 312–332. doi:10.1016/j.jrp.2007.05.008
- Funder, D. C. (1995). On the accuracy of personality judgment: A realistic approach. *Psychological Review*, 102, 652–670.
- Funder, D. C. (1999). *Personality judgment: A realistic approach to person perception*. San Diego, CA: Academic Press.
- Furr, R. M. (2008). A Framework for profile similarity: Integrating similarity, normativeness, and distinctiveness. *Journal of Personality*, 76, 1267–1316. doi:10.1111/j.1467-6494.2008.00521.x
- Furr, R. M., & Wood, D. (2013). On the similarity between exchangeable profiles: A psychometric model, analytic strategy, and empirical illustration. *Journal of Research in Personality*, 47, 233–247. doi:10.1016/j.jrp.2013.01.009
- Galinsky, A. D., Maddux, W. W., Gilin, D., & White, J. B. (2008). Why it may be to get inside the head of your opponent: The differential effects of perspective taking and empathy in negotiations. *Psychological Science*, 19, 378–384.
- Galinsky, A. D., & Moskowitz, G. B. (2000). Perspective-taking: Decreasing stereotype expression, stereotype accessibility, and in-group favoritism. *Journal of Personality and Social Psychology*, 78, 708–724. doi:10.1037/0022-3514.78.4.708
- Gelman, A. (2008). Scaling regression inputs by dividing by two standard deviations. *Statistics in Medicine*, 27, 2865–2873. doi:10.1002/sim.3107
- Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., & Gough, H. G. (2006). The international personality item pool and the future of public-domain personality measures. *Journal of Research in Personality*, 40, 84–96. doi:10.1016/j.jrp.2005.08.007
- Hall, J. A., Andrzejewski, S. A., & Yopchick, J. E. (2009). Psychosocial correlates of interpersonal sensitivity: A meta-analysis. *Journal of Nonverbal Behavior*, 33, 149–180. doi:10.1007/s10919-009-0070-5
- Hall, J. A., Goh, J. X., Mast, M. S., & Hagedorn, C. (2015). Individual differences in accurately judging personality from text. *Journal of Personality*, 84, 433–435. doi:10.1111/jopy.12170
- Hall, J. A., Gunnery, S. D., Letzring, T. D., Carney, D. R., & Colvin, C. R. (2016). Accuracy of judging affect and accuracy of judging personality: How and when are they related? *Journal of Personality*. doi:10.1111/jopy.12262
- Hodges, S. D., Lewis, K. L., & Ickes, W. (2015). The matter of other minds: Empathic accuracy and the factors that influence it. In J. A. Simpson & J. F. Dovidio (Eds.), *APA handbook of personality and social psychology* (Vol. 3, pp. 319–348). Washington, DC: American Psychological Association.
- Hox, J. J. (2010). *Multilevel analysis: Techniques and applications* (2nd ed.). New York, NY: Routledge.
- Ickes, W. (1993). Empathic accuracy. *Journal of Personality*, 61, 587–610.
- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift in the integrative big five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (pp. 114–158). New York, NY: Guilford Press.

- Kenny, D. A. (1991). A general model of consensus and accuracy in interpersonal perception. *Psychological Review*, *98*, 155–163. doi:10.1037/0033-295X.98.2.155
- Kolar, D. W., Funder, D. C., & Colvin, C. R. (1996). Comparing the accuracy of personality judgments by the self and knowledgeable others. *Journal of Personality*, *64*, 311–337. doi:10.1111/1467-6494.ep9606164112
- Letzring, T. D. (2008). The good judge of personality: Characteristics, behaviors, and observer accuracy. *Journal of Research in Personality*, *42*, 914–932. doi:10.1016/j.jrp.2007.12.003
- Letzring, T. D., & Human, L. J. (2014). An examination of information quality as a moderator of accurate personality judgment. *Journal of Personality*, *82*, 440–451. doi:10.1111/jopy.12075
- Letzring, T. D., Rone, C. C., & Colman, D. E. (2016). Implications of fear of negative evaluation, state anxiety, and implied level of target-dominance on perceptions of personality traits. *The Journal of Social Psychology*, *156*, 581–593. doi:10.1080/00224545.2016.1140117
- Letzring, T. D., Wells, S. M., & Funder, D. C. (2006). Information quantity and quality affect the realistic accuracy of personality judgment. *Journal of Personality and Social Psychology*, *91*, 111–123. doi:10.1037/0022-3514.91.1.111
- Lewis, K. L. (2014). Searching for the open book: Exploring predictors of target readability in interpersonal accuracy (doctoral dissertation). University of Oregon, Eugene.
- Marsh, H. W., Ludtke, O., Robitzsch, A., Trautwein, U., Asparouhov, T., Muthen, B., & Nagengast, B. (2009). Doubly-latent models of school contextual effects: Integrating multilevel and structural equation approaches to control measurement and sampling error. *Multivariate Behavioral Research*, *44*, 764–802. doi:10.1080/00273170903333665
- Mehrabian, A., & Epstein, N. (1972). A measure of emotional empathy. *Journal of Personality*, *40*, 525–543.
- Myers, M. W., & Hodges, S. D. (2012). The structure of self-other overlap and its relationship to perspective taking. *Personal Relationships*, *19*, 663–679.
- Nomura, K., & Akai, S. (2012). Empathy with fictional stories: Reconsideration of the Fantasy Scale of the Interpersonal Reactivity Index. *Psychological Reports*, *110*, 304–314. doi:10.2466/02.07.09.11.PR0.110.1.304-314
- Poole, A. D., & Sanson-Fisher, R. W. (1980). Long-term effects of empathy training on the interview skills of medical students. *Patient Counselling and Health Education*, *2*, 125–127.
- Richard, F. D., Bond, C. F., Jr., & Stokes-Zoota, J. J. (2003). One hundred years of social psychology quantitatively described. *Review of General Psychology*, *7*, 331–363. doi:10.1037/1089-2680.7.4.331
- Riggio, R. E., Tucker, J., & Coffaro, D. (1989). Social skills and empathy. *Personality and Individual Differences*, *10*, 93–99.
- Rogers, K. H., & Biesanz, J. C. (2015). Knowing versus liking: Separating normative knowledge from social desirability in first impressions of personality. *Journal of Personality and Social Psychology*, *109*, 1105–1116. doi:10.1037/a0039587
- Rothenberg, B. B. (1970). Children's social sensitivity and the relationship to interpersonal competence, intrapersonal comfort, and intellectual level. *Developmental Psychology*, *2*, 335–350.
- Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2012). A 21 word solution. *Dialogue*, *26*(2), 4–7. doi:10.2139/ssrn.2160588.
- Stiff, J. B., Dillard, J. P., Somera, L., Kim, H., & Sleight, C. (1988). Empathy, communication, and prosocial behavior. *Communication Monographs*, *55*, 198–213.
- Teding van Berkhout, E., & Malouff, J. M. (2016). The efficacy of empathy training: A meta-analysis of randomized controlled trials. *Journal of Counseling Psychology*, *63*, 32–41. doi:10.1037/cou0000093
- Thomas, G. (1999). Accuracy in empathic and trait judgements: The quest for the good judge, good target, good trait, and good relationship (doctoral dissertation). University of Canterbury, Christchurch, New Zealand.
- Tymms, P. (2004). Effect sizes in multilevel models. In I. Schagen & K. Elliot (Eds.), *But what does it mean? The use of effect sizes in educational research* (pp. 55–66). London, UK: National Foundation for Educational Research.
- Wachi, T., Watanabe, K., Yokota, K., Otsuka, Y., & Lamb, M. E. (2016). The relationship between police officers' personalities and interviewing styles. *Personality and Individual Differences*, *97*, 151–156. doi:10.1016/j.paid.2016.03.031
- Wang, C. S., Ku, G., Tai, K., & Galinsky, A. D. (2014). Stupid doctors and smart construction workers: Perspective-taking reduces stereotyping of both negative and positive targets. *Social Psychological and Personality Science*, *5*, 430–436. doi:10.1177/1948550613504968
- Wang, C. S., Tai, K., Ku, G., & Galinsky, A. D. (2014). Perspective-taking increases willingness to engage in intergroup contact. *PLoS One*, *9*, 1–8. doi:10.1371/journal.pone.0085681
- Zaki, J., Bolger, N., & Ochsner, K. (2008). It takes two: The interpersonal nature of empathic accuracy. *Psychological Science*, *19*, 399–404. doi:10.1111/j.1467-9280.2008.02099.x
- Zebrowitz, L. A. (1990). *Social perception*. Belmont, CA: Thomson Brooks/Cole.

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