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THE EFFECTS OF TRAINING, PRACTICE, AND FEEDBACK OF THE EMPATHIC
RESPONSE ON ACCURACY OF PERSONALITY TRAIT JUDGMENT

by

Douglas Edward Colman

A dissertation

submitted in partial fulfillment

of the requirements for the degree of

Doctor of Philosophy in the Department of Psychology

Idaho State University

Spring 2018

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To the Graduate Faculty:

The members of the committee appointed to examine the dissertation of Douglas Edward Colman find it satisfactory and recommend that it be accepted.

Tera D. Letzring, Ph.D.
Committee Chair

Robert D. Rieske, Ph.D.
Committee Member

Erika K. Fulton, Ph.D.
Committee Member

Robert W. Lion, Ph.D.
Committee Member

Alexander R. Bolinger, Ph.D.
Graduate Faculty Representative

Pilot Study 1

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Douglas Colman
Psychology
MS 8112

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Ralph Baergen, PhD, MPH, CIP
Human Subjects Chair

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Psychology
MS 8112

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Human Subjects Chair

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Douglas Colman
Psychology
MS 8112

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Ralph Baergen, PhD, MPH, CIP
Human Subjects Chair

Phone: (208) 282-1336 • Fax: (208) 282-4723 • isu.edu/research

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July 11, 2017

Douglas Colman
Psychology
MS 8112

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Sincerely,

Ralph Baergen, PhD, MPH, CIP
Human Subjects Chair

Phone: (208) 282-1336 • Fax: (208) 282-4723 • isu.edu/research

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THE EFFECTS OF TRAINING, PRACTICE, AND FEEDBACK OF THE EMPATHIC RESPONSE ON ACCURACY OF PERSONALITY TRAIT JUDGMENT

Dissertation Abstract—Idaho State University (2018)

The empathic response, understanding and then emotionally identifying with another's point-of-view, is an aptitude that likely provides insight about another's personality characteristics. Following Funder's (1995) Realistic Accuracy Model, one's empathic response is likely to allow him/her to detect more trait relevant cues made available by a target, and then utilize that information in forming an impression. To this point, accurately understanding others' thoughts and feelings has been suggested as a necessary condition for accurate trait judgment (Hall, Gunnery, Letzring, Carney, & Colvin, 2017; Ickes, 1993). Indeed, a recent study found the tendency to perspective-take and show empathy as positively related to distinctive accuracy, normative accuracy, and the assumed similarity of trait judgments (Colman, Letzring, & Biesanz, 2017).

Extending this connection, the purpose of this dissertation was to test for a causal link between the empathic responses of perspective-taking and empathy and the accuracy of personality trait judgments. Video-based manipulations of perspective-taking and empathy were created using the framework of Galinsky and colleagues (2008; 2011; 2013), and their efficacy was tested in two pilot studies. However, these videos did not produce significant differences in the level of state empathic response. Thus, text-based manipulations found within the extent literature were used in the main study. The role of training intensity was also investigated by presenting the empathic manipulations (perspective-taking and empathy) using only an instructional design, a design with instruction and practice, or a design with instruction, practice, and then feedback.

Planned analyses revealed no main effect for empathic manipulation or training intensity, nor an interaction between the two factors, on levels of normative and distinctive accuracy. Despite these null results, the relation between trait empathic tendencies and trait judgment accuracy was partially replicated. Moreover, the exploratory analyses indicated a significant positive relation between normative and distinctive trait judgment accuracy and state levels of perspective-taking and empathy, which extends previous work (Colman et al., 2017). Overall, this dissertation provides additional insight into the link between trait judgment accuracy and judges' levels of empathic response, as well as identifying several future directions for research surrounding these two important interpersonal processes.

Chapter I: Introduction

Personality is characterized by the average or *typical* behavioral, emotional, and thought processes across situations and over time of a person (Funder, 2001), and represents an important determinant of one's existence (Allport, 1921). A given person's expression of behavior in different situations is highly variable, but consistency in such expression is also seen over time – that is, in the aggregate (Anusic & Schimmack, 2016; Fleeson, 2001; Fleeson & Law, 2015; Geukes, Nestler, Hutteman, Kűfner, & Back, 2017). This behavioral consistency across time has been shown to be predictive of many important life outcomes, including well-being, quality of relationships, occupational choices, and even life expectancy (George, Helson, & John, 2011; Ozer & Benet-Martinez, 2006).

The assessment and description of others' personality is an important process of interpersonal relations which begins immediately upon initial interaction, be it face-to-face, or through electronic media (e.g., Skype), postal mail, etc. (Bar, Neta, & Linz, 2006; Todorov, Pakrashi, & Oosterhof, 2009; Uleman, Adil Saribay, & Gonzalez, 2008; Willis & Todorov, 2006). However, it is often the case that initial impressions of others are based on very little information (Ambady, Hallahan, & Rosenthal, 1995; Schaller, 2008). Nevertheless, even with very little information, people are able to achieve surprising levels of accuracy in judgments of others' personality (Funder, 1999, 2012).

These zero-acquaintance, or first, impressions provide a foundation upon which future interactions will build. Subsequently, additional interactions prompt revision, when necessary, of that first impression (Asch, 1946; Mann & Ferguson, 2015). Indeed, the accuracy of perceptions of others typically increases with longer periods of

acquaintanceship (Biesanz, West, & Millevoi, 2007; Colvin & Funder, 1991).

Nonetheless, because people often choose to engage in subsequent interactions based on their initial impressions, achieving accuracy when judgments are based on very little information is of the utmost importance (Funder, 2012). The consequences of *inaccuracy* can be poor relationships, ineffective employees, and loaned money and/or items going unreturned.

Individuals decide based, at least in part, on their first impression whether to engage in future interactions with others at a rapid pace. For instance, judgments of attractiveness, trustworthiness, and likeability are often made in the first second of meeting another individual (Willis & Todorov, 2006), and decisions are made about whether to pursue further acquaintanceship from those impressions. For example, this is a particularly salient issue in speed dating, where there is very short interaction (typically 5 minutes) during which time people must decide to exchange contact information or not based on their impression of the other person. Alternatively, one needs to be able to quickly and accurately assess the potential danger of others (Schaller, 2008) to appropriately identify threatening situations. Such important, everyday scenarios illustrate why the accuracy of interpersonal perceptions, especially at zero-acquaintance, has piqued the interest of psychological researchers for nearly a century (e.g., Adams, 1927; Allport, 1937; Taft, 1955).

The current work sought to test for a causal link between understanding and emotionally identifying with another's point-of-view (i.e., perspective-taking and empathy, respectively) and the accuracy with which trait judgments of personality are made. Because a reliable relation has been established between these (Colman, Letzring,

& Biesanz, 2017), it was hypothesized that increasing the state levels of perspective-taking or empathy would cause greater levels of accuracy to be achieved. Additionally, the role of training intensity was investigated by using a between-subjects design to administer three instructional methods for manipulating perspective-taking and empathy. Here it was hypothesized that increased training intensity would cause greater gains in accuracy for both perspective-taking and empathy.

Chapter II: Literature Review

Interest on first impressions has not only centered on the underlying process that allows (or inhibits) interpersonal accuracy (e.g., Funder, 1999), but also the myriad practical and applied implications of this phenomenon (Funder, 2003; Human & Biesanz, 2013; Letzring, 2015). Interpersonal perceptions have important implications for relationship quality and occupational success, among other important psychosocial variables (Hall, Andrzejewski, & Yopchick, 2009). Given the long-lasting interest in interpersonal accuracy, it is not surprising that much research has illuminated the manner by which accurate perceptions occur (Funder, 2012). The most widely used model, the Realistic Accuracy Model (RAM; Funder, 1995), describes a four-stage process. Specifically, information must be *relevant* to and *available* from the person for whom perceptions are being made (referred to as the target), and the person making the perceptions (referred to as the judge) has to *detect* that information and correctly *utilize* it while forming and calibrating impressions.

Interpersonal Accuracy

Interpersonal accuracy refers to the “accurate judgment about any verifiable characteristic of a person or about the group that a person belongs to” (Hall, Mast, & West, 2016, p. 5). Such a definition explicitly allows for including perceptions of social attributes (e.g., group membership), traits (e.g., personality, life satisfaction), and states (e.g., emotions, thoughts). Even with the diverse types of accuracy captured under the umbrella term of interpersonal accuracy, the domain of focus for this dissertation is the Big Five personality traits of Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. The manners in which trait judgment accuracy has been operationally

defined has steadily evolved over the past century (Funder & West, 1993). This refinement has occurred for two central reasons: 1) critiques of the methods used for assessment and 2) technological innovation that has allowed for greater computational complexity.

An influential critique by Cronbach (1955) changed the course of accuracy research by exposing the fact that accuracy scores are comprised of multiple perceptual components, and researchers should forego measurement of accuracy by a single metric (Cronbach, 1955; Gage & Cronbach, 1955). The two central components identified by Cronbach (1955) were stereotype accuracy and differential accuracy. Stereotype accuracy, now commonly termed normative accuracy, is the ability to predict the generalized target, which is dependent upon the judge's understanding of the "relative frequency or popularity of possible responses" on the judgment measure (p. 179). Interestingly, this measure of accuracy also reflects the favorability of perceptions in that the normative profile is decidedly positive (K. H. Rogers & Biesanz, 2015). Differential accuracy, now commonly referred to as distinctive accuracy, reflects the widespread conceptualization of accuracy within the literature and by lay people – the ability to judge others' unique levels and ordering of a given set of characteristics (e.g., personality traits). More specifically, it is a judge's ability to accurately perceive targets' traits relative to the normative level, as well as the ability to order targets accurately on each attribute (Furr, 2008; Zebrowitz, 1990). In this way, a high level of differential accuracy denotes judges' ability to understand how targets differ from the normative profile and from other individuals (Biesanz, 2017).

The second influence on the advancement in conceptualizations of accuracy is technological innovation. That is, increased processing power (via computers) and the widespread availability of statistical programming software have allowed researchers to implement more complex analytic strategies. Indeed, over the decades there have been many analytical strategies employed while investigating interpersonal accuracy. Scholars have implemented item-level correlations (e.g., Funder & Colvin, 1988; Funder & Dobroth, 1987; McDonald & Letzring, 2016), the Social Relations Model (e.g., Albright, Kenny, & Malloy, 1988; Back & Kenny, 2010; Kenny, 1991), and advanced profile correlation strategies to assess stereotype accuracy and differential accuracy (Furr, 2008). Furthermore, there is an increased use of multilevel models, such as the Social Accuracy Model (SAM; Biesanz, 2010), to account for the non-independent, nested data produced by the necessary research designs (e.g., each judge rating multiple items for multiple targets). More recently, Structural Equation Modeling has been implemented to evaluate the cues which aid in accurate judgments (Nestler & Back, 2015).

Realistic Accuracy Model

Returning to the RAM (Funder, 1995), the interpersonal perception process is marked by four distinct stages – relevance, availability, detection, and utilization – which must be successfully completed to arrive at accurate interpersonal judgments. With the fundamental element in this process being information (i.e., cues), these stages can be categorized as target specific (i.e., relevance and availability stages) or judge specific (i.e., detection and utilization stages). As noted earlier, judges must correctly *utilize* cues that are *detected* from the set of *relevant* information that is made *available* externally by targets.

Cues are considered *relevant* to the degree they are directly linked to a characteristic being judged. For instance, an organized desk in a home office would be considered a relevant cue to a judgment of conscientiousness (Gosling, Ko, Mannarelli, & Morris, 2002); alternatively, cues relevant to extraversion are talkativeness and enjoyment for greeting strangers. When cues are not relevant, they are not helpful to the judgment process. Relevant cues must also be made *available* by the target for others to perceive, which may occur verbally, non-verbally, or in some combination thereof. For example, the organized desk is only available to judges who have access to the room. Thus, only to the extent that relevant cues are made available to judges will impressions be predicated upon valid information. Next in the process, relevant and available information must be *detected* by the judge. Even if relevant cues are made available by the target, the judge must be attentive and recognize such cues for accurate impressions to be formed. Therefore, the judge must be in the same situation as the target or somehow have access to relevant cues made available by the target, such as via video or seeing behavioral residue (e.g., clean desk). Finally, cues that are detected must be properly *utilized* to contribute positively to impression accuracy. If one improperly interprets detected information, the accuracy of judgments will be reduced.

These four stages of the interpersonal perception process are related multiplicatively. That is, if any of the stages – cue relevance, availability of information, cue detection, or proper utilization – is not successfully traversed, accuracy becomes zero (Funder, 1995, p. 659). In a similar vein, this multiplicative property of RAM also means that a greater degree of achievement in one or more stages should result in consequential improvements to the level of interpersonal accuracy achieved by judges. For this reason,

much research has been directed toward variables that moderate accuracy by interacting with one or more of the RAM stages (Funder, 1995). The most noteworthy moderators are the (a) trait, (b) information, (c) target, and (d) judge. In much of the extant research the term *good* precedes each moderator in question (e.g., good trait), as the focus of research has been the correlates and/or causal mechanisms of *enhanced* interpersonal accuracy (Funder, 1993).

Good trait. This moderator of interpersonal accuracy is predicated upon the notion that some traits are easier to judge than others (Funder, 1999). Most centrally, traits with more visible cues are judged more accurately because more cues are available that are relevant to highly visible traits (Funder & Drobth, 1987). For example, more trait relevant information would be available from a target talking freely in a large group (representing high extraversion) than if a target is experiencing thoughts and feelings of fear and anxiety (an indication of greater neuroticism). However, researchers have had a difficult time coming to a consensus on which traits are considered *good* across situations. Clarification of this issue, at least in part, comes from whether the person judging the trait is the self, an unacquainted other, or an acquainted other (Vazire, 2010; Vazire & Carlson, 2011), visibility of the trait (Funder & Drobth, 1987; McDonald & Letzring, 2016), and evaluativeness of the trait (John & Robins, 1993).

As alluded to previously, some traits (e.g., neuroticism) have relatively few relevant cues available for perception, because relevant cues remain primarily internal to the self (via thoughts, emotions, or self-talk). For traits exhibiting this pattern of cue availability, a greater degree of accuracy is likely to be achieved by the self and not others, particularly in the case of low acquaintanceship (Vazire, 2010) and when targets

are observed in situations that are of low relevance to the trait in question (Hirschmüller, Egloff, Schmukle, Nestler, & Back, 2015). Conversely, traits such as extraversion and conscientiousness are presented through myriad overt behaviors, and are easily observed in most situations, thus allowing for more informed, and presumably accurate, judgments by others. A recent study expanded upon the relation between visibility and accuracy of personality traits to include judgments of personal values (McDonald & Letzring, 2016). Interestingly, traits were more accurately judged even though values were rated as more visible. This finding suggests that the visibility correlate of the good trait is not as straightforward as it has appeared in the past. However, a plausible explanation for this finding is the evaluativeness of the characteristic, which has been shown to moderate accuracy (John & Robins, 1993). Specifically, the evaluativeness of traits (seen as good or bad) impacts the relation between traits and who (self vs. other) is likely to have more accurate judgments (John & Robins, 1993). A greater discrepancy for highly evaluative traits compared to less evaluative traits was found between target and judge ratings (i.e., self-other agreement) than when ratings were made by two observers (i.e., consensus). From this, it was reasoned that evaluative traits induce the use of self-enhancement biases when judges make ratings. Because such biases would have less of an effect on ratings by observers, the resulting discrepancies between measures of self-other agreement and consensus are logical.

Good information. The information on which judgments are based can be good in two distinct manners: quality and quantity (Funder, 1995, p. 660). In general, the amount and quality of information are positively related to accuracy (e.g., Beer &

Brooks, 2011; Biesanz et al., 2007; Colvin & Funder, 1991; Letzring, Wells, & Funder, 2006).

Information quality. Listening to interviews in which targets talked about thoughts and feelings resulted in greater accuracy than listening to interviews based on behavior or a mixture of behavioral and thoughts/feelings components (Andersen, 1984). Considering this finding from the RAM framework (Funder, 1995), these differences in accuracy could be due to thoughts and feelings having more relevance to personality than behaviors, thus allowing for greater accuracy of judgments. In a similar vein, a study by Letzring et al. (2006) revealed that higher quality information was positively related to accuracy of judgments, while holding information quantity constant. Specifically, when given 50 minutes to interact, those in groups instructed to *get-to-know* each other achieved the highest level of accuracy, followed by those in groups without a specific prompt (unstructured condition), while those in groups instructed to answer trivia questions attained the lowest level of accuracy.

Given the fact that information quality in general had been positively associated with accuracy (e.g., Andersen, 1984; Letzring et al., 2006), Beer and Brooks (2011) conducted a study on the relative quality of information types for interpersonal accuracy. To do this, participants were instructed to disclose either values information (e.g., what types of things were important in life) or factual information (e.g., personal details that differentiated them from others). Interestingly, information type was not related to overall accuracy, however it was related to accuracy differently across the personality traits considered. Specifically, values information was related to higher accuracy in judgments

of neuroticism, whereas factual information was related to higher accuracy in judgments of conscientiousness.

A more recent study by Letzring and Human (2014) used the SAM (Biesanz, 2010) to examine the relation of information quality with both normative and distinctive accuracy. Using a manipulation similar to Andersen (1984), previously unacquainted dyads either discussed thoughts and feelings, discussed their behaviors, or engaged in activities prior to making ratings of the other's personality. Higher distinctive accuracy, but lower normative accuracy, was found in select traits for participants who engaged in thoughts and feelings or behavioral discussions, when compared to those engaging in activities. However, the thoughts and feelings discussion and behavioral discussion conditions did not differ from each other, "supporting the idea that information about thoughts and feelings is at least as useful as information about behavior" (p. 448). Moreover, it was found that when targets revealed more information about their personality or current life events (coded from the video recorded interactions) they were judged with greater levels of distinctive accuracy.

Information quantity. Information quantity is most often discussed in the context of the acquaintanceship effect (Funder & Colvin, 1988). That is, as length of exposure to another increases the amount of information about the target available for use in forming impressions should be increased. Indeed, while greater-than-chance degrees of accuracy have been found for 30-second to 1-minute exposures to targets (Carney, Colvin, & Hall, 2007; Kryzyaniak, McDonald, Colman, & Letzring, 2017), accuracy of perceptions generally increases with longer acquaintanceship (Biesanz et al., 2007; Blackman & Funder, 1998; Colvin & Funder, 1991; Funder & Colvin, 1988; Letzring et al., 2006;

Paulhus & Bruce, 1992). However, a meta-analysis did not find a significant impact of information quantity for the accuracy of predicting social and clinical outcomes for thin-slices (≤ 5 -minutes) of observation (Ambady & Rosenthal, 1992). Nonetheless, an interesting pattern of results emerges when decomposing accuracy into the two components elucidated by Cronbach (1955). Specifically, distinctive accuracy tends to increase with acquaintanceship while normative accuracy decreases (Biesanz et al., 2007). Keeping this in mind, a recent study in which judges viewed a set of 30-sec., 1-min., 3-min., or 5-min. target videos found no differences in distinctive accuracy and only minor differences in normative accuracy for judgments across these video lengths (Kryzaniak et al., 2017). Even with these extremely short periods of exposures to target individuals, a general positive trend in accuracy, like that seen in much acquaintanceship effect research, was observed.

Good target. The central tenant of the *good target* moderator of interpersonal accuracy is that variability exists in how accurately targets are typically judged, or, in other words, the transparency or readability or judgability of targets. Indeed, there exists research to directly support this proposition that some targets tend to be judged more accurately than others (Biesanz, 2010; Colvin, 1993). Under the RAM framework, accuracy is likely to be higher when targets emit more relevant cues. For example, targets who are more judgable tend to reveal a greater number of observable cues about their less observable characteristics (Human & Biesanz, 2011a). Moreover, individuals with a coherent personality are easier to judge accurately (Biesanz & West, 2000), as “behavior is more consistent from one situation to the next, making valid observations of their personality more available” (Funder, 2012, p. 179). Aside from personality coherence,

good targets are often labeled with more positive descriptions such as warm, cheerful, dependable, extraverted, and conscientious; whereas less judgable individuals are commonly labeled as hostile, deceitful, moody, and neurotic (Colvin, 1993). Why this is the case is not entirely clear, but perhaps judges find it more enjoyable to interact and get-to-know more easily judged individuals. To this point, it has been found that target likeability is related to accuracy (Human & Biesanz, 2011b).

Relatedly, a systematic review of the good target literature (Human & Biesanz, 2013) identified three broad correlates of judgability: social status, psychological adjustment, and socialization. Higher social status individuals send clearer non-verbal cues, have those cues more often detected because others pay greater attention to such individuals, and feel more free to express emotion. The psychologically adjusted tend to present a more coherent picture of themselves, have less emotional suppression, and are more likeable. Finally, highly judgable targets excel at non-verbal and emotional expression, which tends to facilitate social competency. From these few examples, it is not surprising that such individuals are not only perceived with greater accuracy, but also tend to experience greater person-environment fit, increased high quality social support, and reduced loneliness (Human & Biesanz, 2013, p. 264).

Good judge. The good judge is the last of the moderators identified by Funder (1995), and has been a steadfast feature of interpersonal accuracy research (e.g., Adams, 1927; Christiansen, Wolcott-Burnam, Janovics, Burns, & Quirk, 2005; Letzring, 2008; Taft, 1955). Opposite of the good target, the supposition is that individuals differ in their ability to accurately perceive others. Similar to good target research, individual differences have been found in this ability (Biesanz, 2010), which has subsequently been

shown to be related to a multitude of beneficial outcomes (Letzring, 2015). Specifically, normative, but not distinctive, accuracy was positively associated with judges' self-reported satisfaction with life, interpersonal support and control, and positive affect.

Exploring such individual differences in judgmental ability, several behavioral, personality, and situational factors have been found to be important. For instance, accuracy in judging another's personality was positively associated with judges' agreeableness and sense of purpose (Letzring, 2008). Additionally, general mental ability and openness to experience have been found to be positively associated with interpersonal accuracy (Christiansen et al., 2005). From a behavioral perspective, the use of basic social skills (e.g., eye contact, expressing warmth), enjoyment of the interaction, and liking of the target, among other aspects, were positively related to accuracy (Letzring, 2008). Alternatively, yet intuitively, needing reassurance, undermining, and seeking advice were negatively related to accuracy. Concluding from these findings, it was asserted that such a pattern supports the idea that good judges elicit more information from targets for use when making judgments (p. 925). Furthermore, the number of good judges involved in three-person interactions impacts the level of accuracy achieved (Letzring, 2008). Based on the idea that good judges are likely to elicit more relevant information from their interaction partners, others in the multi-person interaction or even observing the interaction should also have that information available to them. This is precisely what was found; when groups contained at least one good judge, higher accuracy was attained by observers of the recorded interaction (albeit less pronounced when the group included one good judge vs. two good judges).

More recently, individuals' empathic response was shown to be reliably related to the ability to judge others accurately (Colman et al., 2017). Across four separate studies, a reliable link was found between the empathic tendencies outlined by Davis (1983) – perspective-taking, empathic concern, fantasy, and personal distress – and three different perceptual components. Specifically, all four tendencies were related to distinctive accuracy, while perspective-taking, empathic concern, and fantasy were correlated with normative accuracy and judges' projection of themselves in perceptions of others (i.e., assumed similarity). These findings play an important role in the current research. Therefore, a more comprehensive overview of the empathic response will now be provided before expanding the discussion of accuracy into another domain – inferring the thoughts, feelings, and purpose of others.

Empathic Response

An individual's empathic response is characterized by his/her ability to understand another person's perspective and then respond in an appropriate manner. As such, the empathic response is an important part of forming and maintaining interpersonal relationships. The core of the empathic response – or what the lay person conceptualizes as empathy – is the “link[age] between knowing the thoughts and feelings of others, experiencing them, and responding to others in caring, supportive ways” (Dvash & Shamay-Tsoory, 2014, p. 282). Importantly, differences in empathic responses can arise from four primary sources across situations: 1) differences in the way one experiences the specific situation (e.g., due to prior experiences), 2) differences in the way one perceives the situation (e.g., due to proximity or attention), 3) variability among

the relationships one has with the targets, and 4) dispositional differences in emotionality and/or tendency for an empathic response (Batson, Fultz, & Schoenrade, 1987, p. 21).

Empathy, broadly construed, is a complex and multifaceted construct. Davis (1983) noted “there are both affective and cognitive components to the empathic response” (p. 113). This fact is evident from a review of the literature, as there is a long history of two distinct, yet interrelated lines of scientific inquiry (Batson et al., 1987; Brems, 1989; Davis, 1980; Duan & Hill, 1996; Gladstein, 1983). The first line of inquiry is of a more cognitive, intellectual dimension of the empathic response. For this dimension, the emphasis is placed on “taking the role or perspective of another person [to see] the world as the other person does” (Gladstein, 1983, p. 468). Throughout this document, the term *perspective-taking* will be used to reference this aspect of the empathic response, which is defined as *a process by which one temporarily takes a point-of-view of another person in an effort to gain insight about the situation or thoughts, feelings, and/or purpose of another* (Davis, 1983; Galinsky, Maddux, Gilin, & White, 2008).

This process can occur physically by changing one’s position to gain another viewpoint or cognitively by imagining the conditions that another entity is experiencing. Regardless of the way one seeks to gain perspective, many benefits are had from the process, especially in the interpersonal domain. For example, it has been found that a manipulation to increase perspective-taking resulted in reduced stereotype use (Wang, Ku, Tai, & Galinsky, 2014) and facilitated interactions among in-group and out-group members (Galinsky & Moskowitz, 2000; Wang, Tai, Ku, & Galinsky, 2014). Additionally, combining perspective-taking with the feeling of power, irrespective of

whether one actually holds power, is related to greater levels of fairness and accuracy in interpersonal decisions (Galinsky, Magee, Rus, Rothman, & Todd, 2014). Moreover, perspective-taking provided an advantage during negotiation (Galinsky, Maddux, et al., 2008), as one used the insight gained to their strategic advantage.

The second line of inquiry emphasizes the affective (or emotional) response that usually occurs after perspective-taking: “responding with the same emotion to another person's emotion” or “feeling the same way as another person does” (Gladstein, 1983, p. 468). Although the terminology varies widely across the literature for this dimension – from affective and emotional empathy to empathic concern (see for example Davis, 1996; Mehrabian & Epstein, 1972) – the most simplistic term, *empathy*, will be used herein. Throughout this document, empathy is defined as *experiencing similar feelings, thoughts, and/or emotions as perceived occurring in another* (Davis, 1983; Davis et al., 2004; Gladstein, 1983; Zaki, 2014; Zaki, Bolger, & Ochsner, 2008).

It has been proposed that empathy, as defined herein, operates through the process of perspective-taking (Stiff, Dillard, Somera, Kim, & Sleight, 1988). That is, one must first understand another's point-of-view, via the process of perspective-taking, before being able to emotionally identify with the other by developing sympathy and feelings of concern (Zaki, 2014). This process, like perspective-taking, has many positive interpersonal outcomes. For instance, there exists a wealth of research concluding that higher levels of empathy, assessed using multiple methods (e.g., self-reports, other-reports, ability tests), are related to increased prosocial behavior (Eisenberg & Fabes, 1990; Eisenberg & Miller, 1987; Hoffman, 2008). Moreover, empathy is related to improved therapeutic outcomes (Banja, 2006; Mercer & Reynolds, 2002; C. R. Rogers,

2007) and thus has been promoted as an important aspect of connecting with clients. Specifically, the process of the clinician putting him- or herself in the patient's 'shoes' can induce a deeper understanding of the issues and which courses of actions are most likely to be adhered to by the client – improving both diagnosis and treatment outcomes (Banja, 2006). While there are many positive correlates, empathy can also hinder one's attainment of desirable outcomes. For instance, recall that Galinsky, Maddux, et al. (2008) found that perspective-taking led to better negotiation outcomes. However, when one takes the next step in the empathic process by taking on the thoughts and feelings of the other as his or her own, the benefits were less pronounced and at times even detrimental to the empathizer, as compared to a control group.

Empathic Accuracy

An implicit, yet fundamental assumption of the connection between individuals' empathic response and positive interpersonal outcomes is that the process provides accurate information about the thoughts, feelings, and purposes of others. However, that is a bold assumption to make. Rather, it is empathic accuracy, a topic on which research has proliferated in the last few decades, that likely moderates the relationship between positive outcomes and the empathic response. Empathic accuracy is defined as “*one's overall level of accuracy in inferring the specific content of other people's successive thoughts and feelings*” (Ickes, 2016, p. 52; italics added). More concretely, this has been operationalized as the correspondence between the thoughts and feelings targets report experiencing, and the thoughts and feelings that judges infer from targets' behavior (Hodges, Lewis, & Ickes, 2015; Ickes, 1993, 2001, 2016; Ickes, Stinson, Bissonnette, & Garcia, 1990).

Measurement of empathic accuracy has primarily taken two forms: 1) unstructured dyadic interaction and 2) standard stimulus (Ickes, 2001). In the first paradigm – the unstructured interaction – two participants are seated in a room together and then left alone to engage in an unstructured conversation. After a predetermined amount of time, the researcher returns and if it was not already known by the participants, informs them that they were videotaped while talking. At that point, both participants are asked to independently review the recording, stopping it when they recall having a thought and/or feeling and specifying it exactly on a coding sheet. Following the completion of this task by both participants, they then view the recording once more, but this time thinking about the interaction partner's thoughts and feelings. For this second video review, the footage is stopped at the specific points where a thought and/or feeling was recalled by the other. At these stop points, the participant (now acting as judge) is to infer the thought and/or feeling of the other on a coding sheet. Once this is completed, the participant is finished with the empathic accuracy procedure.

In the standard stimulus paradigm, each participant makes inferences about multiple targets' thoughts and feelings. This is accomplished by having a *standard* set of targets (usually between 3 and 8) used as the *stimulus* on which inferences are made by participants on a coding sheet at specified stop points. Just like the unstructured dyadic interaction paradigm, targets that make up the standard stimulus set indicated the point in which they had a thought and/or feeling and what it was on a coding sheet. Ultimately, for both paradigms, the degree of match between the reported thoughts and/or feelings by targets and those inferred by the judges are coded (e.g., 0 = completely different content, 1 = somewhat similar content, 2 = essentially same content). Ickes (1993, 2001) suggests

this coding be done by a minimum of 6 to 8 individuals to ensure reliability. The outcome of this coding is a total empathic accuracy score for each participant, which denotes the *proportion of accurate inferences*. These proportions of accurate inferences often hover between 20% for unacquainted persons and 35% for married couples (Ickes, 2016). This suggests that being empathically accurate is rather difficult and leaves much room for improvement.

Research on empathic accuracy, measured in the above manner, has contributed much to the interpersonal literature. For instance, it can be both a benefit and a burden in close relationships: helpful when assessing thoughts and feelings that are non-threatening to the relationship, but detrimental when thoughts and feelings are threatening (Simpson, Oriña, & Ickes, 2003). However, correlates of the *good judge* of thoughts and feelings have been relatively hard to find (Ickes, Buysse, et al., 2000). For instance, unlike trait judgment accuracy, research has failed to find meaningful gender differences on empathic accuracy (Hodges, Laurent, & Lewis, 2011), rather there seem to be motivational differences between men and women (Hodges et al., 2011; Ickes, 2011; Ickes, Gesn, & Graham, 2000; Klein & Hodges, 2001). Even so, there are two general characteristics of judges that predict the ability to be empathically accurate (Ickes, 2016).

The first aspect related to empathic accuracy is one's placement on the Autism Spectrum (Hodges, Lewis, & Ickes, 2014). Specifically, those diagnosed with Autism Spectrum Disorder (ASD) seem to have a less developed theory of mind (ToM; Baron-Cohen, Leslie, & Frith, 1985) and thus have a reduced ability to understand, let alone infer, the thoughts and feelings of others (Demurie, De Corel, & Roeyers, 2011). The second aspect is age (Ickes & Hodges, 2013; Isaacowitz, Vicaria, & Murry, 2016), with

empathic accuracy increasing across the first decades of life. This relationship is primarily seen during the early years (e.g., infancy through early adolescence) because ToM begins to develop during early childhood (i.e., 3-5 years of age) and continues to improve through late childhood (Wellman, Cross, & Watson, 2001).

Beyond these spheres (ASD diagnosis and age), a meta-analysis revealed some other broad factors that moderate empathic accuracy (Davis & Kraus, 1997). Specifically, people with greater intellectual functioning, a more complex yet independent cognitive style, who are well adjusted, express more social sensitivity, and are interpersonally trustful tend to achieve higher empathic accuracy. Further investigating the good empathic judge, Ickes, Buysse, et al. (2000) found that verbal intelligence “may be one of the strongest candidates” to distinguish good vs. poor judges; although, it is not clear why this is the case (p. 233). Furthermore, a communal interpersonal orientation and interpersonal trust were also suggested as plausible moderators of empathic accuracy.

Connecting Empathic and Trait Accuracy

Importantly, it is the skill of empathic accuracy that has been speculated to be a “necessary (if not sufficient) prerequisite to the accurate perception of traits” (Ickes, 1993, p. 587). However, only a few studies have examined the direct connection (e.g., Flury, Ickes, & Schweinle, 2008; Lewis, 2014; Thomas, 1999) and have produced mixed conclusions. Thomas (1999) found significant variability across judges for both empathic accuracy and trait accuracy. However, judges’ scores for each type of accuracy based on the same target did not correlate. On the other hand, Flury et al. (2008) found that among dyads consisting of one individual high and one low on a measure of borderline personality disorder (BPD), those with higher BPD had higher empathic and trait

accuracy. However, this result was confounded by the fact that those with BPD were poorer targets. Most recently, Lewis (2014) tested this relation from a different perspective – looking for the good target. Although evidence was found for variability in targets' readability when thoughts, emotions, or personality traits were being judged, a general tendency for being readable did not emerge.

While the relation between empathic and trait accuracy is a tenuous one, some research has established a link between self-report measures of empathic tendencies (as a proxy for empathic accuracy) and trait accuracy (Bernstein & Davis, 1982; Colman et al., 2017; Hall, Goh, Mast, & Hagedorn, 2016). Specifically, the tendency for perspective-taking is positively related to accuracy of trait judgments from viewing targets in videos (Bernstein & Davis, 1982; Colman et al., 2017) and from written text (Hall, Goh, et al., 2016). Additionally, judges with a greater tendency for empathy achieve more accurate trait judgments, again from both written text and video recordings of targets (Colman et al., 2017; Hall, Goh, et al., 2016). Lastly, the other two subscales of the Interpersonal Reactivity Index (Davis, 1983) – Fantasy and Personal Distress – were also related to trait accuracy (Colman et al., 2017). Specifically, Fantasy was positively related to distinctive and normative accuracy, and negatively related to assumed similarity. Personal Distress, on the other hand, was negatively related to distinctive accuracy but unrelated to normative accuracy and assumed similarity.

Because of these divergent findings between empathic tendencies and trait accuracy, and empathic accuracy and trait accuracy, a different theoretical stance ought to be taken. In doing so, it is important to consider prior findings regarding both aspects. First, the prospect of the good empathic judge has received little empirical support (e.g.,

Ickes, Buysse, et al., 2000; but also see Thomas, 1999), suggesting limited variability in the aptitude for being empathically accurate. Alternatively, there are clear individual differences to the empathic response (Davis, 1980, 1996; Mehrabian & Epstein, 1972; Spreng, McKinnon, Mar, & Levine, 2009), and these differences are related to many important outcomes (e.g., Davis, 1996; Eisenberg & Miller, 1987).

Another important difference is the measurement of empathic tendencies compared to empathic accuracy. As noted earlier, empathic accuracy scores denote the proportion of correct inferences about targets' thoughts and feelings (Ickes, 1993, 2001). Conceptualized differently, measures of individuals' empathic tendency (e.g., Davis, 1983; Mehrabian & Epstein, 1972) capture how often one perceives him/herself to engage in those activities. These differences become critical when reasoning the connections (or lack thereof) among empathic tendencies, empathic accuracy, and trait judgment accuracy. Specifically, although the proportion of accurate inferences hold relatively stable across judges, those who engage in the processes more (i.e., those with a higher empathic tendency) will have a greater absolute amount of correct information about targets that can be used to make accurate judgments of personality traits. For example, suppose both person A and person B have empathic accuracy scores corresponding to 20% correct inferences. Now, assume person A's empathic tendency is low (20 inferences per interpersonal interaction) and person B's empathic tendency is high (50 inferences per interpersonal interaction). In this example, person B would hold more correct information ($.20 * 50 = 10$ correct inferences) than person A ($.20 * 20 = 4$ correct inferences). Therefore, the theoretical proposition is that this absolute number of correct inferences plays a central role in greater empathic tendencies being related to trait

accuracy.¹ If this is indeed the case, training to increase perspective-taking or empathy should result in a greater absolute level of empathic insight, which will likely help increase the detection and utilization of target cues, ultimately leading to increases in trait judgment accuracy (see Figure 1).

Training: Instruction, Practice, & Feedback

Across many domains, training interventions have taken several forms: 1) instruction only (e.g., Biesanz & Human, 2010; Finlay & Stephan, 2000), 2) instruction with subsequent practice (e.g., Gibson, 1953; Gist & Stevens, 1998), and 3) instruction followed by practice with feedback (e.g., Kluger & DeNisi, 1996). However, the most efficacious training interventions are designed to include instruction, demonstration, practice, and feedback (Salas & Cannon-Bowers, 2001). A recent meta-analysis indicated that training is an effective strategy to improve interpersonal accuracy (Blanch-Hartigan, Andrzejewski, & Hill, 2012), especially when training includes a practice and feedback phase. Specifically, inclusion of practice and feedback phases moderated the effectiveness of accuracy trainings (Blanch-Hartigan et al., 2012), which is what would be expected given the literature on designing training programs (Salas & Cannon-Bowers, 2001; Salas, Tannenbaum, Kraiger, & Smith-Jentsch, 2012; Schmidt & Bjork, 1992).

¹ In the example, it is also true that person B has a greater absolute number of incorrect inferences, and it is therefore possible that this greater absolute amount of incorrect information would decrease accuracy.

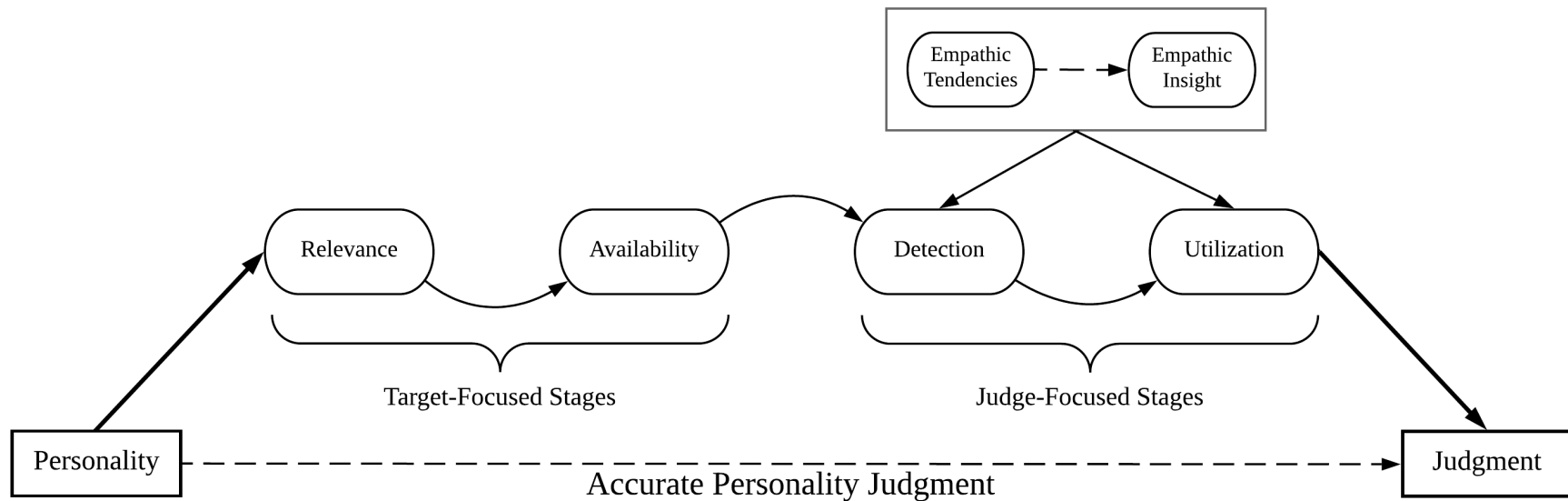


Figure 1. Stages of the Realistic Accuracy Model (RAM), with detection and utilization being moderated by judge empathic tendencies. These empathic tendencies are hypothesized to provide insight about the target, which may help judges detect relevant cues and better utilize them in the perception process. Thus, the expected result is more accurate personality judgment. Adapted from Fig.1 in Funder (2012).

Training of perspective-taking and empathy has primarily been aimed at three different populations: 1) the clinical population (e.g., those with ASD), 2) psychologists, therapists, and other professionals (e.g., doctors and teachers), and 3) the general, typically-developed population. As might be expected, training the empathic response in the clinical population, especially those with ASD or Asperger syndrome, has had minimal efficacy. For instance, Golan and Baron-Cohen (2006) tested the efficacy of a computerized program intended to improve the skills of adults with ASD or Asperger syndrome for decoding complex emotion of lifelike stimuli based on realistic visual and auditory examples. This program allowed the user three options: 1) explore the library of examples, 2) learn through lessons and quizzes, and 3) the gamification of learning to recognize the complex emotions. Overall, this digital program resulted in improvements for similar tasks to those in the software, but not for tasks requiring generalization beyond those exemplars seen in the program. Similarly, a 16-week (1.5 hours per week) manualized intervention study was completed on a sample of children with ASD. In this intervention, children were run in groups for which the principles of ToM were taught and demonstrated after which they practiced those skills. Those undergoing this training, compared to waitlist controls, seemingly were able to improve their ToM measured via a standardized interview, but had trouble enacting upon their improved skill according to parental reports (Begeer et al., 2011). Alternatively, in intensive training for four children diagnosed with ASD, the use of dolls and puppets to create vignettes was rather effective for increasing responses of empathy as rated by two trained observers (Schrandt, Townsend, & Poulson, 2009).

Training studies with professional populations (e.g., doctors, therapists, nurses) tend to view the empathic response as unidimensional, with the inclusion of both perspective-taking and empathy components. Even so, work has shown training to be successful in this domain. For example, an empathy intervention consisting of four hours of lecture spread across four weeks that included video exemplars of physician-patient interactions that were followed by practice and discussion, resulted in a significant boost to physician self-reported empathy as well as ratings by patients (Riess, Kelley, Bailey, Dunn, & Phillips, 2012). In another study, medical and nursing students completed a 10-hour instruction-based empathy course over a 5-week timeframe. Difference scores from pre- to post-training using paper-and-pencil tests indicated gains in participants' empathic responses and skills (Ozcan, Oflaz, & Bakir, 2012). As a last particularly effective example, a 5-day in-service training was given to a sample of nurses. In this training, the empathic response was taught and modeled with role playing, followed by opportunity for practice with group members, and feedback was given by the trainers based on the practice session (Ançel, 2006). Just as would be hypothesized from the training literature, engaging in all the training channels (i.e., instruction, demonstration, practice, and feedback; Salas & Cannon-Bowers, 2001) resulted in a considerable increase in overall self-reported empathic skills (approx. 16%; Ançel, 2006).

While these studies present evidence for the efficacy of training the empathic response in real world, applied settings, much work has also been done at the basic level to tease apart the dimensions of the empathic response. Central in this work has been the differentiation between perspective-taking and empathy. This differentiation can be summed up as self- vs. other-focus (Batson, Early, & Salvarani, 1997). Indeed, focusing

on this differentiation for manipulating these empathic tendencies has been successful (Galinsky, Maddux, et al., 2008; Gilin, Maddux, Carpenter, & Galinsky, 2013; Todd, Bodenhausen, Richeson, & Galinsky, 2011). In the manipulations used by Galinsky and colleagues (2008; 2011; 2013), simple yet distinct instructions were read by participants. For the empathy condition, they were instructed to be self-focused by *trying to imagine what you would be feeling in the given role, what emotions you would be experiencing*. Alternatively, those in the perspective-taking condition were instructed to be other-focused by *trying to imagine what the other person would be feeling, what are their emotions and purpose in the situation*. These instructional sets seemed to produce different engagement in perspective-taking and empathy, as the results from these studies followed a pattern that would be expected from theory. For example, it makes sense that stereotyping (a cognitive shortcut) is decreased for those who view a situation from another's perspective (Wang, Ku, et al., 2014). It is also reasonable for negotiators to achieve fewer benefits when the cost to others is understood through perspective-taking; similarly, a negotiator taking on the feelings and thoughts of the opposing representative is not as inclined to pursue mutually exclusive benefits (e.g., they try to reduce the cost to the other party; Galinsky, Maddux, et al., 2008).

Project Overview & Hypotheses

The central purpose of this dissertation was to test for a causal link between the empathic responses of perspective-taking and empathy and the accuracy of personality trait judgments. This directly expands upon prior work that has shown reliable, non-causal relations between these constructs (Colman et al., 2017). Given the effectiveness of the prompts used by Galinsky and colleagues (2008; 2011; 2013) in altering the

empathic response of participants, manipulations for perspective-taking and empathy were initially created for use in this dissertation using a very similar framework. Specifically, manipulation presented by video media were based on written instructions from previous research. The perspective-taking manipulation created for this project first directed the participant to envision what the target was thinking, feeling, and his/her purpose, and then examples were given. Alternatively, participants in the empathy condition were instructed to think the same thoughts and feel the same emotions the target was likely having, with examples again following. The efficacy of these manipulations was tested in Pilot Studies 1 and 2.

The main study implemented a crossed design to test the effects of empathic manipulations and different training designs on the normative and distinctive accuracy of trait judgments. Based on prior exploratory work which shows positive relations between self-reported tendencies for perspective-taking and empathy with both normative and distinctive accuracy (Colman et al., 2017), the empathic manipulations were expected to have a positive effect on both accuracy components.²

H₁: There will be a main effect for the empathic manipulation on levels of normative and distinctive accuracy for trait judgments. Specifically, the highest levels of accuracy will be found for participants assigned to the empathy manipulation condition, followed by participants in the perspective-taking manipulation condition, and the lowest levels of accuracy will be for participants in the empty control condition.

Similarly, based on the extant literature on training design (e.g., Salas & Cannon-Bowers, 2001; Salas et al., 2012), the levels of both normative and distinctive accuracy

² Project information, materials, analysis script, and preregistration for the Main Study can be found on the Open Science Framework at <https://osf.io/aku39/>.

were expected to increase as training intensity increased in terms of opportunity to practice and the provision of feedback to the judge.

H₂: There will be a main effect for the training condition on levels of distinctive and normative accuracy for trait judgments. Specifically, the highest levels of accuracy will be found for participants assigned to the instruction + practice + feedback condition, followed by participants in the instruction + practice condition, and the lowest levels of accuracy for participants in the instruction only condition.

Finally, the experimental design allowed for the examination of interaction effects. It was expected that the more intensive training became, the greater the effect of the empathic manipulations of perspective-taking and empathy would be on distinctive and normative accuracy. However, the increase due to training condition was predicted to be similar for both empathic manipulations. Thus, an interaction between the two factors (empathic manipulation and training intensity) was not expected.

Chapter III: Pilot Study 1

The purpose of this pilot study was twofold. The first objective was to determine the control condition (empty vs. active) to be used in the Main Study of this dissertation. The second, more central aim was to test the efficacy of the perspective-taking and empathy instructional videos. The intent was to use only three videos in the Main Study to assess the effect of perspective-taking and empathy on the accuracy with which personality judgments are made. However, before much resources (e.g., time, money, etc.) were expended, the effects of each video on participants' state levels of perspective-taking and empathy were examined.

Methodology

Determination of sample size. To ensure sufficient sample size was garnered to detect increases to perspective-taking or empathy, power analyses were conducted using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007). In a recent meta-analysis (Teding van Berkhout & Malouff, 2016), training programs were found to, on average, have a medium effect (Hedges' $g = 0.51$) on empathy levels.³ As such, the *MANOVA: Global effects* model with an estimated medium effect size of $f^2 = .0625$ and a Type I error rate of $p = .05$, specified that a total sample size of 116 participants would be required to obtain power = .80 to detect a significant multivariate effect.

However, a significant global multivariate effect requires one to perform follow-up analyses for each individual dependent variable (DV). One MANOVA post hoc analysis is the stepdown procedure, which uses an ANOVA followed by ANCOVAs for

³ The same medium effect size is used for all the reported power analyses in Pilot Study 1: Hedges' $g = 0.51$ is approximately equivalent to $f = .25$ and $f^2 = .0625$.

$n - 1$ dependent variables (Enders, 2003; Tabachnick & Fidell, 2013). The most theoretically important DV is tested using the ANOVA. Then, that DV is entered as a covariate when the second most theoretically important DV is tested using an ANCOVA. Subsequently, and as applicable, the previous DVs are entered as covariates when testing each successive DV, *stepping down* DVs in order of their theoretical importance. While this procedure is recommended over others (Enders, 2003; Tabachnick & Fidell, 2013), it is prone to an inflated Type I error rate. Specifically, Monte Carlo simulations have shown that departures from normality and heterogeneous variance/covariance matrices produce increased Type I error (Finch, 2007). Accounting for possibly inflated Type I error, it was planned that the Bonferroni correction would be applied – which produced an acceptable Type I error rate of $p = .025$. Given the stepdown procedure and change in the Type I error rate, another power analysis was conducted. Specifically, required sample size was estimated with the *ANCOVA: Fixed effects, main effects and interactions* model given a medium effect size of $f = .25$, a Type I error rate of $p = .025$, number of groups (k) = 4, numerator $df(k - 1) = 3$, and number of covariates = 1. This procedure specified a minimum sample size of 212 participants to achieve adequate power (0.80).⁴

Recruitment. For this, and the subsequent studies, Amazon’s Mechanical Turk (MTurk) was used to recruit participants. Technology, and the World Wide Web in particular, have provided new methods for accessing research participants. At its core, MTurk is a widely utilized platform for recruiting individuals to complete what are termed “human intelligence tasks” or HITs (Mason & Suri, 2012). Several studies have

⁴ Alternatively, the *ANOVA: Fixed effects, omnibus, one-way* model with an estimated effect size of $f = .25$, a Type I error rate of $p = .025$, power = .80, number of groups (k) = 4 specified a necessary sample size of 212, a full parallel to the ANCOVA model.

evaluated differences between traditional in-person and crowdsourced participants and have concluded data quality is high with crowdsourced participants (Behrend, Sharek, Meade, & Wiebe, 2011; Buhrmester, Kwang, & Gosling, 2011; Paolacci & Chandler, 2014). Additionally, crowdsourced workers appear motivated even at low compensation levels (Buhrmester et al., 2011) and complete studies for intrinsic as well as extrinsic rewards (Paolacci & Chandler, 2014). Furthermore, MTurk participants tend to be more diverse on important demographic variables such as age, education, and ethnicity than traditional in-person college/university participants (Behrend et al., 2011; Paolacci & Chandler, 2014). However, there are some differences between traditional laboratory participants and MTurk participants across the Big Five personality traits (Colman, Vineyard, & Letzring, in press). Specifically, while MTurk participants have levels of openness and conscientiousness that are within the range of that found with traditional laboratory participants, they are more neurotic but less extraverted and agreeable. Nonetheless, two critical benefits of using MTurk are the speed of data collection since it can take place 24 hours a day, and the relatively low cost.

Participants. Approximately 53 individuals per group (Range = 50 - 58), for a total sample of 213 participants (57.75% Female; 77.93% Caucasian, 9.86% Black/African American, 5.16% Asian, 7.05% other; $M_{\text{age}} = 38.41$, $SD_{\text{age}} = 12.87$), were recruited using Amazon's Mechanical Turk (MTurk). Groups did not significantly differ on age ($F(3, 208) = 1.23$, $p = .30$, $\eta_p^2 = 0.02$) or gender ($\chi^2(3) = 1.99$, $p = .57$).

Measures.

Abbreviated version of the Big Five Inventory. A 21-item abbreviated version of the Big Five Inventory (John, Naumann, & Soto, 2008) has been previously implemented

by Biesanz and colleagues (e.g., Human & Biesanz, 2011b; Human, Biesanz, Finseth, Pierce, & Le, 2014), and also included three additional items assessing intelligence: “Is intelligent,” “Is bright,” and “Receives very good grades.” The other-report version of this abbreviated measure, which is henceforth referred to as BFI-AV (see Appendix A), was used in this study. All ratings were made on a Likert scale from 1 (*disagree strongly*) to 7 (*agree strongly*). Note however, this abbreviated version has only been used as a judgment measure in prior research. Because such analysis has occurred at the item-level, reliability information is not available. For this reason and because this measure was used in this study as a filler task, reliabilities are not reported.

State Empathy Scale. The State Empathy Scale (SES; see Appendix B; Shen, 2010) is a 12-item measure designed to assess one’s current level of empathic response as a single unidimensional construct in reference to a specific target person. However, the items loading specifically onto either perspective-taking or empathy (affective and associative) were made explicit in the scale’s development; thus, scoring took place by subscale. An example perspective-taking question is “*I recognize the character’s situation*”; an example empathy question is “*I can feel the character’s emotions.*” Self-reports on all items were made using a 5-point Likert scale from 0 (*Not at all*) to 4 (*Completely*). Internal consistency for this measure as a univariate construct was high (α s = .92 and .93) in prior research (Shen, 2010, p. 516). In the current study, reliability was high for each subscale at baseline (α s = .86 and .87 for perspective-taking and empathy, respectively) and post-test (α s = .92 and .89 for perspective-taking and empathy, respectively).

Brief Form of the Interpersonal Reactivity Index. The brief form of the Interpersonal Reactivity Index (B-IRI; see Appendix C; Ingoglia, Lo Coco, & Albiero, 2016) was used to capture participants' typical (trait-like) empathic response to others across four sub-domains – perspective-taking, empathic concern, personal distress, and fantasy. This brief form uses a subset of 16 items from the original Interpersonal Reactivity Index (Davis, 1980), yet retains the key psychometric properties of the original measure (Ingoglia et al., 2016). Most centrally, reliability for the subscales have been found to be adequate (Perspective Taking = .65, Empathic Concern = .69, Fantasy = .79, and Personal Distress = .71). Herein, self-reports were made on a Likert Scale from 1 (*does not describe me well*) to 5 (*describes me very well*) for which internal consistency was adequate for each subscale at baseline (α s ranged from .81 to .88) and post-test (α s ranged from .81 to .93).

General demographics questionnaire. General demographics including gender, ethnicity, age, and religious affiliation were collected from participants (see Appendix D).

Stimuli. The two stimulus videos for this pilot study display a single individual (referred to as the target) discussing his/her typical behaviors with a research assistant. Only the target was visible in the videos, and the target in each stimulus video served as the *character* referenced in the SES items. These videotaped discussions were selected at random from those available in a library produced for an unrelated study (see Letzring & Human, 2014). While the original videos in this library were of various lengths, those chosen were cut to approximately 1 minute. This approach to the stimulus videos was taken because the videos themselves were not expected to be of critical importance.

Manipulation. A set of four videos was developed for this pilot study; two provided training for either perspective-taking or empathy, and two served as controls: one active and one empty. The transcripts used for each video are shown in Appendix E.

Perspective-taking. This video was generated to expand upon the written manipulation previously used to increase perspective-taking (Galinsky, Maddux, et al., 2008; Gilin et al., 2013; Todd et al., 2011). The video began by explaining that understanding the perspective of the *other* person will help the participant to better appraise that person's personality and behavior. Participants were directed to ascertain what others "are thinking, what their interests and purposes are" (Galinsky, Maddux, et al., 2008, p. 381). After this description, the remainder of the video provided active examples of this process. This involved walking through two example targets depicted in still photographs. Then, participants were instructed to apply this training to a third individual depicted in a photograph and write a few sentences about what that person's "purpose is, their interests and thoughts." After participants wrote these sentences, the example was completed by informing them what the *other's* purpose might have been, and what interests and thoughts might have been passing through the *other's* mind. Finally, the video concluded with a set of instructions for the next task in the procedure.

Empathy. This video was also based upon the empathy manipulation used to contrast the perspective-taking manipulation implemented in studies by Galinsky, Maddux, et al. (2008), Todd et al. (2011), and Gilin et al. (2013). The video began by explaining that intentionally putting *oneself* into another person's position will help him or her to better evaluate that person's personality and behavior. Participants were directed to think for themselves about what the *other person* is thinking, feel the way the *other*

person does, and embrace the same sensations. After this description, the remainder of the video provided active examples of this process. This involved walking through two example targets depicted in still photographs. Then, participants were instructed to apply this training to a third individual depicted in a photograph and write a few sentences as to how they felt and what they were thinking. After participants wrote these sentences, the example was completed by describing to participants what the person pictured was likely to be feeling and thinking. This was followed by rhetorically asking if they themselves experienced similar emotions, had similar thoughts, and felt similar sensations as the person depicted. Finally, the video concluded with a set of instructions for the next task in the procedure.

Active control. For this video, three pictures – one each from the perspective-taking and empathy training conditions, plus one additional not featured in either – were displayed and the situations described to the viewer. Ultimately, the goal of this video was to be a training condition but with 1) negligible changes to state levels of perspective-taking and empathy and 2) unlikely to be related to accuracy of personality judgment. Although this second aspect was not tested in this pilot study, it was reasoned that simply describing the situation that is displayed should not influence the later judgment of target individuals. Finally, like the other conditions, the video concluded with a set of instructions for the next task in the procedure.

Empty control. In this video, the instructions for the next steps in the procedure were displayed and read aloud by a narrator.

Procedure. Participants first read and agreed to the informed consent document. After consenting, they were instructed to watch the first 1-minute stimulus video after

which they rated the target person using the other-report version of the BFI-AV. While not of analytical importance here, ratings were made of the target because this was the task that was to occur in the Main Study of this dissertation. Following this, participants completed the SES and B-IRI to capture baseline measurements of state and trait perspective-taking and empathy. Next, participants were randomly assigned to an experimental condition, which involved viewing one of the four manipulation videos. The end of each video provided instructions in written and narrated form for the next task, which was to view another video of a person discussing the behaviors s/he typically engages in for several situations and then rate that person's personality using the other-report version of the BFI-AV. Following the ratings of personality, participants again completed the two self-report measures of perspective-taking and empathy (SES and B-IRI) as well as the general demographics questionnaire. After completing these measures, participants were provided with a debriefing statement and thanked for their time. Throughout this pilot study, attention checks were embedded to provide an indicator of the degree of comprehension of and adherence to the instructions. This was completed by including simple, yet easily overlooked prompts within the various questionnaires (see Table 1 for a list of example attention checks). Ultimately, only those who correctly answered at least 80% of attention checks and completed at least 90% of the procedure were remunerated \$0.50.⁵

Analytic approach. For this pilot study, the outcome of the personality judgment phase of the procedure was not relevant; instead, self-reports on state perspective-taking

⁵ These payment criteria were clearly established in the MTurk posting and informed consent document.

and state empathy were the crux of this pilot study. As such, a one-way MANOVA was utilized. For this analysis, video condition was the independent variable and difference scores (post-test minus baseline) for the perspective-taking and empathy subscales of the SES were the DVs. The plan was to follow a significant global effect with the stepdown procedure (Tabachnick & Fidell, 2013).

Table 1
Example Attention Checks

-
1. Make sure to select *disagree strongly* for this item
 2. Make sure to select *agree a little* to this item
 3. Select *agree strongly* to this item
 4. Select *does not describe me well* to this item
-

Results

Planned analysis. Before conducting the multivariate analysis, it was verified that the assumptions of the MANOVA were met. Specifically, according to Box's M test, there was homogeneity of the covariance matrices across the DVs ($\chi^2(9) = 14.12, p = .118$) and the error variance was equal across conditions for each DV ($F(3, 209) < 1.67, ps > .17$). Ultimately, the MANOVA demonstrated a non-significant multivariate effect of manipulation condition on the dependent variables of difference scores for perspective-taking and empathy, Wilks' $\Lambda = .98, F(6, 416) = 0.83, p = .55$. Because this multivariate test was not significant, the planned follow-up stepdown procedure was not performed.

Exploratory analyses. The non-significant multivariate effect of manipulation condition on the DVs of state perspective-taking and empathy was unexpected. As such, exploratory analyses were undertaken to explore whether participants were following the directions provided in the manipulation in a way that supports the empathic processes

that were intended to occur based on the condition to which the participant was assigned.

These follow-up analyses helped inform Pilot Study 2.

Coding. To conduct the exploratory analyses, the open-ended responses provided by each participant were coded by a total of eight trained research assistants who were blind to participant condition.

Table 2
Coding Prompts Developed for the Exploratory Analyses

Prompt	Response Scale
#1 To what degree did the respondent focus on situational factors, and NOT the characteristics of a person?	1 - Not at all 2 - A little 3 - A moderate amount 4 - A lot 5 - A great deal
#2 To what degree did the respondent show recognition and understanding of a person's purpose, thoughts, and feelings?	1 - Not at all 2 - A little 3 - A moderate amount 4 - A lot 5 - A great deal
#3 To what degree did the respondent seem to take on the thoughts, feelings, and purpose of the character as his/her own?	1 - Not at all 2 - A little 3 - A moderate amount 4 - A lot 5 - A great deal
#4 Select the overall theme of the response from (1) solely about the situation to (5) solely about the respondent's own thoughts, feelings, and purpose.	1 - Solely situational 2 - --- 3 - A combination of the situation, the thoughts/feelings/purpose of another person, and/or the thoughts/feelings/purpose of the respondent 4 - --- 5 - Solely OWN thoughts, feelings, and purpose
#5 What condition do you think the respondent was exposed to?	1 - Active control 2 - Perspective-taking 3 - Empathy

Coding scheme. Five questions were developed for this process (see Table 2). The first three questions were developed to explore the degree to which participants' open-ended responses were (1) non-empathic, situation focused, (2) perspective-taking focused, and (3) empathy focused. The fourth prompt placed the quality of the empathic response on a continuum from 1 (*non-empathic situational based*) to 5 (*empathy, with complete self-focus*). Finally, the last question was to posit the manipulation to which each participant was assigned based on the open-ended response.

Coders. Eight trained research assistants independently coded the open-ended responses provided by participants in the active control, perspective-taking, and empathy groups. Because participants in the empty control group were not asked to provide an open-ended response, these individuals were excluded from this coding process and further analysis. One of the coders was excluded because responses consistently deviated from the remaining seven coders. These remaining coders achieved adequate to high reliability⁶ for their responses to the five prompts: #1 ICC = 0.52 [0.38, 0.64]⁷, $p < .001$; #2 ICC = 0.50 [0.43, 0.58], $p < .001$; #3 ICC = 0.84 [0.81, 0.88], $p < .001$; #4 ICC = 0.71 [0.62, 0.78], $p < .001$; #5 Fleiss' $\kappa = 0.80$.

Results. With sufficient reliability being reached, responses to prompts 1-4 were averaged across coders to glean a single estimate. This estimate for each prompt was used as the dependent variables in these exploratory analyses. For prompt 1, there was a significant difference across the manipulation conditions, $F(2, 152) = 416.07$, $p < .001$,

⁶ The intraclass correlation (ICC) was used for prompts #1-4, as the response options were continuous; Fleiss' κ was used for prompt #5 because it used categorical response options.

⁷ Values in brackets represent 95% confidence interval.

$\eta_p^2 = 0.85$. Tukey's post hoc analysis was used to follow up all significant results, and in this case indicated that open-ended responses for the active control were coded as more situation-focused than both the perspective-taking ($M_{\text{diff}} = 2.17, p < .001$) and empathy groups ($M_{\text{diff}} = 2.60, p < .001$), and the perspective-taking group was coded as more situation-focused than the empathy group ($M_{\text{diff}} = 0.43, p = .001$). For prompt 2, there was a significant difference among the manipulation conditions, $F(2, 152) = 226.39, p < .001, \eta_p^2 = 0.75$. Open-ended responses for the perspective-taking group were coded as more other-focused than the active control group ($M_{\text{diff}} = 2.13, p < .001$) but not significantly more than the empathy group ($M_{\text{diff}} = 0.22, p = .12$). Additionally, the empathy group was coded as more other-focused than the active control group ($M_{\text{diff}} = 1.92, p < .001$). For prompt 3, there was a significant difference among the manipulation conditions, $F(2, 152) = 264.63, p < .001, \eta_p^2 = 0.78$. Open-ended responses for the empathy group were coded as more self-focused than both the perspective-taking ($M_{\text{diff}} = 2.57, p < .001$) and active control groups ($M_{\text{diff}} = 2.63, p < .001$). However, the perspective-taking and active control groups were not coded as being significantly different ($M_{\text{diff}} = 0.05, p = .92$). For prompt 4, there was a significant difference among the manipulation conditions on the empathic continuum, $F(2, 152) = 412.10, p < .001, \eta_p^2 = 0.84$. There was a linear pattern across the three groups, with all being significantly different from one another ($ps < .001$). Specifically, the empathy group was highest ($M = 4.06, SD = 0.76$), followed by the perspective-taking group ($M = 2.37, SD = 0.36$), and finally the active control group ($M = 1.18, SD = 0.26$). Lastly, in regard to the fifth prompt, the coders were able to deduce to which manipulation participants were assigned, all $\chi^2(1) > 163.48, ps < .001$.

Discussion

The expectation that there would be differences among manipulation groups based on difference scores for state perspective-taking and empathy was not supported. However, the exploratory analyses were informative. First, based on their open-ended responses, participants in the active control group appeared to be more situation-focused and less other- and self-focused than the perspective-taking and empathy groups. This suggests the active control group is highly similar to the empty control group, and thus the inclusion of an empty control is redundant and should be dropped. Furthermore, the open-ended responses of the perspective-taking group were more other-focused than the active control and empathy groups, while the empathy group responses were more self-focused than the active control and perspective-taking groups. Coders were also able to correctly deduce to which manipulation group the great majority of participants belonged from only the open-ended responses. This overall pattern of exploratory results indicates that participants completed the process as directed in the training videos, and therefore likely did experience the intended level of perspective-taking or empathy.

Nonetheless, it is troubling that differences among groups were not seen in difference scores of state perspective-taking or empathy. This could be due to several factors. First, it may be the case that a minimum level of affect or emotionality needs to be present for an empathic response to occur. Based on a review the stimulus videos selected, there was a dearth of expressed affect in the 1-minute segment. Furthermore, it may have also been the case that a longer exposure to the target was necessary to allow participants to fully embrace the manipulation. Lastly, it could be the case that the SES is a crude measure of state empathic response; therefore, not allowing for fine grain

differences to emerge, which is what might be expected with such a short manipulation protocol. Given these possibilities, a second pilot study was conducted to further explore the efficacy of the manipulation videos designed for this dissertation.

Chapter IV: Pilot Study 2

Like Pilot Study 1, the purpose of this second pilot study was twofold. First, it sought to address issues related to the video stimuli and measures that are possible reasons for the null results of Pilot Study 1. Specifically, this pilot study used a stimulus video that was longer (3 minutes, compared to 1 minute) to make it more likely that empathic responses would arise in the participants watching the video. Moreover, the stimulus video depicted the target describing key life scenes in which a greater amount of affect was expressed, which was thought to be more likely to enable empathic processes to occur. Secondly, this pilot study also explored the efficacy of the video manipulations as compared to the traditional, text-only instructional prompt manipulations on which they were based (i.e., Todd et al., 2011). To more thoroughly accomplish these purposes, an additional measure intended to tap into five domains of the empathic response was administered. Furthermore, five individual questions tapping into similar facets as those coded in the exploratory analysis phase of Pilot Study 1 were included. Finally, because of the exploratory results of the first pilot study, an empty control condition was not included in this pilot study.

Methodology

Determination of sample size. To ensure sufficient sample size was garnered to detect increases to state perspective-taking or state empathy, a power analysis was conducted using G*Power (Faul et al., 2007). Specifically, required sample size was estimated with the *ANOVA: Fixed effects, omnibus, one-way* model with an estimated

medium effect size⁸ of $f = .30$, a Type I error rate of $p = .01$ (Bonferroni corrected for up to five related tests), power = .80, number of groups (k) = 5. This procedure specified a minimum sample size of 195 participants.

Participants. Approximately 40 individuals per group (Range = 38 - 41) were recruited through MTurk, for a total sample of 197 participants (58.38% Female; 70.05% Caucasian, 11.68% Black/African American, 7.10% Asian, 11.17% other; $M_{\text{age}} = 39.42$, $SD_{\text{age}} = 13.02$). Experimental groups did not significantly differ on age ($F(4, 192) = 0.82$, $p = .51$, $\eta_p^2 = 0.02$) or gender ($\chi^2(6) = 2.65$, $p = .85$).

Measures.

BFI-AV. The BFI-AV, which was employed in Pilot Study 1, was used to capture judgments of the individual shown in the target video. As stated in Pilot Study 1, analysis of this measure in the way it is being used would be at the item-level. For this reason and because this measure was used in this study as a filler task, reliabilities are not reported.

SES. State affective empathy, state associative empathy, and state perspective-taking were assessed with this 12-item measure (Shen, 2010) as a manipulation check. Unlike the first pilot study, a baseline measurement was not taken in this study as group level means were of central focus. Internal consistency was adequate for each subscale (α s = .75, .80 and .86 for affective empathy, associative empathy, and perspective-taking, respectively).

⁸ This effect size was selected based strongly on the meta-analysis by Teding van Berkhout and Malouff (2016) which found an overall effect of Hedges' $g = 0.51$, but also in part on the exploratory results from Pilot Study 1 which found effect sizes ranging from $\eta_p^2 = 0.75$ to 0.85. $f = .30$ is roughly equivalent to Hedges' $g = 0.60$ and $\eta_p^2 = 0.08$.

Empathic Response Scale. The Empathic Response Scale (ERS; see Appendix F; Campbell & Barrow, 2004) is a 31-item measure designed to assess one's current level of empathic response. This measure has five different subscales: a) concern (e.g., *If I had the opportunity, I would try to help someone like the person in the video*); b) verisimilitude or realism (e.g., *The person in the video discusses something that reflects real life*); c) identification (e.g., *I can really identify with the person shown in the video*); d) understanding (e.g., *I can really see how someone could have experiences like the person talked about in the video*); and e) emotional arousal (e.g., *I can see how someone would feel emotional while watching this video*). All responses were made using a 7-point Likert scale from 1 (*disagree strongly*) to 7 (*agree strongly*). Reliability was good for four of the subscales (all α s $\geq$.84), but was lower for Verisimilitude (α = .66).

B-IRI. The B-IRI (Ingoglia et al., 2016), which was employed in Pilot Study 1, was also utilized in this study to capture participants' trait levels of empathic response in the four sub-domains. Internal consistency was adequate or good for each subscale (α s = .87, .88, .90, and .82 for perspective-taking, empathic concern, fantasy, and personal distress, respectively).

Table 3

Individual Empathic Response Items

-
1. To what extent did you try to be objective and emotionally detached while watching the video? (reverse scored)
 2. To what extent did you try to imagine what the character might be thinking, feeling, and experiencing?
 3. To what extent did you try to imagine what you might be thinking, feeling, and experiencing if you were the character?
 4. To what extent did you attempt to imagine the feelings, thoughts, and reactions of the person in the video?
 5. To what extent did you attempt to carefully observe every action and behavior of the person in the video?
-

Individual empathic response items. Several individual items were included to tap into similar facets of the empathic response as were coded in Pilot Study 1. These specific items were used as manipulation checks in prior research (Davis, Hull, Young, & Warren, 1987; Todd et al., 2011), and are listed in Table 3. These items were rated using a 7-point Likert scale from 1 (*not at all*) to 7 (*very much*).

General demographics questionnaire. General demographics including gender, ethnicity, age, and religious affiliation were collected from participants.

Stimuli. The stimulus video for this pilot study displayed a single individual describing three key life story scenes adapted from The Life Story Interview (McAdams, 2008). This individual in the stimulus video served as the *character* referenced in the SES items. The stimulus video was selected from those available in a library produced for an unrelated study (McDonald, 2018), based on having a high level of expressed affect that was expected to increase the chances of empathic responses arising. While the original videos in this library are of various lengths, the video chosen was cut to approximately 3-minutes in length.

Manipulation. The active control, perspective-taking, and empathy videos developed for the first pilot study were again used in this follow-up pilot study. Additionally, written instructional prompts for perspective-taking and empathy were adapted from Todd et al. (2011). Specifically, the perspective-taking instructions were *other-focused*, and read as follows: “While watching, visualize clearly and vividly what she might be thinking, feeling, and experiencing while describing the situations.” Alternatively, the empathy instructions were *self-focused*, and read as follows: “While watching, imagine what you might be thinking, feeling, and experiencing if you were the

person in the video, looking at the world through her eyes and walking in her shoes for the situations she describes.”

Procedure. Participants first read and agreed to an informed consent document. After consenting, participants were randomly assigned to an experimental condition, which involved viewing one of the three manipulation videos or reading one of the instructional prompts. For participants assigned to a video condition, the videos described in Pilot Study 1 were used, which included instructions in written and narrated form and provided a description of the next task of viewing a video of a person describing three key life story scenes and then rating that person’s personality using the other-report version of the BFI-AV. For those participants who received the written instruction, information on the subsequent task was received alongside the manipulation text. Following the ratings of personality, participants were instructed to complete the self-report measures of perspective-taking and empathy (SES, ERS, B-IRI, and individual empathic response items) as well as the general demographics questionnaire. After completing these, participants were provided a debriefing statement and thanked for their time. Like Pilot Study 1, attention checks were embedded in the questionnaires and only those who correctly answered at least 80% of attention checks and completed at least 90% of the protocol were remunerated with a \$0.25 payment.⁹

Analytic approach. Like the first pilot study, the outcome of the personality judgment phase of the procedure is not relevant. Rather, it is the self-reports on the various state perspective-taking and state empathy measures that are of critical

⁹ These payment criteria were clearly established in the MTurk posting and informed consent document.

importance. Here, a multitude of univariate tests were conducted. Specifically, a total of 13 one-way ANOVAs using type of empathic manipulation as the independent variable, were conducted with the subscales of the SES and ERS, as well as the five individual empathic response items that served as manipulation checks in prior work (Davis et al., 1987; Todd et al., 2011) as the DVs. While one might be concerned about inflated Type I error given this analytic strategy, the goal was to gather converging evidence of the effectiveness of the manipulation. Thus, convergence of evidence from the multiple tests, rather than the result of a single test, needed to be found to conclude the manipulations were efficacious.

Table 4
Results of ANOVA Models for the Various Measures

	<i>F</i>	<i>p</i> -value	η_p^2
<i>State Empathy Scale</i>			
Affective	0.69	.60	0.014
Cognitive	0.87	.48	0.017
Associative	0.48	.75	0.009
<i>Empathic Response Scale</i>			
Verisimilitude	1.29	.28	0.026
Identification	0.70	.59	0.014
Concern	1.40	.23	0.028
Understanding	1.19	.32	0.024
Emotional Arousal	1.59	.18	0.032
<i>Individual empathic response items^a</i>			
Question #1	0.28	.89	0.006
Question #2	0.77	.55	0.016
Question #3	1.01	.40	0.021
Question #4	0.33	.86	0.007
Question #5	2.25	.07	0.045

^a These items are detailed in Table 3.

Results

It was first verified that trait empathic tendencies of perspective-taking, empathic concern, fantasy, and personal distress were not different across groups (all $F_s(4, 192) < 1.61, p > .17, \eta_p^2 < 0.03$). Next, a series of ANOVAs were conducted in search of

converging evidence indicating the manipulations were efficacious. Contrary to this expectation, none of the ANOVAs across measures and subscales produced a significant result (see Table 4).

Discussion

The expectation of differences between manipulation groups based on the SES and ERS subscales, as well as the individual empathic response items, was not supported. Across these measures, there was essentially no evidence for differences in state perspective-taking or empathy based on either the video-based manipulation created for this dissertation or the text-based manipulations that have been effectively used in prior research (Todd et al., 2011). While these findings again make for an important decision moving forward, a tentative conclusion can be drawn.

First, recall that it was proposed that a longer video stimulus was necessary to enable an empathic response to occur. In this second pilot study, the stimulus was lengthened to three minutes – three times that used in Pilot Study 1. Second, in addition to the video-based manipulations, text-based manipulations that have been found in previous research to be effective in producing an effect in several outcome measures (e.g., business negotiations) were also used. Given the expanded length of stimulus exposure and the fact that a similar absence of an effect was found for both the video- and text-based manipulations, it seems even more plausible that existing measures of *state empathic response* (i.e., SES, ERS) lack the sensitivity necessary to detect differences caused by a brief manipulation – whether text- or video-based.

While the proposition about the measures of state empathic response seems tenable, it is not possible to rule out the possibility that the manipulations used are simply

not effective. As such, to undertake a more evidence-based approach to this dissertation, the text-based, instead of the video-based, manipulations were implemented in the main study. This choice was made because these text-based manipulations have been used in many published studies that have found significant differences in a variety of outcome variables (e.g., business negotiations, racial bias, stereotypic behavior; Galinsky, Maddux, et al., 2008; Galinsky, Wang, & Ku, 2008; Todd et al., 2011). While the decision was made to move forward with the manipulations used in much prior research, it should be noted that further investigation of the utility of the existing state empathic response measures is needed.

Chapter V: Main Study

This is the primary dissertation study, and is designed as a conceptual replication and extension of Colman et al. (2017). The conceptual replication is on a main effect of the empathic manipulation, and the extension is the introduction of training conditions. This study involved two distinct phases: 1) generation of a new set of stimulus videos and 2) assessment of the effects of empathic manipulation and training conditions on the normative and distinctive accuracy of personality judgments.

Methodology

Participant recruitment. The current research used two recruitment methods. In phase one, targets were recruited from the Department of Psychology participant pool at Idaho State University. The protocol for these participants was completed in-person. Alternatively, in phase two, participants (e.g., judges) were recruited from MTurk.

Determination of sample size. In determining the sample size that was necessary to complete phase 2 of this study, power analyses were conducted using G*Power (Faul et al., 2007). The *MANOVA: Special effects and interactions* model with an estimated medium effect size of $f^2 = .0625$ and a Type I error rate of $p = .05$ specified that a total sample size of 99 judges would be required to obtain power = .80. However, as mentioned previously, a significant global multivariate effect requires one to perform post hoc analyses, for which the stepdown procedure (Tabachnick & Fidell, 2013) was planned. Thus, similar to Pilot Study 1, another power analysis was conducted using the *ANCOVA: Fixed effects, main effects and interactions* model with an estimated effect size of $f = .25$, a Type I error rate of $p = .025$ (after accounting for inflated Type I error using the Bonferroni correction), power = .80, number of groups (k) = 9, numerator df (k

– 1) = 8, and number of covariates = 1 in G*Power (Faul et al., 2007). This model specified a necessary sample size of 263, almost triple the sample size indicated by the MANOVA model.

Adding another layer of complexity to this *a priori* discussion of power is the stability of the accuracy estimates that will be derived using the SAM (Biesanz, 2010), a cross-classified multilevel model which provides an item-level analysis of participants' ability to judge targets' personality profiles. Simulations in which the number of groups (level-2 units; 30, 50, and 100), group size (level-1 units; 5, 30, and 50), and the intra-class correlation (0.1, 0.2, and 0.3) were varied, a minimum of 100 groups provided regression coefficients, standard errors, and variance estimates of acceptable reliability (Maas & Hox, 2005). However, these simulations were applied to a fewer number of grouping factors (i.e., number of experimental groups) than the current study used. Therefore, to ensure the stability of estimates, approximately 50 judges were recruited for each condition in this 3 (empathic manipulation: active control vs. perspective-taking vs. empathy) $\times$ 2 (training condition: instruction vs. instruction + practice vs. instruction + practice + feedback) between-subjects experimental design. An empty control group was also included; thus, the overall minimum total sample size was set at $N = 350$.

Measures.

Big Five Inventory – 2. The 60-item Big Five Inventory – 2 (BFI-2; see Appendix G; Soto & John, 2017) is an improved version of the original Big Five Inventory (John et al., 2008) that was designed to measure the Big Five personality trait dimensions of Open-mindedness, Conscientiousness, Extraversion, Agreeableness, and Negative Emotionality. During development, this measure was determined to have

acceptable reliability with Cronbach's alpha for the 12-item domain scales ranging from .83 - .91. Ratings of short phrases of basic vocabulary were made using a Likert scale from 1 (*disagree strongly*) to 7 (*agree strongly*). This measure was used to capture self- and acquaintance-reported personality of the targets solicited for this study. Additionally, judges rated their own personality using this measure. Internal consistency was high for each trait dimension – α s ranged from .87 to .93.

BFI-AV. To reduce judges' fatigue, ratings of targets were made using the BFI-AV, which was also employed in Pilot Studies 1 and 2. Given this, self- and acquaintance-reported personality of the targets were solicited on this measure during the first phase of this study. Finally, judges also rated their own personality using this measure. Reliabilities were acceptable for each of the domains; $\alpha = .73$ for Openness, $\alpha = .78$ for Conscientiousness, $\alpha = .89$ for Extraversion, $\alpha = .73$ for Agreeableness, $\alpha = .83$ for Neuroticism, and $\alpha = .76$ for Intelligence.

Positive and Negative Affect Schedule. The Positive and Negative Affect Schedule (PANAS; see Appendix H; Watson, Clark, & Tellegen, 1988) was used to assess both positive (PA) and negative affect (NA). For trait level reports, participants were instructed to report on each emotion in terms of the extent to which they “generally feel this way, that is, how you feel on the average” using a 1 (*very slightly or not at all*) to 5 (*extremely*) Likert scale. Additionally, self- and other-report versions were used in this study to capture state PA and NA. For these state level reports, participants were instructed to report feelings on each emotion “right now, that is, at the present moment” using the same Likert scale. Internal consistency has been previously found to be $\alpha = .89$ for PA and $\alpha = .85$ for NA (Watson et al., 1988). Both state and trait level reports by

judges in this study were found to be highly reliable: α s = .92 and .93 for PA, respectively and α s = .91 and .92 for NA, respectively.

B-IRI. The B-IRI (Ingoglia et al., 2016), which was implemented in both pilot studies, was also utilized in this study to capture levels of empathic response in the four sub-domains. Each of the subscales had moderate to high reliability; α = .88 for Perspective-taking, α = .89 for Empathic Concern, α = .89 for Fantasy, and α = .83 for Personal Distress.

SES. Similar to Pilot Study 2, state empathy (affective and associative) and state perspective-taking were assessed after the last target video with this 12-item measure (Shen, 2010) as a manipulation check. Internal consistency for each subscale had acceptable reliability – α s ranged from .78 to .87.

ERS. Like the SES, the 31-item ERS (Campbell & Barrow, 2004) was completed after the last target video as a manipulation check. Recall this measure captures five domains of the empathic response: a) concern, b) verisimilitude, c) identification, d) understanding, and e) emotional arousal. Internal consistency was high for each, except for verisimilitude – α s = .90, .68, .88, .85, and .89, respectively.

General demographics questionnaire. General demographics including gender, ethnicity, age, and religious affiliation (see Appendix D) were collected from all participants (i.e., both targets and judges) recruited for this study. Additionally, judges were asked to complete additional questions related to parental and marital status, educational attainment, employment status, and leadership experience. These additional questions are outlined in Appendix I.

Stimuli. For the stimulus development phase of this study, participants (i.e., targets; $N = 23$) were asked to describe three key life story scenes (i.e., high point, life challenge, and turning point) adapted from The Life Story Interview (McAdams, 2008) for approximately 1 minute each while being video-recorded. This timeline was made explicit to targets to facilitate creating raw video footage that, when edited, was approximately 3 minutes in duration. Appendix J outlines the script that was used to introduce the interview and to elicit a response for each key scene.

After the video-recording session was completed, targets provided information on the emotions, thoughts, and/or feelings they were experiencing during the video recording. This was done in three different manners. First, immediately following the video-recording session, targets completed the self-report state version of the PANAS. Second, targets reviewed their videotaped interactions and provided what thoughts and feelings they were experiencing at selected *stop points* by writing 1-3 sentence descriptions. These descriptions were given twice for each life story scene at approximately the halfway point and at the conclusion of the response. This information was collected for use in the instruction + practice + feedback condition described in the next section. Third, targets wrote brief summaries (2-3 sentences) of their overall thoughts and feelings during the entire videotaped interaction. In addition to information on emotions, thoughts, and feelings, targets also completed personality self-reports (BFI-2 and BFI-AV) and reported general demographics.

Beyond these self-reports, each target was asked to identify and provide email addresses for five acquaintances (whom they had known for a minimum of 6 months) to report on his/her personality, this time utilizing other-report versions of the BFI-2 and

BFI-AV.¹⁰ These solicitations were first sent by the target from his/her personal email, using a provided template that specified the online survey URL and the participant's research ID (see Appendix K). The researcher sent up to two follow-up emails to acquaintances who had yet to complete the survey. This first follow-up email occurred after approximately one week, and the second after two-week's time. Approximately three weeks after targets completed their session, data collection was considered closed – whether or not all acquaintance reports were completed ($M_{\text{acquaintances per target}} = 2.74$; Modes = 3, 4)

Target video selection. The second phase of this study required a total of 14 videos, which were split into two blocks of seven videos each. In selecting the videos for use, several steps were followed. First, a minimum of two acquaintances were required to have completed the personality measures for the target depicted in the video. This criterion was met for 19 of the 23 targets who participated in this first phase of the main study. From these 19 targets, 14 videos (without consideration of gender) were selected in which the target reported focusing least on the interview process as being the cause of the experienced thoughts and feelings. This left an equal number of males and females. Next, the selected videos were split into groups based on the gender of the targets. Then these groups were split into subgroups of 3 and 4, respectively, using randomization in Microsoft Excel. Finally, the group of 3 males was paired with the group of 4 females,

¹⁰ Self- and acquaintance-reports on the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), measures of Implicit Theory of Intelligence (ITIM; Dweck, Chiu, & Hong, 1995) and personality (ITPM; Chiu, Hong, & Dweck, 1997), IRI (Davis, 1980) and B-IRI (Ingoglia et al., 2016), and the Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999) were also collected, but are not reported in this dissertation.

and vice versa. These two combined groups, of 7 video each, formed the two blocks of videos that were observed and rated in the second part of the main study. The gender represented more in each block was shown first, and then alternated throughout the remainder of the block. Table 5 shows the demographic profile for each video block.

Table 5

Target Demographic Information by Video Block

	Block 1	Block 2
Age (<i>M</i>)	25.29	20.86
Gender (<i>n</i>)		
Men	4	3
Women	3	4
Ethnicity (<i>n</i>)		
Caucasian	6	5
Hispanic/Latinx	1	1
Prefer not to answer	-	1
Religious Affiliation (<i>n</i>)		
Christian	4	5
Agnostic	2	1
Other	1	1
Acquaintance reports		
Range	2-5	2-5
Mean	3.57	3.14

Accuracy criterion. Research has shown that the self is not always the most accurate when identifying personality (John & Robins, 1993; Vazire, 2010). Because of this, it has been proposed that judgments should be compared to a criterion garnered from a compilation of self-report and the reports of one's peers (Kolar, Funder, & Colvin, 1996), and this has become the standard for interpersonal accuracy research. Given this, an accuracy criterion profile was composed for each target following the process outlined in Figure 2. Specifically, each item was averaged across the acquaintance reports and then the resulting item mean was averaged with the self-report. Ultimately, these criterion

profiles were used in the estimation of personality judgment accuracy in the second phase of this study.

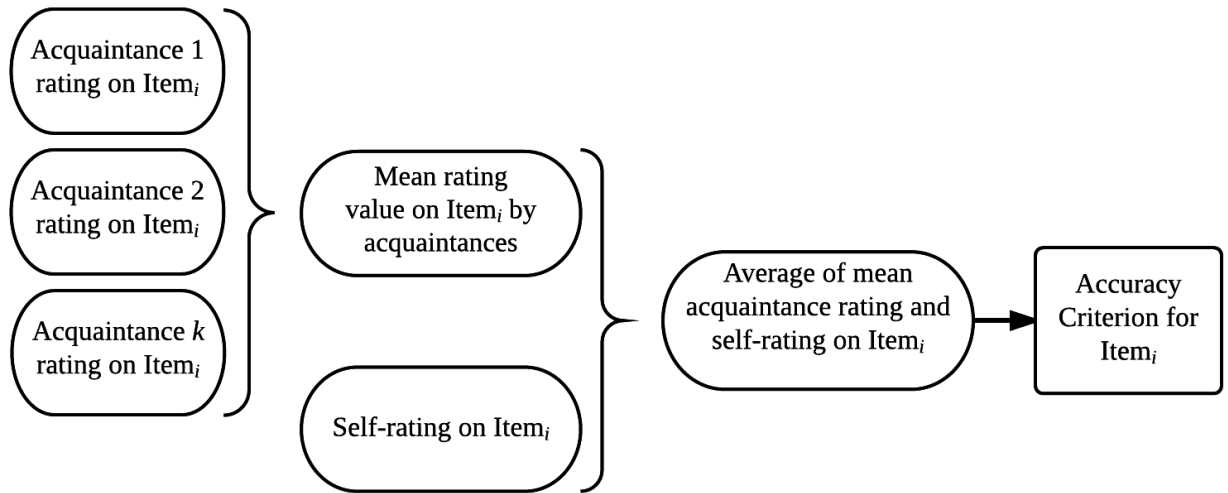


Figure 2. Visualization of the accuracy criterion profile computation process. Note that the number of acquaintance reports collected for each target can vary (k denotes the number of total acquaintance reports on Item _{i}). Recall that each target identified 5 acquaintances, and thus k ranged from 2 to 5.

Manipulations. Two different manipulations, as well as an empty control, were tested in the second phase of this main study. Table 6 displays the full prompts for each of the seven conditions, and these are described in detail in the following sub-sections.

Empathic. Given the results of Pilot Studies 1 and 2, text-based empathic manipulation instructions were used. There were three different instructions, one each for empty control, perspective-taking, and empathy, and were based on those used by Todd et al. (2011). Note that these instructions ended with a description of the next task - viewing videos of targets discussing recent positive and negative events and after each, answering questions about the given target.

Table 6.
Instructional Prompts for Each Experimental Condition of Phase Two of the Main Study

Empathic Manipulation	Training Condition		
	<i>Instruction only</i>	<i>Instruction + practice</i>	<i>Instruction + practice + feedback</i>
<i>Empty Control</i>	You will now view video clips of seven (7) individuals talking about three key life situations. After each video, you will answer a series of questions pertaining to the characteristics of the individual you just observed as well as other questions.	---	---
<i>Perspective-Taking</i>	You will now view video clips of seven (7) individuals talking about three key life situations. <i>While watching, visualize clearly and vividly what the person in the video might be thinking, feeling, and experiencing while describing the situations.</i> After each video, you will answer a series of questions pertaining to the characteristics of the individual you just observed as well as other questions.	You will now view video clips of seven (7) individuals talking about three key life situations. <i>While watching, visualize clearly and vividly what the person in the video might be thinking, feeling, and experiencing while describing the situations.</i> <u>Each video will be broken into six (6) shorter segments. After each segment, you will be asked to report what you think the person was thinking and feeling.</u> Finally, after viewing all six (6) segments, you will answer a series of questions pertaining to the characteristics of the individual you just observed as well as other questions.	You will now view video clips of seven (7) individuals talking about three key life situations. <i>While watching, visualize clearly and vividly what the person in the video might be thinking, feeling, and experiencing while describing the situations.</i> <u>Each video will be broken into six (6) shorter segments. After each segment, you will be asked to report what you think the person was thinking and feeling.</u> After viewing all six (6) segments, you will answer a series of questions pertaining to the characteristics of the individual you just observed as well as other questions. Finally, you will be able to see what the person reported actually thinking and feeling as feedback and then indicate how accurately you think your reports match his or hers.
<i>Empathy</i>	You will now view video clips of seven (7) individuals talking about three key life situations. <i>While watching, imagine what you might be thinking, feeling, and experiencing if you were the person in the video, looking at the world through their eyes and walking in their shoes for the situations described.</i> After each video, you will answer a series of questions pertaining to the characteristics of the individual you just observed as well as other questions.	You will now view video clips of seven (7) individuals talking about three key life situations. <i>While watching, imagine what you might be thinking, feeling, and experiencing if you were the person in the video, looking at the world through their eyes and walking in their shoes for the situations described.</i> <u>Each video will be broken into six (6) shorter segments. After each segment, you will be asked to report what you were thinking and feeling.</u> Finally, after viewing all six (6) segments, you will answer a series of questions pertaining to the characteristics of the individual you just observed as well as other questions.	You will now view video clips of seven (7) individuals talking about three key life situations. <i>While watching, imagine what you might be thinking, feeling, and experiencing if you were the person in the video, looking at the world through their eyes and walking in their shoes for the situations described.</i> <u>Each video will be broken into six (6) shorter segments. After each segment, you will be asked to report what you were thinking and feeling.</u> After viewing all six (6) segments, you will answer a series of questions pertaining to the characteristics of the individual you just observed as well as other questions. Finally, you will be able to see what the person reported actually thinking and feeling as feedback and then indicate how accurately you think your reports match his or hers.

Training. To manipulate consideration of each target's purposes, interests, thoughts, feelings, and sensations prior to making personality trait judgments, judges were randomly assigned to one of three training conditions: instruction only, instruction + practice, or instruction + practice + feedback. These conditions were administered by appending additional text to the randomly assigned empathic manipulation text. This manipulation was only used for those randomly assigned to the perspective-taking or empathy group of the empathic manipulation; no additional text was given for those in the empty control group nor those assigned to the instruction only training condition.

Procedure. For the second phase of this study, which is graphically shown in Figure 3, judges were randomly assigned to one of the target video blocks. After first reading and agreeing to the informed consent document, self-reports of the IRI, state- and trait-level PANAS, BFI-2, and BFI-AV were completed. Next, judges were randomly assigned to view one of the seven possible instructional sets listed in Table 6. While the instructions were provided for the training with the empathic manipulation, the actual practice and feedback tasks were embedded within this target judgment phase of the protocol. Regardless of randomly assigned condition, judges completed a *post-video questionnaire set* for each target, which involved the following procedures: 1) providing personality ratings of the target using the other-report version of the BFI-AV; and 2) filling out the PANAS twice – once using the other-report version to capture his/her perception of the target's state affect and then once using the self-report version to capture the judge's current state affect. The tasks for each training condition during this target judgment phase were as follows:

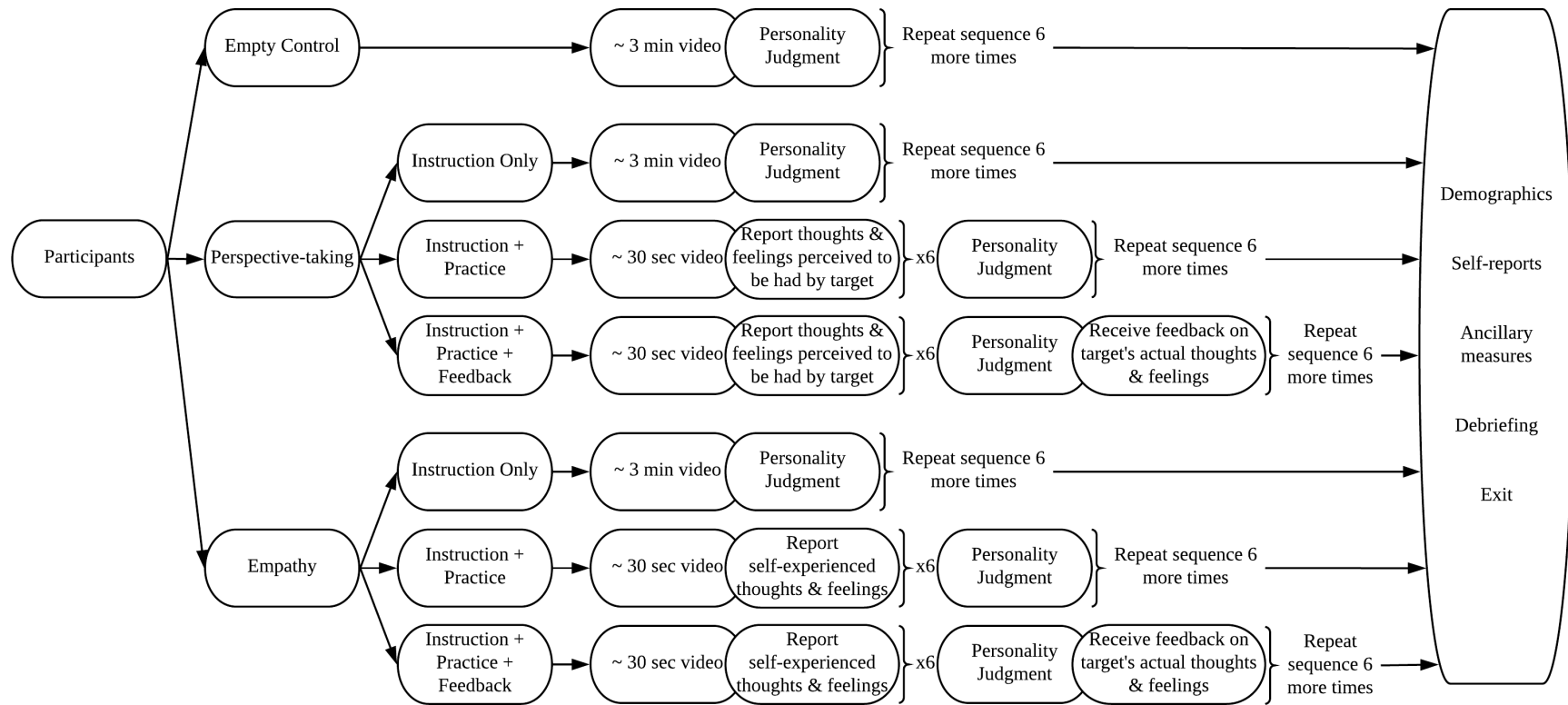


Figure 3. Visualization of the procedure for phase two of the Main Study

Instruction only condition (including empty control): After viewing the stimulus video, judges immediately completed the post-video questionnaire set.

Instruction + practice condition: Judges provided open-ended responses describing what they believe the target was thinking and feeling at the six video stop points – at the middle and end of the target’s response to each question (i.e., at the same place targets provided this information). Next, the judges completed a multiple-choice question in which they selected the overall thoughts and feelings of the target. In order to provide realism, the distractor items for these multiple-choice questions were taken from the actual responses of other targets in the study. Finally, after completing each of these tasks, the judges completed the post-video questionnaire set.

Instruction + practice + feedback condition: As in the instruction + practice condition, judges provided open-ended responses describing what they believed the target was thinking and feeling at the six video stop points, completed a multiple-choice question in which they selected the overall thoughts and feelings of the target, and completed the post-video questionnaire set. To implement the feedback portion of this condition, following completion of the post-video questionnaire set, the actual thoughts and feelings reported by the target after each 30-second video slice and the correct answer to the multiple-choice question were shown as feedback. Finally, judges were asked to indicate how well they thought their responses matched the actual target responses on a 1 (*not at all*) to 5 (*extremely well*) Likert type scale. The addition of this question was to help safeguard against participants not reading the feedback. That is, to answer the question honestly, participants were required to review the feedback.

Following this target judgment phase, judges completed the SES and ERS in reference to the last target as a manipulation check, and then provided general demographics.¹¹ Finally, judges were provided a debriefing statement, thanked for their time, and prompted to exit the online study. In a similar fashion but not the same as both pilot studies, only those who correctly answered at least 80% of attention checks and completed at least 80%¹² of the procedure were remunerated \$2.00.¹³

Analytic approach. To examine the impact of training condition on the accuracy of personality judgments, the SAM (Biesanz, 2010) was utilized.¹⁴ The SAM takes a componential approach to accuracy using a cross-classified multilevel model for *simultaneous analysis* of the two central accuracy elements identified by Cronbach (1955). These two components of accuracy are labeled *normative accuracy* and *distinctive accuracy* in the SAM (Biesanz, 2010), but are equivalent to stereotype accuracy and differential accuracy, respectively. The base model is expressed as follows (equation 1):

$$\begin{aligned}
 Y_{jit} &= \beta_{0jt} + \beta_{1jt} TCrit_{it} + \beta_{2jt} Norm_i + \varepsilon_{jit} \\
 \beta_{0jt} &= \gamma_{00} + u_{0j} + u_{0t} \\
 \beta_{1jt} &= \gamma_{10} + u_{1j} + u_{1t} \\
 \beta_{2jt} &= \gamma_{20} + u_{2j} + u_{2t}
 \end{aligned}
 \tag{1}$$

¹¹ Although ancillary to the emphasis of the Main Study, SWLS (Diener et al., 1985), ITIM (Dweck et al., 1995), ITPM (Chiu et al., 1997), and SHS (Lyubomirsky & Lepper, 1999) were also administered at this point.

¹² For Pilot Studies 1 and 2 this value was 90%, for the main study it was set at 80%. This is because the Main Study procedure is significantly longer than in each pilot study.

¹³ Again, these payment criteria were clearly stated in the MTurk posting and the informed consent document.

¹⁴ The lme4 package for R (version 1.1-14) was used to estimate the multilevel models from which the accuracy scores were extracted.

Under this model, Y_{jt} is judge j 's rating of target t (the judge-target pair) on item i of the BFI-AV. $TCrit_{ti}$ is the accuracy criterion, which was determined through combining self- and acquaintance-ratings, for target t on item i . $Norm_i$ is an estimate of the average personality profile for item i on the BFI-AV. Specifically, this normative estimate was gleaned by averaging the self-reported scores on item i of the BFI-AV across all judges in this study. Prior to analysis, $Norm_i$ was subtracted from $TCrit_{ti}$, which adjusted $TCrit_{ti}$ to match the operational definition of distinctive accuracy – how accurately judge j differentiates target t from the normative person, which is captured in the predictor $Norm_i$. After this adjustment, both predictors in the model ($TCrit_{ti}$ and $Norm_i$) were grand mean centered.

Given this data preparation process, the intercept (β_{0jt}) of the level-1 model is the average predicted value of judge j 's rating of target t on item i when $TCrit_{ti}$ and $Norm_i$ are at their mean levels. In a similar vein, β_{1jt} is the estimate of distinctive accuracy, and represents the average change in judge j 's rating of target t on item i for a one unit increase to target t 's criterion value on item i , while holding the normative estimate on item i at the mean value. Finally, β_{2jt} is the estimate of normative accuracy, and corresponds to the average change in judge j 's rating of target t on item i for a one unit increase in the normative profile on item i , while holding target t 's criterion on item i at the mean value.

There is an interesting twist to the estimation of accuracy scores that need be noted. Specifically, only ratings of the last six targets in each video block were used in the computation of accuracy. This is because those in the instruction + practice + feedback training condition were not exposed to feedback until after the first target. That

is, judges in this condition received feedback on the first target's actual thoughts and feelings just prior to beginning the second target video. Thus, in order to keep the accuracy estimation process the same across all conditions, ratings of the first target were omitted and only ratings for the last six targets were included in the model.

In preparation for primary analyses, estimates for both types of accuracy – normative and distinctive – based on the last six targets, were extracted for each judge. To examine the main effect of empathic manipulation, the main effect of training, and their interaction without inclusion of the empty control condition, a 2×3 MANOVA was implemented, using the extracted distinctive and normative accuracy estimates as the DVs. It was planned that following a significant global effect, the stepdown procedure (Tabachnick & Fidell, 2013) would be carried out. In addition to this multivariate approach, a univariate single factor approach was also undertaken. Specifically, two one-way ANOVAs were used to test for differences in accuracy across all seven groups – one for normative accuracy and a second for distinctive accuracy.

Results

Participants and determination of inclusion. A total of 772 MTurk workers consented and at least partially completed the protocol. As noted previously, the criteria for participants to be remunerated and included in data analyses were completing at least 80% of the protocol with a minimum of 80% correctness on the attention checks. This resulted in a 48.4% inclusion rate (62.47% Female; 77.21% Caucasian, 10.05% Black/African American, 5.39% Hispanic/Latinx, 7.35% Other; $M_{\text{age}} = 40.08$, $SD_{\text{age}} = 12.70$). Given that the protocol took between approximately 50 minutes and up to 90 minutes depending upon the training condition, it is not surprising there was a significant

difference in inclusion rates across groups ($\chi^2(6) = 41.37, p < .001$). Specifically, the instruction only conditions had the greatest inclusion rates ($> 67\%$) and the most intensive training conditions – instruction + practice + feedback – had the lowest inclusion rates ($< 38\%$). However, gender distribution across groups for those included was not significantly different ($\chi^2(6) = 4.01, p = .67$), nor were there differences in age ($F(6, 367) = 1.05, p = .39, \eta_p^2 = 0.017$). Because of the number of cells containing 0, conducting a Chi Squared test of differences for ethnicity distribution across conditions would not be meaningful. Thus, ethnic groups were reduced to Caucasian vs. non-Caucasian, with other and prefer not to answer responses removed. The Chi Squared test conducted on these two groups across conditions indicated no differences ($\chi^2(6) = 7.61, p = .27$). Moreover, levels on the Big Five personality traits, each of the B-IRI subscales, and trait PA were not significantly different across groups ($F_s(6, 367) < 1.92, p > .08, \eta_p^2 < .03$). Conversely, there was a significant difference in trait NA across groups ($F(6, 367) = 2.24, p = .04, \eta_p^2 = 0.04$); however, Tukey post-hoc tests revealed no significant pairwise differences. Given the lack of demographic differences across groups, concern about the differential inclusion rates is low and not of further consideration herein.

Planned analyses.

State empathy manipulation checks. Both the SES and ERS were administered toward the end of the protocol as manipulation checks of the empathic manipulation. Using one-way ANOVAs, none of the subscales of either measure were different across the seven groups (all $F_s(6, 365 \text{ or } 366 \text{ or } 367) < 1.83, p > .09, \eta_p^2 = 0.03$). Although these manipulation checks failed to reveal differences in measured state empathic response across groups, all other planned analyses were still undertaken.

Estimation of overall normative and distinctive accuracy. The SAM was used to estimate the overall normative and distinctive accuracy achieved by the judges. As shown in Table 7, significant levels of distinctive and normative accuracy were found across conditions.¹⁵ Additionally, there was a significant amount of variability in distinctive and normative accuracy scores across judges and targets (see judge and target random effects estimates in Table 7). This indicates there is variability that can be explained by the manipulations, or perhaps some other factor (e.g., individual differences).

Table 7

Social Accuracy Model Parameter Estimates Across Groups

Fixed effects	
Distinctive accuracy (γ_{10})	0.156 (0.051)*
Normative accuracy (γ_{20})	0.703 (0.067)***
Judge random effects	
$\tau_{\text{Distinctive}}$	0.111***
$\tau_{\text{Normative}}$	0.448***
Target random effects	
$\tau_{\text{Distinctive}}$	0.173***
$\tau_{\text{Normative}}$	0.218***

Note. *** $p < .001$, ** $p < .01$, * $p < .05$. Standard errors of the fixed effects are in parentheses. Significance of the random effects were tested using nested chi-square difference tests (Hox, 2010, pp. 47-50).

Multivariate effect of the manipulations. As planned, a MANOVA was used to explore the two manipulations – empathic and training. However, before conducting the multivariate analysis, it was verified that the assumptions were met for each independent variable. Specifically, using the Box’s M test, the covariance matrices were considered equal across the DVs for both the empathic manipulation ($\chi^2(3) = 1.11, p = .78$) and

¹⁵ Model was estimated using the lme4 package (version 1.1-13) for R (version 3.4.1) with the lmerTest package (version 2.0-33) attached so that *dfs* via Satterthwaite’s approximation and *p*-values for fixed effects were available in summary output.

training conditions ($\chi^2(6) = 10.98, p = .09$). Additionally, the error variance was equal across groups for normative accuracy ($F(5, 315) = 0.65, p = .66$), but were significantly different across groups for distinctive accuracy ($F(5, 315) = 2.33, p = .04$). Although there was a violation of the MANOVA assumptions, it was decided to proceed with the multivariate analysis. However, as suggested by Tabachnick and Fidell (2013), a more conservative alpha level (.025) was needed to determine significance of differences in distinctive accuracy. Ultimately, the concern about significance for distinctive accuracy was a moot point as the MANOVA did not reveal significant global multivariate effects.¹⁶ Expressly, there was no interaction effect (Wilks' $\Lambda = 1.00, F(4, 628) = 0.17, p = .95, \eta^2 = .001$), main effect for the empathic manipulation (Wilks' $\Lambda = 1.00, F(2, 314) = 0.19, p = .83, \eta^2 = .001$), or main effect for the training condition (Wilks' $\Lambda = .98, F(4, 628) = 1.25, p = .29, \eta^2 = .008$).

Univariate effect of the manipulations.¹⁷ Because the multivariate test was not significant, the stepdown procedure was not necessary. Nonetheless, univariate tests were conducted to further explore the data. Specifically, in testing the interaction and main effects for empathic manipulation and training conditions, 2 (empathic manipulation) $\times$ 3 (training condition) ANOVAs were run – once each for normative and distinctive accuracy. Just as the multivariate test indicated, for both normative and distinctive accuracy, there were no significant effects (all $F_s(1 \text{ or } 2, 315) < 1.84, p > .16, \eta_p^2 < .011$; see Figures 4 and 5). Additionally, to be able to compare all 7 groups to one another, one-way ANOVAs were conducted – one each for normative and distinctive accuracy. Once

¹⁶ Results held when trait PA and NA were entered as covariates.

¹⁷ Again, each of these results held when trait PA and NA were entered as covariates.

again, the analyses and Figures 6 and 7 paint the clear picture that there were no significant differences across all the groups (both $F(6, 367) < 0.72, p > .63, \eta_p^2 < .01$).

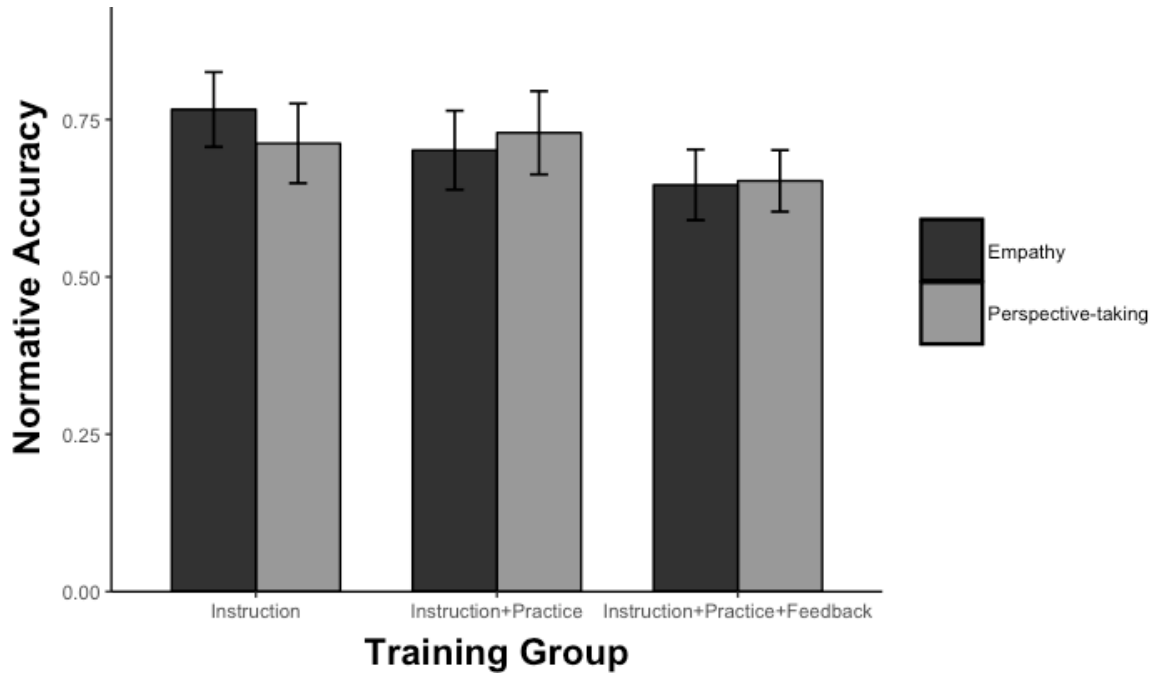


Figure 4. Normative accuracy across training intensity levels and between empathic manipulations.

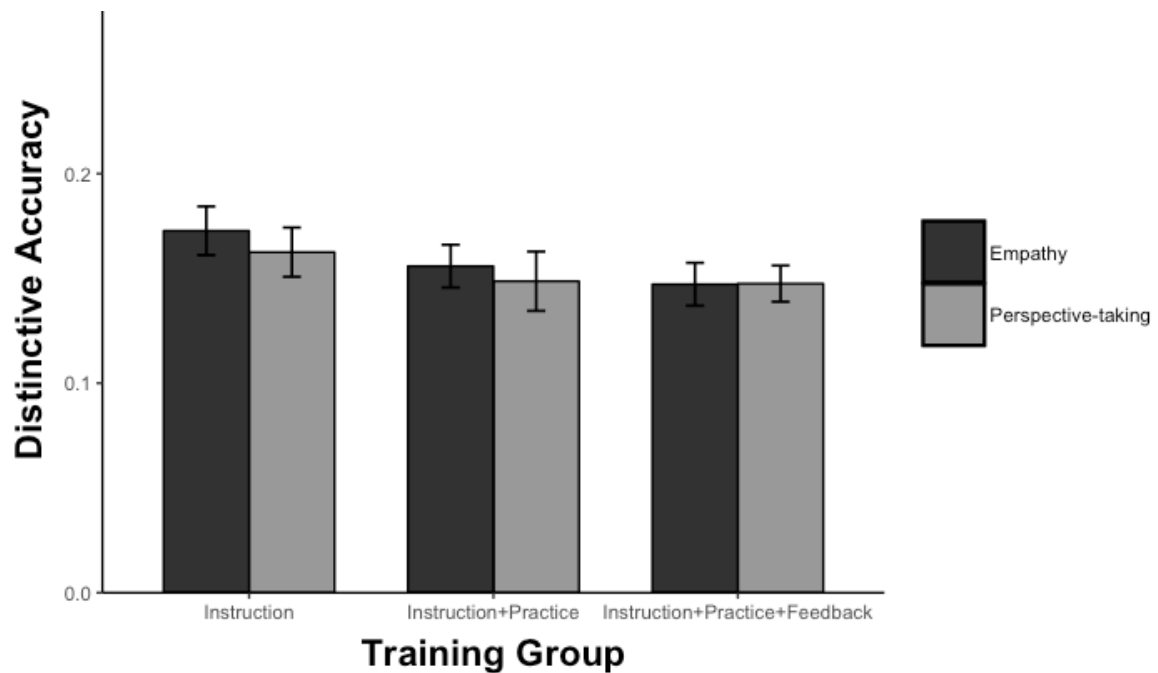


Figure 5. Distinctive accuracy across training intensity levels and between empathic manipulations.

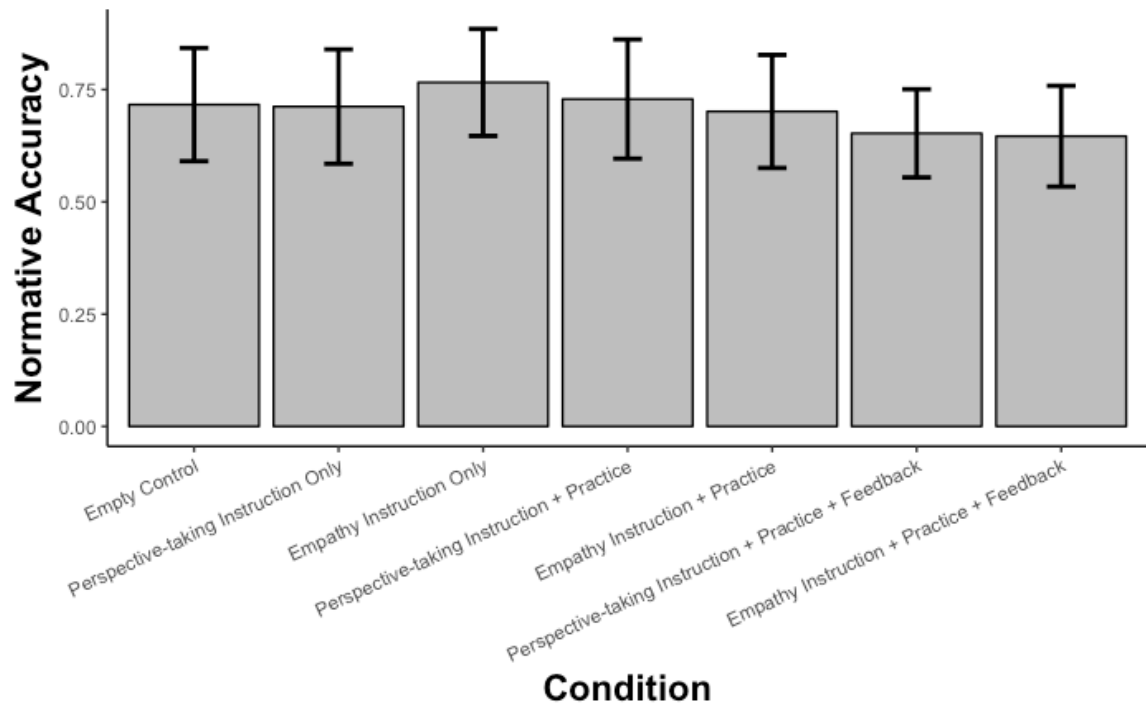


Figure 6. Normative accuracy across conditions, including the empty control.

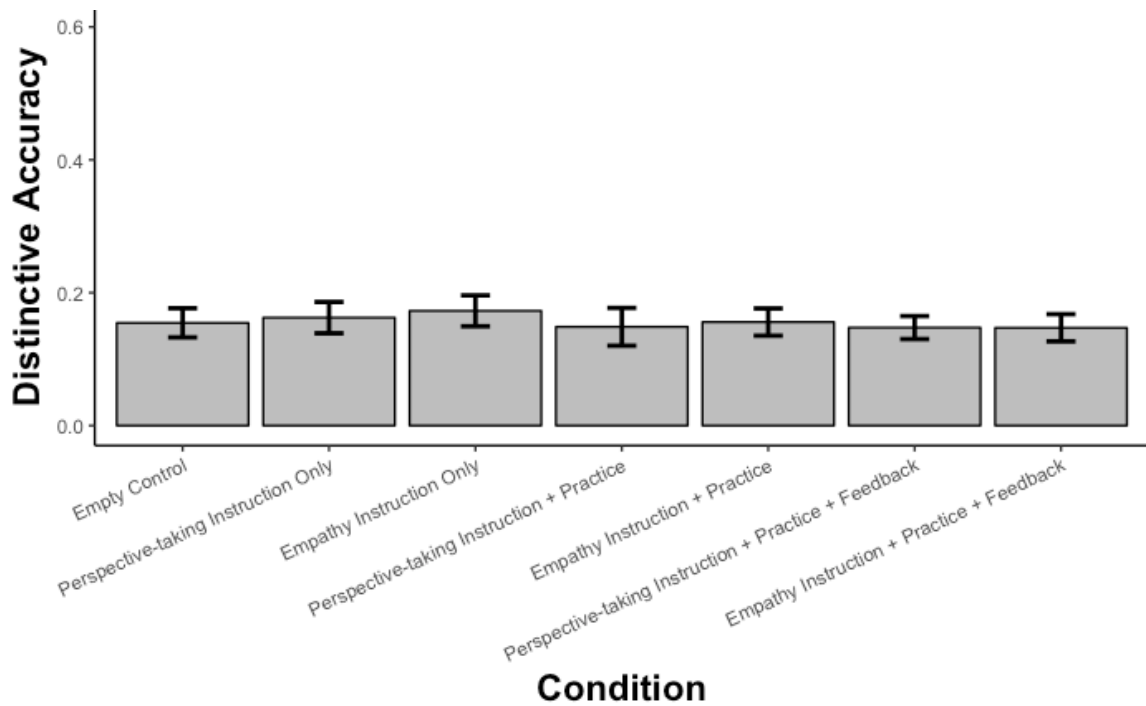


Figure 7. Distinctive accuracy across conditions, including the empty control.

Exploratory analyses.

Replication of Colman, Letzring, and Biesanz (2017). An explicit purpose of this dissertation was to replicate the finding that trait empathic responses were found to be significantly related to both normative and distinctive accuracy (Colman et al., 2017). In this analysis, the subscales of the brief IRI, instead of the full IRI, were used as moderators of each accuracy component in the SAM. Specifically, equation 1 was adapted for this set of analyses by the addition of the given empathic tendency (ET_j) being tested at level-2 of the model (see equation 2). The resulting coefficients γ_{11} and γ_{21} represent the change in distinctive accuracy and normative accuracy, respectively, for a one-unit change in the given empathic tendency.

$$\begin{aligned}
 Y_{jit} &= \beta_{0jt} + \beta_{1jt} TCrit_{ti} + \beta_{2jt} Norm_i + \varepsilon_{jit} \\
 \beta_{0jt} &= \gamma_{00} + \gamma_{01}ET_j + u_{0j} + u_{0t} \\
 \beta_{1jt} &= \gamma_{10} + \gamma_{11}ET_j + u_{1j} + u_{1t} \\
 \beta_{2jt} &= \gamma_{20} + \gamma_{21}ET_j + u_{2j} + u_{2t}
 \end{aligned} \tag{2}$$

As shown in Table 8, the data indicated a similar pattern of relations as found by Colman et al. (2017). Specifically, the pattern of significant moderation for normative accuracy is replicated. However, only the significant moderation by Personal Distress was replicated for distinctive accuracy. Nonetheless, the pattern of effects (see d effect size columns) was similar to those found in previous work, but of much smaller magnitude in the current data.

Relationship between trait and state levels of empathic response. Measures for both trait empathic response (via the B-IRI) and state empathic response (via SES and ERS) were administered to judges. Although the planned manipulation checks did not reveal significant differences in state empathic response across groups, it was reasonable to presume there would be relations among individuals' trait and state level empathic

response. As can be seen in Table 9, this is indeed the case. Of note is the fact that the interrelations among subscales from the same measure are noticeably stronger than between subscales of different measures. This is especially evident for the relations between trait level and state level subscales. For instance, the correlation between trait level perspective-taking and empathic concern was $r = .57$; the same relation for the state level (e.g., perspective-taking and affective empathy) was $r = .60$. Meanwhile the relation between state and trait level perspective-taking was $r = .36$, and this relation between empathic concern and affective empathy was $r = .32$ ($r = .31$ with associative empathy).

Table 8
Social Accuracy Model Empathic Tendency Moderator Estimates

Moderator effects	Colman et al. (2017)		Main Study	
	Coefficient	<i>d</i>	Coefficient	<i>d</i>
Distinctive accuracy (γ_{11})				
Perspective-taking	0.0296 (0.0013)***	0.23	0.0002 (0.0082)	0.002
Empathic Concern	0.0487 (0.0059)***	0.39	0.0125 (0.0079)	0.12
Fantasy	0.0334 (0.0057)***	0.30	0.0128 (0.0073)	0.13
Personal Distress	-0.0171 (0.0058)**	-0.14	-0.0091 (0.0085)**	-0.08
Normative accuracy (γ_{21})				
Perspective-taking	0.1013 (0.0148)***	0.27	0.1421 (0.0241)***	0.56
Empathic Concern	0.1479 (0.0141)***	0.42	0.1900 (0.0215)***	0.83
Fantasy	0.0417 (0.0135)**	0.14	0.0567 (0.0219)***	0.25
Personal Distress	0.0183 (0.0142)	0.06	-0.0243 (0.0253)	-0.09

Note. *** $p < .001$, ** $p < .01$, * $p < .05$. Standard errors of the fixed effects are in parentheses. Effect sizes were calculated as the change in slope (γ_{11} or γ_{21}) for a 2 *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). Values shown for Colman et al. (2017) are the meta analytic estimates across the four studies reported.

Table 9
Pearson Correlations Among Trait and State Measures of the Empathic Response

	1	2	3	4	5	6	7	8	9	10	11
<i>B-IRI Subscales</i>											
1. Perspective-taking	--										
2. Empathic Concern	0.57***	--									
3. Fantasy	0.36***	0.43***	--								
4. Personal Distress	0.00	0.15**	0.22***	--							
<i>SES Subscales</i>											
5. Affective Empathy	0.27***	0.32***	0.29***	0.21***	--						
6. Perspective-taking	0.36***	0.34***	0.24***	-0.01	0.60***	--					
7. Associative Empathy	0.30***	0.31***	0.24***	-0.02	0.64***	0.77***	--				
<i>ERS Subscales</i>											
8. Verisimilitude	0.17**	0.27***	0.09	-0.07	0.22***	0.49***	0.38***	--			
9. Identification	0.20***	0.32***	0.19***	0.08	0.59***	0.60***	0.68***	0.44***	--		
10. Concern	0.38***	0.53***	0.26***	0.05	0.52***	0.59***	0.59***	0.51***	0.68***	--	
11. Understanding	0.17***	0.31***	0.11*	-0.05	0.20***	0.48***	0.36***	0.81***	0.46***	0.49***	--
12. Emotional Arousal	0.36***	0.44***	0.27***	0.16**	0.67***	0.56***	0.62***	0.36***	0.72***	0.80***	0.32***

Note. *** $p < .001$, ** $p < .01$, * $p < .05$.

State empathic response as moderator of accuracy. Extending the findings of Colman et al. (2017), state empathic response – irrespective of manipulation condition – was tested as a moderator of distinctive and normative accuracy. This was done in the same fashion as the previous set of analyses, by entering each of the SES and select ERS subscales as a moderator of each accuracy component in level 2 of the model.¹⁸

Using each of the three SES subscales – affective empathy, perspective-taking, and associative empathy – as moderators, it was found that results were consistent with what would be expected if the empathic manipulations had been effective in altering judges' empathic response. To begin, those reporting a greater state level of perspective-taking achieved greater levels of both distinctive accuracy ($\gamma_{11} = 0.042$, $d = 0.34$, $t(368) = 4.45$, $p < .0001$) and normative accuracy ($\gamma_{21} = 0.2479$, $d = 0.90$, $t(371) = 9.63$, $p < .0001$). Similarly, those reporting higher state levels of affective empathy achieved greater distinctive accuracy ($\gamma_{11} = 0.0329$, $d = 0.28$, $t(368) = 3.59$, $p = .0004$) as well as normative accuracy ($\gamma_{21} = 0.1838$, $d = 0.67$, $t(373) = 7.00$, $p < .0001$). Finally, and like the two other subscales of the SES, state levels of associative empathy positively moderated distinctive accuracy ($\gamma_{11} = 0.0283$, $d = 0.27$, $t(369) = 3.55$, $p = .0004$) and normative accuracy ($\gamma_{21} = 0.2071$, $d = 0.89$, $t(371) = 9.54$, $p < .0001$).

Analyses were only conducted on three ERS subscales – specifically, identification, concern, and understanding. These subscales roughly map onto similar dimensions as the SES subscales of associative empathy, affective empathy, and perspective-taking, respectively. Results were consistent with those using the SES subscales. A greater state level of identification was positively associated with levels of

¹⁸ All effects held when controlling for the corresponding trait level empathic response.

both distinctive accuracy ($\gamma_{11} = 0.021$, $d = 0.26$, $t(369) = 3.44$, $p = .0006$) and normative accuracy ($\gamma_{21} = 0.1473$, $d = 0.84$, $t(371) = 8.91$, $p < .0001$). Similarly, higher state levels of concern were significantly related to greater distinctive accuracy ($\gamma_{11} = 0.0218$, $d = 0.25$, $t(370) = 3.28$, $p = .001$) as well as normative accuracy ($\gamma_{21} = 0.2062$, $d = 1.12$, $t(371) = 12.02$, $p < .0001$). Finally, state levels of understanding positively moderated distinctive accuracy ($\gamma_{11} = 0.0221$, $d = 0.21$, $t(367) = 2.71$, $p = .007$) and normative accuracy ($\gamma_{21} = 0.2023$, $d = 0.85$, $t(370) = 9.05$, $p < .0001$).

Chapter VI: General Discussion

It is easy to see how intentionally seeking to understand the viewpoints, thoughts, and/or feelings of others can lead to positive social interactions. If one can see through the same lens as another, there is a reduced probability of misunderstanding and likely clearer communication can be had. In a similar vein, taking this a step further and placing oneself in the same cognitive and emotional frame as another is likely to help resulting interactions. These processes, perspective-taking and empathy, were the focus of this dissertation. Specifically, it was reasoned that perspective-taking and empathy would be causally linked to the accuracy with which trait judgments are made. This was an explicit extension of the correlational finding that one's trait levels on these empathic tendencies were related to the accuracy of personality trait judgments (Colman et al., 2017). Beyond this, it was hypothesized that increased training intensity would increase the empathic manipulation effect, as that is the effect commonly seen within the training literature (Salas & Cannon-Bowers, 2001; Salas et al., 2012).

Prior to conducting the Main Study, two pilot studies were undertaken to determine the efficacy of a video-based empathic manipulation. In Pilot Study 1, participants were randomly assigned to one of four conditions – empty control, active control, perspective-taking, or empathy. However, there were no differences on either state cognitive empathy (e.g., perspective-taking) or affective/associative empathy found from pre-test to post-test in any of the conditions. That said, exploratory analyses indicated that open-ended responses, to a great degree, were in line with expectations for each group. Moreover, trained research assistants could predict, with above chance

accuracy, the experimental group to which participants belonged. These results from Pilot Study 1 led to the second pilot study.

For Pilot Study 2, multiple measures were utilized to assess state empathic response at post-test: the State Empathy Scale (Shen, 2010) which was used in Pilot Study 1, the Empathic Response Scale (Campbell & Barrow, 2004), and five Likert-type questions that were similar to those developed for the exploratory analyses in Pilot Study 1. Additionally, text-based instructional groups, which were based largely on the work of Todd et al. (2011), were added to the protocol. Furthermore, a longer stimulus video was used to have a greater quantity of affect displayed by the target, compared to those used in Pilot Study 1. Finally, only one control group – the empty control – was retained. Even with these changes, there were no significant differences found between randomly assigned groups. Although this led to questions about the sensitivity of these measures, the decision was made to use a text-based empathic manipulation in the Main Study because text-based instructions have been used exclusively in previous research, whereas video-based manipulations have not been implemented for manipulating empathy within the published literature.

In the Main Study, using a text-based empathic manipulation similar to those in Pilot Study 2, no differences were found between any of the participant groups on state measures of perspective-taking and empathy collected after the judgment phase of the protocol. Moreover, in contrast to the hypotheses made for the Main Study, there was no evidence for greater levels of accuracy based on the empathic manipulation, nor a training condition effect. If this is the reality, it would make conceptual sense that no effect for training condition was found. That is, if a manipulation produces no effect, no

length or intensity of training for that manipulation is going to be efficacious. This aside, the exploratory analyses provided some additional insight. First, the findings of Colman et al. (2017) were partially replicated as the pattern of results across empathic tendencies was the same for normative accuracy, but somewhat different for distinctive accuracy. Second, each of the subscales of the SES and select subscales of the ERS (which roughly mapped onto the same dimensions of the state empathic response) were positively related to both normative and distinctive accuracy. These additional findings provide evidence, albeit not causal, for a connection between both trait and state levels of the empathic response with the ability to make accurate trait judgments of others.

Considering all the findings, it is possible that manipulating judges' state level empathic behavior via text-based instructions is a complex task. From this, one can take two different stances with regard to the state empathic response manipulation. The first position is that text-based manipulations do not change state levels of the empathic response, but rather influence some other behavioral construct. However, given the accumulation of theoretical support, correlational findings, and experimental outcomes in the literature, this is a rather untenable position. A second, more acceptable stance is that such manipulations may not be as easily accomplished as previous research (e.g., Todd et al., 2011; Wang, Ku, et al., 2014) makes it seem, which leaves several options in explaining the lack of differences from the empathic manipulations in the Main Study.

First, decisions must be made as to the context of the manipulation that might influence its efficacy. For instance, will the study take place in a laboratory, in a public place (e.g., at a museum), or at a location of each participant's choosing via an internet portal. Certainly there needs to be a balance between control and realism, but these

different situations have the potential to be impactful. An additional consideration is whether the outcome requires a live interpersonal interaction (e.g., mock negotiation) or simply requires participants to view/listen to stimuli (e.g., taped introductions). The live interactions certainly provide a more realistic utilization of the empathic process, but require more time, space, and resources than reusable stimuli. Another decision is if and how a manipulation check will be implemented. This is critical, as measurement of the empathic response has the potential to influence the natural tendencies of participants and even the manipulation itself, which is discussed further in the coming section.

Second, a more explicit and impactful training – such as the videos tested in Pilot Studies 1 and 2 – could be necessary. The reason for using the text-based instructions instead of the video-based instructions was the lack of a detected effect on state empathic response across groups. However, as mentioned in the discussion of each pilot study, the measures of state empathic response are perhaps not sensitive enough to detect the difference produced by a one-time, fairly quick manipulation or training. If this is the case, the video manipulations hold the potential of being more impactful than the text-based instructions; this should be experimentally explored through replication and extension of studies which found significant effects for the text-based instructions (e.g., Galinsky et al., 2014; Wang, Ku, et al., 2014; Wang, Tai, et al., 2014).

Third, it is possible that a longer training directed toward making stable increases to judges' empathic tendencies (e.g., a trait-level manipulation) is required. Much of the extent literature (e.g., Galinsky & Moskowitz, 2000; Gilin et al., 2013; Todd et al., 2011) on the utility of perspective-taking and empathy has focused on domains in which intent and purposes are situationally based and outcomes are rather immediate (e.g., result of

negotiation, confirmation of a behavioral stereotype). Alternatively, the accurate perception of another's personality requires a judge to make predictions of behavioral patterns that are stable cross-situationally – this is presumably a much more elaborate and complex process.

Following this line of thought, it is plausible that with long-term implementation of empathic behavior (i.e., perspective-taking and being empathic), rather than a one-time increase to such undertakings, is critical for increased judgment accuracy ability. Recall that individuals with greater trait-level tendencies for perspective-taking and empathy are more normatively and distinctively accurate in their judgments (Colman et al., 2017). The current results expanded this to state-level responses of perspective-taking and empathy. Nonetheless, it is likely that one slowly becomes more skillful over time at using the information and/or insights garnered from those introspective thought and emotional processes – impacting the utilization stage of the RAM (Funder, 1995).

Future Directions and Implications

The overwhelming prevalence of null findings in this study leads to more questions that rightfully deserve investigation on their own. A first set of questions that warrants additional research are the methods that are efficacious for inducing individuals – both for the short- and long-term – to perspective-take and experience empathy. While there has been much published on the outcomes derived from instructional prompts (Batson et al., 1997; Galinsky, Maddux, et al., 2008; Hoffman, 2008; Riess et al., 2012; Teding van Berkhout & Malouff, 2016; Todd et al., 2011; Wang, Ku, et al., 2014; Wang, Tai, et al., 2014), measurement of the effect of such prompts on state levels of the empathic response is missing. However, a prerequisite to answering such a question is

adequate measurement. Given the results of Pilot Studies 1 and 2, the sensitivity of the existing measures (Campbell & Barrow, 2004; Shen, 2010) for state empathic response for detecting change after an intervention is in question. Therefore, it would be wise for future research to explore the validity and sensitivity of these existing assessments. From such exploration, it is possible that new measures of state empathic response need to be developed.

An interesting twist to the measurement of state empathic response is that assessment itself holds the potential to increase the processes in question. That is, in order to complete the response items, one necessarily must cognitively complete the process being assessed. An example will help clarify this; item 4 of the SES prompts respondents to indicate to what degree s/he *can feel the [target] person's emotions*. An honest and accurate response to this question is not possible without explicitly trying to undergo that process. In this regard, the current measures of the state empathic response likely have strong demand characteristics, reducing their sensitivity in discriminating among respondents. Thus, if one was to develop an alternative state measure of the empathic response, such demand characteristic should be explicitly considered. For instance, it would be interesting to explore a checklist type scale in which participants indicate the various type of considerations they had during an interpersonal situation or while observing another person (in-person or via recording). Categories captured would need to go beyond the desired empathic responses of perspective-taking and/or empathy, and include things such as the self, the situations, past and/or future events and tasks, and even motivations. Although this is but one direction that could be taken for the development of a state-level measure, it is worthy of consideration.

For another future direction, after validating a method for manipulating state and trait levels of the empathic response and a method for effectively measuring them, it would be promising to experimentally explore the proposition that repetitious use of empathic responses cause increases to one's trait judgment ability. Specifically, it is theorized that experience with the empathic process impacts multiple stages of the RAM. The most evident stage of the RAM (Funder, 1995) to be impacted, as mentioned earlier, is utilization as judges become increasingly skillful in perspective-taking and experiencing empathy. However, it is also feasible for other stages to be affected. First, it is possible that the detection stage would be impacted as attention to expressed thoughts and/or verbalized or visible emotions increases the number of available target cues that judges deem to be trait relevant. Pairing such an increase in detected cues with more effective utilization, one can see the potential for meaningful increases in levels of trait judgment accuracy.

While the proposed impact to the detection and utilization stages of the RAM are of central theoretical importance, it is also feasible for judges to impact the availability of trait relevant cues emitted by targets. However, such influence can be proposed in divergent directions – an increase of cues being expressed or a reduction. On the one hand, judges play a significant role in eliciting cues from targets (Letzring, 2008). It might be the case that empathic responses allow judges to engage the target in dialogue and/or behave in a nonverbal manner that entice targets to produce a greater number of trait-relevant cues. Alternatively, targets may presume that highly empathic judges are able to more accurately understand them, and therefore decide to actively engage in impression management by limiting the availability of cues that may be detected and

utilized. To date, however, each of these propositions is yet to be directly tested and therefore warrant further empirical investigation.

Third, while not a question raised directly from the results, exploring the relation between empathic accuracy and trait accuracy is a tenable future direction with the data collected for this dissertation. Specifically, the open-ended responses that were provided by judges in the instruction + practice and instruction + practice + feedback groups closely followed the Standard Stimulus Paradigm for measuring empathic accuracy outlined by Ickes (2001, pp. 227-229). Although much coding of these responses would be necessary, it is feasible to evaluate the relationship between judges' level of empathic accuracy and personality trait accuracy. Empathic accuracy has been claimed a "necessary (if not sufficient) prerequisite to the accurate perception of traits" (Ickes, 1993, p. 587). That is, if accurate judgments of the transient thoughts, feelings, emotions, and purposes of a target are achieved, they would also serve as valid information for trait judgments. Following this proposition, it would be hypothesized that a positive relationship between these two types of accuracy would be found. Indeed, this was the case in a recent study that found a relation between accuracy of judging affective states and accuracy of judging traits (e.g., fear and Neuroticism or happy and Extraversion) when the two domain share common informational cues (Hall et al., 2017).

It should also be noted that the differences between perspective-taking and empathy are extremely subtle. The key difference in the manipulation prompts is the locus of focus in the process – other vs. self. Recall that perspective-taking is a necessary process for empathy to occur; that is, if one does not understand what another's thoughts, feelings, and/or motivations are, s/he will be unable to match or take on those

cognitions/affective states as his/her own. Thus, while the slight difference in prompts make conceptual sense, it can be lost on inattentive participants. As such, researchers seeking to manipulate participants' engagement in these processes should seek to make the locus of focus very explicit and well-defined.

Related to the fact that the difference in the empathic manipulations are slight, it might be the case that different cues need to be made available by targets dependent upon which empathic process is being undertaken by judges – perspective-taking or empathy. For instance, because perspective-taking is focused on gaining insight and understanding of another's position, thoughts, etc., cues relevant to such information are likely to be more easily processed by someone actively perspective-taking. Similarly, emotional or affective cues are likely to coincide with the empathy process. These questions pertaining to cue relevance, detection, and utilization are certainly a worthy direction for future empirical exploration.

The results of this project and from the proposed future research hold wide-ranging implications. The most obvious implication, and what has been predominately discussed in this section, is for training people to become better judges of others. If impactful, yet relatively short interventions can be developed, benefits are likely to be had by the judge themselves, the organizations/businesses for which they work, and the countless others with which they have relationships. Specifically, it is possible that accurate judges are likely to form and maintain higher quality relationships because of an ability to understand the needs of others and then respond to those needs in a desired manner. This, too, applies in an organizational context where interpersonal skills – such as Emotional Intelligence (EI) – are critical.

Côté (2014) defines EI as the “subset of social intelligence that involves the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (p. 460). This is clearly similar to the proposed utility of perspective-taking and empathy discussed herein, just in different terms and with regard to different literatures. That is, perspective-taking and empathy should provide some degree of access to and understanding of others’ thoughts and emotions, which then can be utilized in the judgment process. While a large literature has suggested positive effects of EI within organizations and for leaders (e.g., Côté, 2014; Harms & Credé, 2010; Wong & Law, 2002), only recently has the explicit proposition been made that accuracy is important in those same contexts (Colman, Letzring, & Lion, 2018; Colman & Lion, 2018).

Moreover, gaining awareness and understanding of situations through perspective-taking and empathy is likely to help reduce individuals’ tendency to infer traits of others from situationally constrained behavior (Gilbert & Malone, 1995). Such a tendency, termed correspondence bias, reflects the inclination to systematically make inferences about another’s personality from his/her behavior without consideration of the situation. Indeed, it has been found that perspective-taking reduces such a bias (Hooper, Erdogan, Keen, Lawton, & McHugh, 2015). It might be the case that increased attention and/or understanding of the situational context in which targets behave is the path by which accuracy of judgments is related (non-causally) to the empathic response. Ultimately, a cross-pollination of theory and empirical work among scholars from these various domains holds great potential.

Limitations

At this point, it is necessary to address some limitations. Throughout this dissertation, participant recruitment took place on MTurk. There are many benefits of this strategy, such as speed of data collection and diversity of the resulting sample (Behrend et al., 2011; Colman et al., in press; Paolacci & Chandler, 2014). Moreover, there is evidence of high quality data resulting from crowdsourced samples (Behrend et al., 2011; Buhrmester et al., 2011). Nonetheless, it is a possibility that the Main Study procedure was too long and intensive to maintain the attention and effort of the MTurk population. This is particularly true given that workers often seek to complete work as quickly as possible. To circumvent this being an issue, inclusion criteria were set so that at least 80% of the protocol needed to be completed and, more importantly, at least 80% of attention checks needed to be answered correctly.

Even with inclusion criteria, it is possible that outside distractions occurred while participants were completing the study (phone call, family/work interrupting, etc.). Moreover, it is conceivable that participants failed to have sufficient motivation to attend to the videos of targets or adequately attend to and follow the instructions throughout the protocol. However, these are not as likely to be the case for two reasons. First, the participants included in the analyses were able to successfully complete 80% of embedded attention checks. Second, and more telling, across groups there were significant levels of both normative and distinctive accuracy, which suggest at least a minimum level of attention was given to the videos and ratings of personality.

A second limitation is the fact that judgments were based on video recordings of the targets. While this is a typical practice in trait judgment research (e.g., Biesanz &

Human, 2010; Letzring, 2015; Letzring & Human, 2014), in-person interactions allow judges to elicit information from targets. Recall from previous discussion, it is possible that a great deal of the benefits of perspective-taking and empathy come through the response to the other person. Previous research looking at the relationship between the empathic tendencies and accurate personality trait judgment utilized the same judgment paradigm as employed within this dissertation. Moreover, the outcome tasks in prior work have involved both live interactions with others (e.g., Galinsky, Maddux, et al., 2008) and the viewing of video stimuli (e.g., Todd et al., 2011). Nonetheless, to see increases in trait judgment accuracy based on brief manipulations of the empathic response, it is conceivable that an interactive process is required. This goes back to the proposition that only after repeated, long-term use of empathic behaviors will a judge's cue detection and utilization skills increase, and therefore be carried into less ideal judgment situations (e.g., through video or written text).

A third limitation is the differences that existed between the manipulation implemented and that used in prior work. While the manipulation was based largely on the work of Todd et al. (2011), there are some differences that need be made explicit. First, empathic manipulations have been primarily administered by researchers within a laboratory setting rather than online with MTurk participants. Using an MTurk participant pool, it could be necessary to incorporate stronger manipulations (e.g., video-based like those tested in the pilot studies) and/or ones that require a greater level of attention be given.

A second difference between the current protocol and others within the published literature is the inclusion of a manipulation check in the current project. In contrast,

previous work has examined the effect of empathic responses on myriad outcomes without explicitly ensuring the given manipulation was efficacious. The one clear exception was Todd et al. (2011), in which a non-validated set of questions was used to probe for a self, other, or objective focus of the target. However, because this check came after the outcome variables (i.e., judgments of targets), it is not likely to have interfered with the effect of the empathic manipulation on participant's accuracy in making trait judgments. Alternatively, the training procedure used for the instruction + practice and instruction + practice + feedback conditions could be considered a manipulation check for empathic responses as well as a repeated reminder to participants of what they were being instructed to do. In this way, the training manipulation could have confounded the empathic manipulation. However, if this was the case, an interaction would result between factors, which was not found.

Conclusion

It is clear the text-based instructional manipulation previously used in perspective-taking and empathy research (Todd et al., 2011) was ineffective for increasing trait judgment accuracy. Additionally, there was no evidence for a training condition effect, but this was not surprising given that the empathic manipulation was ineffective. Despite these null results, the exploratory analyses did indicate a significant positive relation between normative and distinctive trait judgment accuracy and state levels of perspective-taking and empathy. Overall, this dissertation provided additional insight into the link between trait judgment accuracy and one's empathic response, as well as several future directions for research and theoretical implications surrounding these two important interpersonal processes.

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Appendix A

Big Five Inventory – Abbreviated Version (BFI-AV)

Original (#) items from John, O. P., & Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (Vol. 2, pp. 102–138). New York: Guilford Press.

Abbreviation and intelligence items from Human, L. J., Biesanz, J. C., Finseth, S. M., Pierce, B., & Le, M. (2014). To thine own self be true: Psychological adjustment promotes judgeability via personality–behavior congruence. *Journal of Personality and Social Psychology*, 106, 286–303. doi:10.1037/a0034860

Self-report Instructions: Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *is full of energy*? Please choose a number for each statement to indicate the extent to which you agree or disagree with that statement. *I see myself as someone who...*

Acquaintance-report Instructions: Here are a number of characteristics that may or may not apply to the person for which you were asked to complete this form. For example, do you agree that this person is someone who *is full of energy*? Please choose a number for each statement to indicate the extent to which you agree or disagree with that statement as a description of the behavior of the person you are rating. *I see this person as someone who...*

Other-report Instructions: Here are a number of characteristics that may or may not apply to the person you just watched in the video. For example, do you agree that they are someone who *is full of energy*? Please choose the option for each statement indicating the extent to which you agree or disagree with that statement. *Do you see this person as someone who...?*

- 1 = Disagree strongly
- 2 = Disagree
- 3 = Disagree a little
- 4 = Neither agree nor disagree
- 5 = Agree a little
- 6 = Agree
- 7 = Agree strongly

- | | |
|--|--|
| 1. Is full of energy | 7. Has an assertive personality |
| 2. Is intelligent | 8. Is sometimes shy, inhibited |
| 3. Generates a lot of enthusiasm | 9. Is outgoing, sociable |
| 4. Remains calm in tense situations | 10. Tends to find fault with others |
| 5. Tends to be quiet | 11. Does a thorough job |
| 6. Makes plans and follows through with them | 12. Is depressed, blue |
| | 13. Is original, comes up with new ideas |

- | | |
|--|----------------------------------|
| 14. Is helpful and unselfish with others | 20. Can be tense |
| 15. Can be somewhat careless | 21. Is reserved |
| 16. Is relaxed, handles stress well | 22. Is ingenious, a deep thinker |
| 17. Receives very good grades | 23. Has a forgiving nature |
| 18. Starts quarrels with others | 24. Is bright |
| 19. Is a reliable worker | |

Scoring instructions:

Extraversion: 1, 3, 5R, 7, 8R, 9, 21R

Neuroticism: 4R, 12, 16R, 20

Agreeableness: 10R, 14, 18R, 23

Openness: 13, 22

Conscientiousness: 6, 11, 15R, 19

Intelligence: 2, 17, 24

Note that "R" denotes reverse-scored items (1=7, 2=6, 3=5, 4=4, 5=3, 6=2, 7=1).

Appendix B

State Empathy Scale (SES)

From Shen, L. (2010). On a scale of state empathy during message processing. *Western Journal of Communication*, 74, 504-524. doi:10.1080/10570314.2010.512278

Instructions: Please read each statement carefully, then choose the degree to which it describes your understanding of the person in the video you just watched. Keep in mind to ONLY think about the video you just watched.

0 = Not at all

1 = Slightly

2 = Moderately

3 = Mostly

4 = Completely

1. The person's emotions are genuine.
2. I experienced the same emotions as the person when watching this message.
3. I was in a similar emotional state as the person when watching this message.
4. I can feel the person's emotions.
5. I can see the person's point of view.
6. I recognize the person's situation.
7. I can understand what the person was going through in the message.
8. The person's reactions to the situation are understandable.
9. When watching the message, I was fully absorbed.
10. I can relate to what the person was going through in the message.
11. I can identify with the situation described in the message.
12. I can identify with the person in the message.

Scoring instructions:

Affective Empathy: Items 1, 2, 3, 4

Cognitive Empathy: Items 5, 6, 7, 8

Associative Empathy: Items 9, 10, 11, 12

Average each subscale to obtain a single metric.

Appendix C

Brief Form Interpersonal Reactivity Index (B-IRI)

From Ingoglia, S., Lo Coco, A., & Albiero, P. (2016). Development of a brief form of the interpersonal reactivity index (B-IRI). *Journal of Personality Assessment*, 98, 461-471. doi:10.1080/00223891.2016.1149858

Instructions: The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you. **READ EACH ITEM CAREFULLY BEFORE RESPONDING.** Answer as honestly as you can. Thank you.

- 1 = Does NOT describe me
- 2 = Describes me slightly
- 3 = Describes me moderately well
- 4 = Describes me very well
- 5 = Describes me extremely well

1. I often have tender, concerned feelings for people less fortunate than me.
2. I really get involved with the feelings of the characters in a novel.
3. In emergency situations, I feel apprehensive and ill-at-ease.
4. I try to look at everybody's side of a disagreement before I make a decision.
5. When I see someone being taken advantage of, I feel kind of protective towards them.
6. I sometimes try to understand my friends better by imagining how things look from their perspective.
7. After seeing a play or movie, I have felt as though I were one of the characters.
8. Being in a tense emotional situation scares me.
9. When I see someone being treated unfairly, I feel very much pity for them.
10. I would describe myself as a pretty soft-hearted person.
11. When I watch a good movie, I can very easily put myself in the place of a leading character.
12. I tend to lose control during emergencies.
13. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.
14. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.
15. When I see someone who badly needs help in an emergency, I go to pieces.
16. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

Subscales:

- Perspective-taking scale: 4, 6, 13, 16
- Fantasy scale: 2, 7, 11, 14
- Empathic concern scale: 1, 5, 9, 10
- Personal distress scale: 3, 8, 12, 15

Appendix D**General Demographics**

Age

- Specify: _____

Gender

- Male
- Female
- Prefer not to answer

What is your ethnicity?

- White
- Hispanic or Latino(a)
- Black or African American
- American Indian/Alaska Native
- Asian
- Hawaiian Native or Pacific Islander
- Other
- Prefer not to answer

What is your religious affiliation?

- Christianity
- Judaism
- Islam
- Buddhism
- Hinduism
- Spiritualism
- Agnostic
- Atheist
- Other
- Prefer not to answer

Appendix E

Transcripts of Training Videos

Perspective-taking condition:

[Video – ‘Hand Shake’] In the process of making your first impressions of others, you should intentionally try to take the perspective of the person you see. Doing so will help you understand their behavior and personality. Try to imagine what they are thinking, what their interests and purposes are. Try to imagine what you would be thinking if you were them. For instance, [Enter photo ‘Perspective-Taking 1’] what is this man thinking? What is his purpose in this situation? Could he be thinking how rude it is to be on a cell phone during an important meeting? Maybe he is really interested in what their boss has to say, thinking to himself – when is he going to tell me?! Here is another situation with a different person [Enter photo ‘Perspective-Taking 2’]. What are his thoughts? What is his purpose for being on the train? Is he returning home from a job interview, reminiscing about how it went? Is he on his way to visit family, after being away at college for several months? What else can you envision him thinking about? [Pause] How about the view he is seeing? Could he merely be interested in plane flying by? [Pause] These are all possibilities. However, some options are more likely than others, and there are clues as to what is running through someone else’s head. The key is to use our understanding of others’ perspectives to gain a more complete and accurate understanding of the people around us. [Enter photo ‘Perspective-Taking 3’] Here is one last example [Pause] Take a moment to gather clues as to what this person’s purpose, interests, and thoughts are. Pause for a moment and think about this [Pause] Now that you have taken a few moments, press continue and use the box on the next page to describe in a few sentences what *YOU* think the person-in-the-picture’s purpose is, ...their interests and thoughts.

[Time delay before the next page.]

[Page between videos has photo of ‘Perspective-Taking 3’ with a textbox for response.]

[Begin new file; continue photo – ‘Perspective-Taking 3’] It appears this person’s purpose is exercise. But, beyond that, what might she be thinking? Maybe how to make the most of the training conditions. Is there a specific purpose to the training – to stay healthy, prepare for a half-marathon, or maybe escaping the non-stop rush of daily life in the city. Only she knows [END photo - ‘Perspective-Taking 3’]. Nonetheless, trying to understand the viewpoint of another can be a powerful way to understand others in a more complete way. [Pause] Now that you know the way in which one can better understand others’ behavior and personality, why don’t you give it a try? You will start the next phase of this study on the next page. You will begin by viewing a video of someone else. After watching this video, you will be asked to judge that person’s typical behavior and individual characteristics. Keeping this in mind, press continue and pay attention to the individual in the video.

[Time delay before the next page.]

Empathy condition:

[Video – ‘Hand Shake’] In the process of making your first impressions of others, you should intentionally put yourself in the other person’s position – think the way they do, feel the way they do, embrace the sensations they are feeling. Doing so will help you understand their behavior and personality. Try to imagine how you would be feeling if you were them. For instance, [Enter photo ‘Empathy 1’] how would you feel if you were this woman? Step in her shoes. What thoughts are running through your head? How did this happen? Why ME?! Where do I go from here? What emotions are you feeling in this situation? Happy, confused, upset maybe? What are your senses telling you? [Pause] Here is another situation with an older gentleman [Enter photo ‘Empathy 2’]. Again, putting yourself in his position. What are your thoughts? What are you pondering? Are you feeling lonely? Does this make you feel down, blue? Are you sensing some coldness, even though the sun is shining? What else are you thinking and feeling, emotionally or otherwise? [Pause for the participants to think about this]? How about the view? What are you looking at? These are all possible thoughts, feelings and sensations. However, some options are more likely than others, and this is why envisioning yourself in another’s situation – in thought, emotion, and physical sensation – will provide clues about another. The key is to use these clues to gain a more complete and accurate understanding of the people around us. [Enter photo ‘Empathy 3’] Here is one last example... Take a moment to place yourself in this person’s position. What are you thinking? What are you feeling emotionally, ...physically? Pause for a moment and think about this. [Pause] Now that you have taken a few moments, press continue and use the box on the next page to describe in a few sentences about what *YOU* were thinking and how *YOU* felt while placing yourself in the person-in-the-picture’s shoes.

[Time delay before the next page.]

[Page between videos has photo of ‘Empathy 3’ with a textbox for response.]

[Begin new file; continue photo – ‘Empathy 3’] Clearly this man is distressed; were you feeling that way? But, beyond that, what were you thinking? Maybe you were thinking of how much you miss a dear friend who passed away? Were you feeling so stressed that you just needed to let out all that emotion? [END photo - ‘Empathy 3’]. Ultimately, only he knows what is being thought and felt, and yours are merely speculative. Nonetheless, imagining yourself in another’s shoes can be a powerful way to understand others in a more complete way. [Pause] Now that you know the way in which one can better understand others’ behavior and personality, why don’t you give it a try? You will start the next phase of this study on the next page. You will begin by viewing a video of someone else. After watching this video, you will be asked to judge that person’s typical behavior and individual characteristics. Keeping this in mind, press continue and pay attention to the individual in the video.

[Time delay before the next page.]

Active control condition:

[Video – ‘Hand Shake’] When you are meeting others for the first time, you are often in a new place as well. Because this is the case, you should pay attention to the surroundings – are you outside, inside. Is it a social venue – party, business meeting, or perhaps an intimate setting? How many people are around? – one, several, hundreds? Let’s take a moment to evaluate a few situations. [Enter photo ‘Active Control 1’] Here we have an outdoor situation in which a single older gentleman is looking out at the bay while sitting alone on a wood bench. It appears to be during mid-day with bright blue skies, and there appears to be few people around. However, across the bay looks to be a town or port, in which lots of people are likely to be. [Pause] Here is another situation, which seems to be more intimate [Enter photo ‘Active Control 2’]. It is night in a big city and a group of people appear to be concluding a business meeting. There are many skyscrapers in the background, behind which the sun is setting. You can also see some papers and notes on the table, which are likely from the meeting. The key is that paying attention to the surroundings is an important part of new social situations where we are likely to meet others. [Enter photo ‘Active Control 3’] Here is one last example. Take a moment to evaluate the situation. What is happening? Where might this be taking place? How many people are likely around, whether or not you see them? Pause for a moment and think about this. [Pause] Now that you have taken a few moments, press continue and use the box on the next page to describe what you saw in the photo in a few sentences.

[Time delay before the next page.]

[Page between videos has photo of ‘Active Control 3’ with a textbox for response.]

[Begin new file; continue photo – ‘Active Control 3’] Clearly the situation is travel of some sort; is that what you noticed? But, beyond that, what else is going on? There was an airplane flying in the distance, seen out the window. Maybe the person in the frame is on a train – an obvious situation where there are likely to be more unseen people. Also notice that the situation is occurring either during the morning or evening. [END photo - ‘Active Control 3’]. The point here is that understanding situations is an important task to complete when meeting others. [Pause] Now that you know this, you will start the next phase of this study on the next page. You will begin by viewing a video of someone else. After watching this video, you will be asked to judge that person’s typical behavior and individual characteristics. Keeping this in mind, press continue and pay attention to the individual in the video.

[Time delay before the next page.]

Empty control condition:

You will start the next phase of this study on the next page. You will begin by viewing a

video of someone else. After watching this video, you will be asked to judge that person's typical behavior and individual characteristics. Keeping this in mind, press continue and pay attention to the individual in the video.

[Time delay before the next page.]



Perspective-Taking 1



Perspective-Taking 2



Perspective-Taking 3



Empathy 1



Empathy 2



Empathy 3



Active Control 1



Active Control 2



Active Control 3

Appendix F

Empathic Response Scale (ERS)

Original (#) items from Campbell, R. G., & Barrow, A. S. (2004). The role of empathy in responses to persuasive risk communication: Overcoming resistance to HIV prevention messages. *Health Communication, 16*, 159-182.

As suggested by R. G. Campbell (personal communication, February 8, 2017), adaptation was undertaken to fit response to target individuals.

Self-report Instructions: Recall the video you just viewed and please respond to the following questions. After each statement, indicate the option that best reflects your opinion about the content of the video you just viewed.

- 1 = Disagree strongly
- 2 = Disagree
- 3 = Disagree a little
- 4 = Neither agree nor disagree
- 5 = Agree a little
- 6 = Agree
- 7 = Agree strongly

- 1. I can see how someone would feel emotional while watching this video.
- 2. If I had the opportunity, I would try to help someone like the person in the video.
- 3. My values and beliefs are similar to those expressed by the person in the video.
- 4. I do not understand how people could get themselves into situations like those described.
- 5. I feel no concern for people like the person shown in the video.
- 6. I was moved by the person in the video.
- 7. The person shown in the video is NOT like me or my friends.
- 8. I wish there was something I could do to solve the problem presented in the video.
- 9. I can really identify with what was described in the video.
- 10. I believe the situation described in the video is realistic.
- 11. I felt upset for those who suffer from the problem described by the person in the video.
- 12. I wish I could do something to help people like the person shown in the video.
- 13. I couldn't care less about people like those shown in the video.
- 14. I can really see how someone could have experiences like the person talked about in the video.
- 15. The person in the video discusses something that reflects real life.
- 16. I was touched by the situation of the person depicted in the video.
- 17. The video did NOT make me feel worried for myself or others.
- 18. The scenes described seems to be an over-reaction.
- 19. I believe educated or intelligent people would not have experienced the problem described.

20. I do not see how this kind of dilemma could happen so easily to people like the person in the video.
21. The video shows someone who seems a lot like me or some of my friends.
22. The shown person grossly exaggerates the situation described.
23. The described stories just seemed illogical to me.
24. The person described situations that are purely a fantasy.
25. I am baffled by people who get in situations like the ones described.
26. I am not much different from the person shown in the video.
27. The situations described in the video are NOT accurate.
28. The person described situations that could really happen.
29. I did NOT feel emotionally involved while watching the video.
30. When I was watching the video, I felt sad for the person affected by the problem.
31. While watching, I felt the same feelings expressed by the person in the message.

Scoring instructions:

Verisimilitude: 10, 15, 18R, 22R, 24R, 27, 28

Identification: 3, 7R, 9, 21, 26

Concern: 2, 5R, 8, 12, 13R, 16

Understanding: 4R, 14, 19R, 20R, 23R, 25R

Emotional Arousal: 1, 6, 11, 17R, 29R, 30, 31

Note that "R" denotes reverse-scored items (1=7, 2=6, 3=5, 4=4, 5=3, 6=2, 7=1).

Appendix G

Big Five Inventory – 2 (BFI-2)

From Soto, C. J., & John, O. P. (in press). The next Big Five Inventory (BFI-2): Developing and assessing a hierarchical model with 15 facets to enhance bandwidth, fidelity, and predictive power. *Journal of Personality and Social Psychology*.

Self-report Instructions: Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please choose a number for each statement to indicate the extent to which you agree or disagree with that statement. *I see myself as someone who...*

Other-report Instructions: Here are a number of characteristics that may or may not apply to the person for which you were asked to complete this form. For example, do you agree that this person is someone who *likes to spend time with others*? Please choose a number for each statement to indicate the extent to which you agree or disagree with that statement as a description of the behavior of the person you are rating. *I see this person as someone who...*

- 1 = Disagree strongly
- 2 = Disagree
- 3 = Disagree a little
- 4 = Neither agree nor disagree
- 5 = Agree a little
- 6 = Agree
- 7 = Agree strongly

- | | |
|---|---|
| 1. Is outgoing, sociable. | 15. Is inventive, finds clever ways to do things. |
| 2. Is compassionate, has a soft heart. | 16. Tends to be quiet. |
| 3. Tends to be disorganized. | 17. Feels little sympathy for others. |
| 4. Is relaxed, handles stress well. | 18. Is systematic, likes to keep things in order. |
| 5. Has few artistic interests. | 19. Can be tense. |
| 6. Has an assertive personality. | 20. Is fascinated by art, music, or literature. |
| 7. Is respectful, treats others with respect. | 21. Is dominant, acts as a leader. |
| 8. Tends to be lazy. | 22. Starts arguments with others. |
| 9. Stays optimistic after experiencing a setback. | 23. Has difficulty getting started on tasks. |
| 10. Is curious about many different things. | 24. Feels secure, comfortable with self. |
| 11. Rarely feels excited or eager. | 25. Avoids intellectual, philosophical discussions. |
| 12. Tends to find fault with others. | 26. Is less active than other people. |
| 13. Is dependable, steady. | 27. Has a forgiving nature. |
| 14. Is moody, has up and down mood swings. | 28. Can be somewhat careless. |

29. Is emotionally stable, not easily upset.
30. Has little creativity.
31. Is sometimes shy, introverted.
32. Is helpful and unselfish with others.
33. Keeps things neat and tidy.
34. Worries a lot.
35. Values art and beauty.
36. Finds it hard to influence people.
37. Is sometimes rude to others.
38. Is efficient, gets things done.
39. Often feels sad.
40. Is complex, a deep thinker.
41. Is full of energy.
42. Is suspicious of others' intentions.
43. Is reliable, can always be counted on.
44. Keeps their emotions under control.
45. Has difficulty imagining things.
46. Is talkative.
47. Can be cold and uncaring.
48. Leaves a mess, doesn't clean up.
49. Rarely feels anxious or afraid.
50. Thinks poetry and plays are boring.
51. Prefers to have others take charge.
52. Is polite, courteous to others.
53. Is persistent, works until the task is finished.
54. Tends to feel depressed, blue.
55. Has little interest in abstract ideas.
56. Shows a lot of enthusiasm.
57. Assumes the best about people.
58. Sometimes behaves irresponsibly.
59. Is temperamental, gets emotional easily.
60. Is original, comes up with new ideas.

Scoring instructions:

Domain Scales

Extraversion: 1, 6, 11R, 16R, 21, 26R, 31R, 36R, 41, 46, 51R, 56
 Agreeableness: 2, 7, 12R, 17R, 22R, 27, 32, 37R, 42R, 47R, 52, 57
 Conscientiousness: 3R, 8R, 13, 18, 23R, 28R, 33, 38, 43, 48R, 53, 58R
 Negative Emotionality: 4R, 9R, 14, 19, 24R, 29R, 34, 39, 44R, 49R, 54, 59
 Open-Mindedness: 5R, 10, 15, 20, 25R, 30R, 35, 40, 45R, 50R, 55R, 60

Facet Scales

Social Engagement: 1, 16R, 31R, 46
 Assertiveness: 6, 21, 36R, 51R
 Energy Level: 11R, 26R, 41, 56
 Compassion: 2, 17R, 32, 47R
 Respectfulness: 7, 22R, 37R, 52
 Acceptance of Others: 12R, 27, 42R, 57
 Organization: 3R, 18, 33, 48R
 Productiveness: 8R, 23R, 38, 53
 Responsibility: 13, 28R, 43, 58R
 Anxiety: 4R, 19, 34, 49R
 Depression: 9R, 24R, 39, 54
 Emotional Volatility: 14, 29R, 44R, 59
 Aesthetic Sensitivity: 5R, 20, 35, 50R
 Intellectual Curiosity: 10, 25R, 40, 55R
 Creative Imagination: 15, 30R, 45R, 60

Note that "R" denotes reverse-scored items (1=7, 2=6, 3=5, 4=4, 5=3, 6=2, 7=1).

Appendix H

Positive and Negative Affect Schedule (PANAS)

From Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology*, 54, 1063-1070.

Self-rating state-level instructions: This scale consists of a number of words that describe different feelings and emotions. Read each item and then select the appropriate answer. Indicate to what extent you feel this way right now, that is, at the present moment. Use the following scale to record your answers.

Self-rating trait-level instructions: This scale consists of a number of words that describe different feelings and emotions. Read each item and then select the appropriate answer. Indicate to what extent you generally feel this way, that is, how you feel on the average. Use the following scale to record your answers.

Other-rating instructions: This scale consists of a number of words that describe different feelings and emotions *others* can feel. Read each item and then select the appropriate answer for the emotions and feelings *the person you saw in the video* likely experienced. Indicate to what extent *that person* felt at that moment. Use the following scale to record your answers.

- 1 = very slightly or not at all
- 2 = a little
- 3 = moderately
- 4 = quite a bit
- 5 = extremely

- | | |
|-----------------|----------------|
| 1. interested | 11. irritable |
| 2. distressed | 12. alert |
| 3. excited | 13. ashamed |
| 4. upset | 14. inspired |
| 5. strong | 15. nervous |
| 6. guilty | 16. determined |
| 7. scared | 17. attentive |
| 8. hostile | 18. jittery |
| 9. enthusiastic | 19. active |
| 10. proud | 20. afraid |

Scoring instructions:

Positive Affect: 1, 3, 5, 9, 10, 12, 14, 16, 17, 19

Negative Affect: 2, 4, 6, 7, 8, 11, 13, 15, 18, 20

Participant scores are generated by averaging each subscale.

Appendix I

Additional Demographic Questions for Judges in Main Study

What is your current education level?

- Completed some high school
- High school graduate
- Completed some college
- Associate degree
- Bachelor's degree
- Completed some postgraduate
- Master's degree
- Professional degree (i.e., JD, DDS, PharmD, etc.)
- Doctoral degree

What is your marital status?

- Single (never married)
- In a relationship
- Married
- Separated
- Widowed
- Divorced
- Other? _____

Do you have children?

- Yes
- No

Please specify for each child gender and age (e.g., boy - 4 years; girl - 18 months)... (if no to above, this question was not displayed)

☐ Boy	☐ Girl	Age: _____
☐ Boy	☐ Girl	Age: _____
☐ Boy	☐ Girl	Age: _____
☐ Boy	☐ Girl	Age: _____
☐ Boy	☐ Girl	Age: _____
☐ Boy	☐ Girl	Age: _____

What is your current employment status?

- Full time employee
- Part time employee
- Temporary employee
- Student employee
- Non-working student
- Unemployed, but searching
- Unemployed, not searching
- Retired

What best describes the type of organization you work for? (if non-working student, one of the unemployed, or retired was selected above, this question was not displayed)

- For profit
- Non-profit (religious, arts, social assistance, etc.)
- Government
- Health Care
- Education
- Other

What level of decision-making authority do you have in your department?

- Final decision-making authority (individually or as part of a group)
- Significant decision-making or influence (individually or as part of a group)
- Minimal decision-making or influence
- No input

What level of decision-making authority do you have in your organization?

- Final decision-making authority (individually or as part of a group)
- Significant decision-making or influence (individually or as part of a group)
- Minimal decision-making or influence
- No input

Have you held a formal leadership/management position (e.g., title of supervisor, shift manager)?

- Yes
- No

In total, for what period of time have you held form leadership/management positions? (if no to above, this question was not displayed)

- Please provide an estimate: _____ months.

Have you been in an informal leadership position (e.g., others look to you for guidance, but you don't/didn't have a formal title or position)?

- Yes
- No

In total, for what period of time have you held informal leadership/management positions? (if no to above, this question was not displayed)

- Please provide an estimate: _____ months.

Appendix J

Interview Introduction and Key Life Scene Prompts

Introduction:

For the life story interview that will be video recorded, I would like you to focus on a few key scenes that stand out in the story of your life. A key scene is a moment in your life story that stands out for a particular reason – perhaps because it was particularly vivid, important, or memorable. Specifically, I will ask that you describe for about a minute each a high point in your life, a challenged you’ve experienced, and a turning point in your life. I ask that you explain what happened, when and where, who was involved, and what you were thinking and feeling during the event.

Here is a list of the prompts [hand participant the prompts listed below on a single sheet of paper]. Take a few minutes to review these and think of possible 1-minute responses. Once you are ready, I will turn on the camera and we will start the interview. Note that I will begin by asking you a few simple questions to ease into the interview.

High Point:

Please describe a scene, episode, or moment in your life that stands out as an especially positive experience. This might be the high point scene of your entire life, or simply an especially happy, joyous, exciting, or wonderful moment in your life. Please describe this high point scene in detail. What happened, when and where, who was involved, and what were you thinking and feeling?

Life challenge:

Looking back over your entire life, please identify and describe what you consider to be a key challenge you faced. What was the challenge or problem? How did it develop? How did you deal with the challenge? Who was involved and what were you thinking and feeling?

Turning Point:

In looking back over your life, think about a key moment that stand out as a turning point – a time or event that marked an important change in your life. Please describe how that event instilled an important change to your life. Again, for this event please describe what happened, where and when, who was involved, and what you were thinking and feeling.

Appendix K

Email Template for Stimulus Targets to Email Acquaintances

TO: [Participant enters each persons' email in the BCC line]

SUBJECT: Help me complete research for class!

BODY:

Hi,

I am participating in a research study in the ISU Psychology Department, and I need your help. The researcher is requesting that I get some of my friends and/or family to complete some questionnaires about me. For this, you came to mind! They are saying it will only take about 15 minutes. If you could complete these within the next few days it will really help them out. I also gave your email to the researcher, so you may receive a follow-up message from him about completing the survey about me.

Below is the link they want you to follow to complete the survey. Also, they want you to know that they will NOT share what you say with me, so feel free to be completely honest.

[URL to Qualtrics survey for acquaintance reports]

The first question will ask you for my subject ID, which is [research ID from tracking sheet].

Thanks for helping me out!

[Have participant sign how they usually would]

PS: The researcher also wanted me to let you know that you are free to contact them with any questions. The primary researcher is Douglas E. Colman, and his email is colmdoug@isu.edu.