A DYADIC-INTERACTIONAL PERSPECTIVE OF IMPLICIT TRAIT POLICIES

A Dissertation

by

JUSTIN KANE BENZER

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2008

Major Subject: Psychology

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ABSTRACT

A Dyadic-Interactional Perspective of Implicit Trait Policies. (August 2008)

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The dyadic-interactional perspective of personality suggests that behavior is a function of both stable personality traits and the dynamic interpersonal environment. According to this theory, interpersonal behavior generally follows the principle of complementarity where behavior tends to be complementary on a dimension of dominance-submissiveness and supplementary on a dimension of warmth-coldness. Implicit trait policies are thought to influence judgments of behavioral effectiveness and be influenced by personality traits. The current study examines the dyadic-interactional perspective using a situational judgment test (SJT) method in order to more fully understand both the relationship between personality traits and behavior but also to better understand the basic assumptions of the dyadic-interactional perspective.

A 24-situation SJT was developed by the author to measure appropriate and inappropriate situations along the dimensions of dominance and warmth. Ten advanced psychology graduate students served as expert raters. Personality scales and the SJT were completed by 317 undergraduates for course credit. Interpersonal skills rated by 117 of the participants' friends served as a performance criterion for Hypothesis 5.

Results support a congruence effect where the fit between response and trait warmth has a positive effect on judgments of behavioral effectiveness. Although a quadratic implicit trait policy effect was observed, results did not support a congruence effect for dominance. Interpersonal rigidity was shown to moderate the effect of both dominant and warm responses but was not shown to moderate the effect of traits. Complementarity hypotheses were not supported, likely due to range restriction of analyzed situations. Exploratory analyses revealed effects in support of interpersonal theory. Situations and responses influenced perceived behavioral effectiveness in accordance with the propositions of interpersonal theory. Situational appropriateness was identified as a moderator of the relationship between situations and responses. Situational judgment test scores were scored in accordance with interpersonal theory. Scores were not shown to observable interpersonal skills as hypothesized, correlating with only one 4-item subscale. Results extend both implicit trait policies and interpersonal theory. Implications, limitations, and future research directions are discussed.

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NOMENCLATURE

AB5C	Big Five Circumplex Scale
ANOVA	Analysis of Variance
DV	Dependent Variable
EI	Emotional Intelligence
EIS	Emotional Intelligence Scale
FIML	Full Information Maximum Likelihood
I/O	Industrial/Organizational
IAS-R	Revised Interpersonal Adjective Scale
ICC	Intra-class Correlation
ITP	Implicit Trait Policy
IV	Independent Variable
MLM	Multilevel Modeling
OLS	Ordinary Least Squares
REML	Restricted Estimation Maximum Likelihood
SJT	Situational Judgment Test
VC	Variance Components

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CHAPTER I

INTRODUCTION

The themes of agency and communion are prevalent in the industrial/ organizational (I/O) psychology literature. Agency refers to the tendency of individuals to differentiate themselves from groups through the enacting of mastery or power-seeking strategies. In contrast, communion (e.g., prosocial behavior, social support) is the tendency of individuals to strive for union with a larger social group and is characterized by strategies that create relationships and increase closeness to others (Wiggins, 1991).

The Ohio State University studies of leader behavior (cf. Fleishman, 1953; Halpin & Winer, 1957) are probably the most well-known attempt by I/O psychologists to study agency and communion in the workplace (see also Judge, Piccolo, & Ilies, 2004). Leaders control their subordinates' agency by initiating structure and promote communion between the leader and employees through consideration. Since then, these themes have recurred throughout the I/O psychology literature. In the performance domain, these themes take the form of agentic task performance and communal citizenship performance (Motowidlo, 2003). In the area of work motivation, Grant (2007) recently proposed that job design (cf. Hackman & Oldham, 1980; Lawler & Hall, 1970) should recognize that organizational goals are communal as well as agentic. These trends in I/O research support Hogan's (1996) proposition that organizational life is

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This dissertation follows the style of *Journal of Applied Psychology*.

characterized by both communal and agentic motives, which he characterized as getting along versus getting ahead. In short, agentic and communal themes abound in I/O psychology.

Dynamic relationships are implicit in both agentic and communal behaviors, but often I/O psychologists do not examine these dynamic aspects of personality. Interpersonal interactions and individual traits are generally considered in terms of similarity (e.g., person-group fit; Ferris, Youngblood & Yates, 1985; Kristof-Brown, Jansen, & Colbert, 2002; Kristof-Brown, Zimmerman, & Johnson, 2005) or static personality dimensions (e.g., the Big Five and leadership; Judge & Bono, 2000; Lim & Ployhart, 2004), respectively. In contrast, the dyadic-interactional perspective of the five factor model of personality proposes that interpersonal interactions are characterized by predictable relationships between behaviors on an interpersonal circumplex defined by interpersonal dominance and warmth (Wiggins & Trapnell, 1996). Most importantly for the current study, interpersonal theory proposes that behaviors not only provide information about the dominance and warmth of interaction partners (i.e., people with whom the focal person interacts), they also can be viewed as behavioral requests for complementary responses from an actor (i.e., the focal person). Thus, the dyadic interactional perspective provides a theoretical basis for understanding how responsiveness to the behaviors of others can influence behavior.

According to the dyadic-interactional perspective, complementary interactions form the basis of all interpersonal interactions. The *intentions* of individuals are not relevant to determining the likely response for responding actors, as only *observed*

behavior can be interpreted by an actor when determining an appropriate response. Responses can be categorized as either complementary (i.e., satisfy the behavioral request of the interaction partner) or non-complementary (i.e., violate the behavioral request of the interaction partner) on the dominance and/or warmth dimension, although the degree to which a response is viewed as non-complementary can vary. Indeed it is likely that interactions can be characterized on a continuum with anchors of complementary and anticomplementary (i.e., the opposite of a complementary response).

The implicit trait policy (ITP; Motowidlo, Hooper, & Jackson, 2006a; 2006b) hypothesis has implications for understanding individual behavior and performance measurement in the workplace. According to Motowidlo et al. (2006a; 2006b), individuals develop implicit conceptualizations of the relative effectiveness of behavioral responses to situations based on practical experience and their own personality traits. Motowidlo et al. (2006a; 2006b) demonstrated that implicit trait policies influenced ratings of behavioral effectiveness and actual interpersonal behavior in different situations. The implicit trait policy hypothesis suggests that behavioral judgments are based on personality traits and trait-relevant experience. However, research thus far has focused on static views of personality rather than a dynamic approach. The current study proposes that applying the dyadic-interactional perspective of personality (Wiggins & Trapnell, 1996) and interpersonal theory (Carson, 1969; Leary; 1957; Sullivan, 1953) to the implicit trait policy will more fully capture the nuances in the situation-trait-behavior relationship. The metaconcepts of agency and

communion (cf. Bakan, 1966) and the operationalizations of dominance and warmth[1] used in the dyadic-interactional perspective of the five factor model (Wiggins & Trapnell, 1996) can be used to reveal the interaction between interaction partners and their actors based on the personality traits of those actors. Applying the dyadic-interactional perspective to the implicit trait policy is expected to reveal that actors will perceive behaviors that both are similar to their own traits and complement the interaction partner's behavior as more effective than those that are not similar or do not complement interaction partner's behavior. Thus, the current study adds to the prediction of behavior beyond personality traits by accounting for the interaction between people and their environment in the form of interaction partner behaviors, and extends implicit trait policy research by elaborating how personality traits and trait-congruent behaviors will influence perceived behavioral effectiveness.

To that end, implicit trait policies are examined to determine how these correlations between trait-relevant behaviors and perceived effectiveness may be relevant to interpersonal behavior. The interpersonal paradigm of personality (i.e., dyadic interactional perspective; interpersonal theory) will then be reviewed to demonstrate how the dimensions of dominance and warmth may be used to predict both trait-relevant behavioral tendencies and dynamic interactions based on the dominance and warmth of observed behaviors. The dyadic interactional perspective suggests that the behavior of an interaction partner on the dimensions of dominance and warmth is an

[1] The metaconcepts of agency and communion are complex and have multiple possible operationalizations, but the dyadic-interactional perspective is based on the dimensions of dominance and warmth.

invitation for a complementary response (i.e., similar on the warmth dimension, but opposite on the dominance dimension).

Following this literature review of implicit trait policies and interpersonal theory, situational judgment tests are introduced as a method of testing hypotheses of relationships between individual traits, the behavior of hypothetical interaction partners, and the perceived effectiveness of responses. The implicit trait policy is reframed as a congruence hypothesis based on interpersonal theory, and extended to account for the behavior demonstrated by hypothetical interaction partners in item stems. The moderating role of interpersonal rigidity for this expanded implicit trait policy is examined, and finally the ability or skill to recognize complementary situations is proposed as an individual difference that will predict social skills.

Chapter II summarizes the method of collecting the data for this dissertation in which undergraduate students completed both a personality trait assessment and a set of situational judgment test items. They also identified a friend who was asked to complete an evaluation of the participant's social skills as a criterion measure. Chapter III details the analysis strategy and results of analyses. Hypotheses were tested and exploratory analyses conducted to explore unexpected results. Chapter IV discusses the implications of results, limitations of the present study, and proposes promising areas of future research.

Implicit Trait Policies

Motowidlo et al. (2006b) defined implicit trait policies as "implicit beliefs about the effectiveness of different levels of trait expression" (p. 57). Motowidlo et al. (2006b)

suggest that implicit trait policies are influenced by individual personality traits such that the perceived importance of the expression of a specific personality trait would be greater for individuals who possess a high level of that trait. Thus, according to the implicit trait policy perspective, a person who is high in conscientiousness perceives a greater difference between the effectiveness of high and low conscientious behaviors than a person who is low in conscientiousness (Motowidlo et al., 2006b). Motowidlo et al. (2006b) proposed that implicit trait policies are also influenced by experience. Motowidlo and Peterson (2006) demonstrated how perceptions of effectiveness in critical incidents are influenced by implicit trait policies based on the experiences associated with different positions in an organization. Inmates reported agreeable guard behavior as more effective, while supervisors focused more on conscientiousness. As shown in Figure 1, Motowidlo et al. (2006a) proposed that procedural knowledge, and thus job performance is influenced by implicit trait policies and experience (see also Hunter, 1986).

Motowidlo et al. (2006a) argued that implicit trait policies are based on the accentuation effect (cf. Eiser & van der Pligt, 1984; Lambert & Wedell, 1991; Tajfel, 1957). The accentuation effect occurs when a peripheral dimension of a stimulus influences ratings on a focal dimension, resulting in greater cognitive differentiation between the stimuli (Eiser & van der Pligt, 1984). For example, Lambert and Wedell (1991) demonstrated that the peripheral dimension of sociability of raters affected the

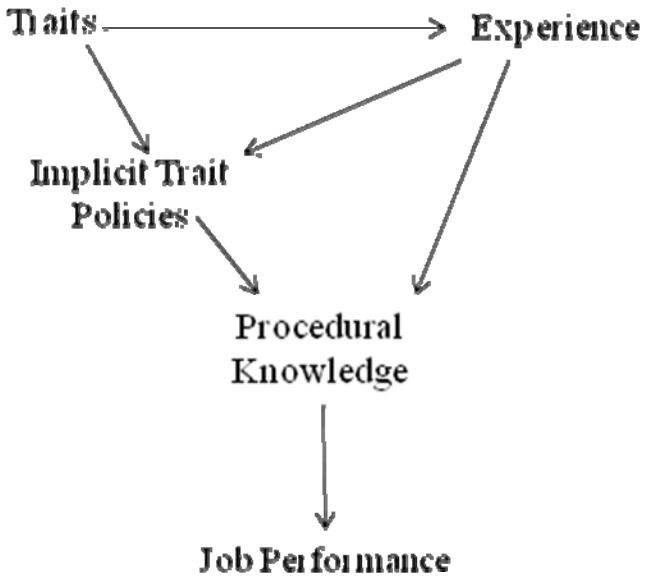

Figure 1. Implicit trait policies as presented in Motowidlo et al. (2006b).

focal dimension of perceived sociability of behaviors. This effect was demonstrated only for stimuli that unambiguously indicated high or low sociability, indicating that the accentuation effect is more than a measurement artifact.

Motowidlo et al. (2006a) defined implicit trait policies as the effect of a peripheral dimension (i.e., the degree to which a behavior is an example of a specific personality trait) on the focal dimension (i.e., the perceived effectiveness of that behavior). Eiser and van der Pligt (1984) suggested that the relationship between a peripheral dimension and ratings of a focal dimension would be greater when individuals have extreme attitudes toward the stimulus; that is, the standing individuals have on the stimulus should moderate the relationship between the peripheral dimension of the stimulus and the ratings of the stimulus. Motowidlo et al. (2006a) extended this to the

implicit trait policy hypothesis by proposing that the effect of the peripheral dimension (i.e., personality trait displayed in a behavior) on the focal dimension (i.e., perceptions of effectiveness) would be moderated by the "attitude"[2] toward the stimulus (i.e., individual's standings on the same personality trait). For example, the agreeableness of an individual would moderate the relationship between the extent to which a behavior is an example of agreeableness and that individual's rating of the effectiveness of that behavior.

While it does appear that personality influences implicit trait policies, it is not conceptually clear what exactly the implicit trait policy represents beyond an empirically defined relationship. That is, implicit trait policies, as yet, are not directly measured cognitions—unlike, for example, intentions to stay with an organization or job satisfaction—but rather are a consistent set of relationships among individual's traits, trait expression in behaviors, and the perceptions of the effectiveness of those behaviors. Motowidlo et al. (2006a) demonstrated that implicit trait policies for agreeableness predicted agreeable behavior in role plays, while trait agreeableness did not, lending support to the proposition that implicit trait policies reflect a construct other than personality traits. If implicit trait policies do represent implicit beliefs that influence procedural knowledge, as Motowidlo (2006a) suggests, then this effect could be extended to measure other forms of trait-relevant procedural knowledge such as perceptions of effective interpersonal behavior. The current study examined

[2] Attitude is used here to reflect the original description of the accentuation effect (Eiser & van der Pligt, 1986). Lambert & Wedell (1991) expanded this view to personality traits, which are clearly distinct from attitudes.

interpersonal implicit trait policies through the complementarity principle of interpersonal theory (Carson, 1969; Wiggins & Trapnell, 1996).

Personality

The implicit trait policy hypothesis proposes that an individual's personality traits moderate the relationship between an example of trait-related behavior and ratings of that behavior's effectiveness such that a trait-relevant behavior will have stronger effectiveness ratings when raters possess a high level of that trait. Traits can be defined as "dimensions of individual differences in tendencies to show consistent patterns of thoughts, feelings, and actions" (McCrae & Costa, 1990, p. 23). The five factor model has emerged as a widely accepted taxonomy of personality traits (Digman, 1990; Goldberg, 1990; McCrae & Costa, 1990). Although there are valid critiques of the five factor model (e.g., Eysenck, 1993; Pervin, 1994), with even proponents noting that the influence of personality on behavior is more complex than can be accounted for with only personality traits (McCrae & Costa, 1996), traits are useful as a framework for predicting behavior (e.g., Barrick & Mount, 1991; Hogan & Holland, 2003; Judge, Heller, & Mount, 2002). According to the Costa and McCrae (1997) naming convention, Factor I is named Extraversion, Factor II is Agreeableness, Factor III is Conscientiousness, Factor IV is Emotional Stability, and Factor V is Openness to Experience.

Agency and Communion

Wiggins (1991; Wiggins & Trapnell, 1996) noted that the dimensions of agency and communion are recurring themes throughout diverse disciplines of study. Bakan

(1966) focused his discussion of agency and communion on religion, but covered diverse topics such as science, sexuality, and death. He described agency and communion as the "two fundamental modalities in the existence of living forms, agency for the existence of the organism as an individual, and communion for the participation of the individual in some larger organism of which the individual is part" (p. 14). Sociologists discuss the division of labor within society as differing based on instrumental roles and expressive roles (Parsons & Bales, 1955). Cross-cultural psychology differentiates societies on the dimensions of individualism and collectivism; Triandis (1990) proposed that individualism is associated with an emphasis on individual goals, whereas in-group goals are assigned higher priority in collectivist societies. McAdams (1993) examines the role of power and love as themes in myths, stories, and narrative life histories.

Work by Digman (1997) indicates that higher order factors of agency and communion may influence all of the big five traits. Based on an analysis of factor correlations from 14 studies, Digman (1997) identified two higher order factors of the Big Five which he named α and β. Factor α was indicated primarily by Agreeableness and Emotional Stability and also to a lesser extent by Conscientiousness, whereas β was indicated by Extraversion and Openness to Experience. Digman proposed that factor α represents the socialization process whereby individuals learn to behave according to societal rules and restrain impulses. Factor β was suggested to be the force of personal growth whereby individuals strive "to actualize, maintain, and enhance the experiencing organism" (Rogers, 1961, p. 487). Digman further observed that these factors are similar to the theoretical concepts of agency and communion proposed by Bakan (1966). Thus,

although they appear in various forms, agency and communion are clearly important themes in the social sciences.

The Interpersonal Circumplex

Leary (1957) proposed that the most important aspect of personality is interpersonal, defining personality as "behavior which is related overtly, consciously, ethically, or symbolically to another human being (real, collective, or imagined)" (p. 4). Indeed, the survival of any social organization depends on the ability of its members to establish and maintain interpersonal relationships (Hogan, 1996). According to Sullivan (1953), people develop automatic, involuntary responses to different situations over time. In modern I/O psychology, these tendencies would be defined as an interaction between social expectations and individual traits in predicting behavior (e.g., Tett & Burnett, 2003). Leary (1957) operationalized Sullivan's behavioral interaction tendencies as sixteen categories of behavior on two interpersonal dimensions of dominance and warmth on an interpersonal circumplex. These were later revised and combined into more reliable octants (Wiggins, 1979). Figure 2 depicts this arrangement, where the angular location on the interpersonal circle indicates the preferred interaction tendency and the distance of the person's standing on that trait from the center indicates the degree of preference for that interaction tendency.

As noted earlier, agency and communion can be conceptualized in a number of ways. In the dyadic-interactional perspective, they are conceptualized interpersonally, specifically dominance (i.e., being agentic by taking charge in interpersonal interactions) and warmth (i.e., being communal by demonstrating nurturing behavior toward others). The

five factor model specifies the broad enduring traits that characterize people throughout their lifetimes. While the five-factor model is not a comprehensive model of personality, it does provide a set of common definitions that researchers from different personality traditions may use to communicate their findings (McCrae & Costa, 1996).

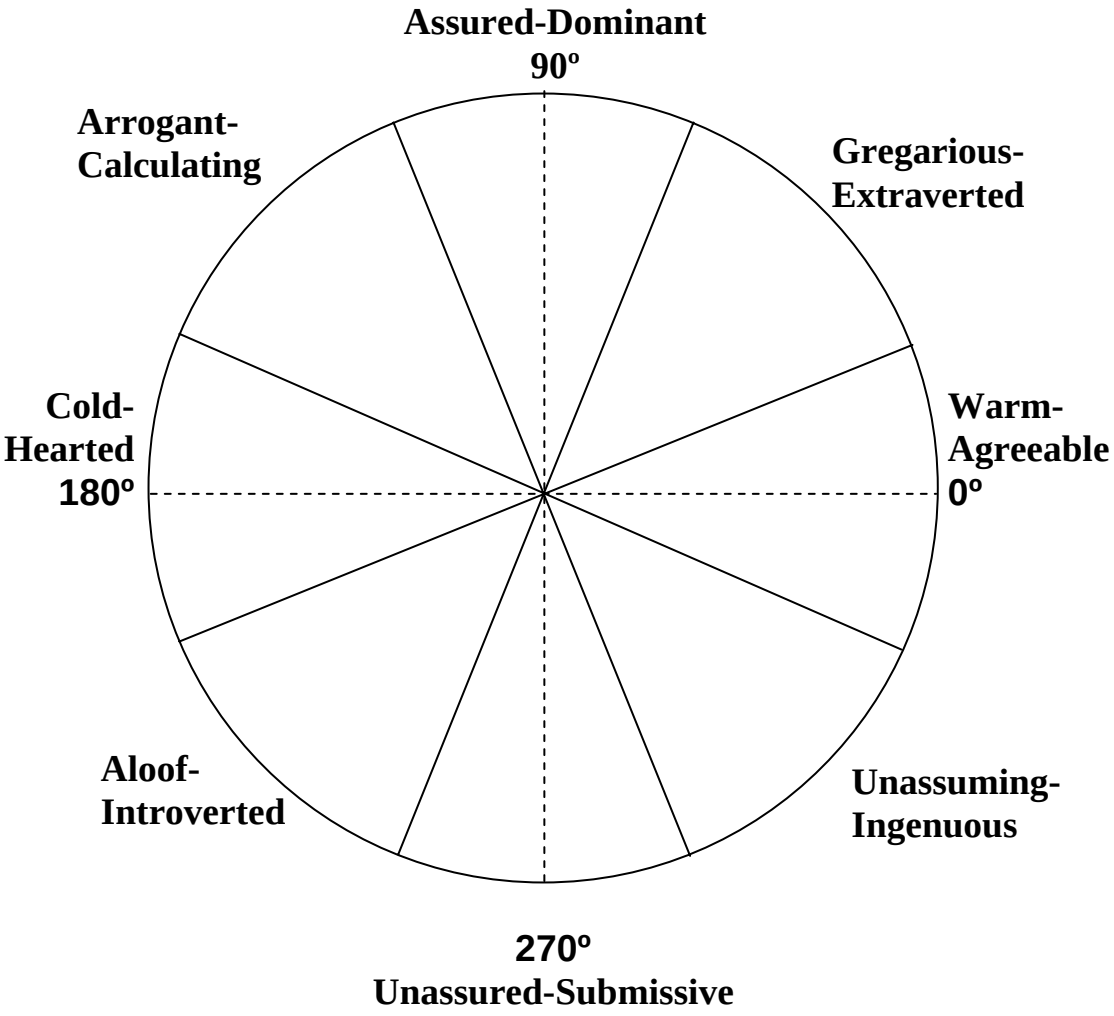

Figure 2. The interpersonal circumplex.

McCrae and Costa (1989) compared the five factor model to Wiggins, Trapnell, and Phillip's (1988) Revised Interpersonal Adjective Scale (IAS-R), a commonly used measure of the interpersonal circumplex, and demonstrated that the interpersonal circumplex can be defined by the dimensions of extraversion and agreeableness (see Figure 3). Hofstee, de Raad, and Goldberg demonstrated that ten circumplexes may be created based on combinations of each of the big five traits (AB5C; 1992). From this perspective, the interpersonal circumplex is one of ten possible circumplexes based on the five factor model. As the dyadic-interactional perspective of the five factor model is based on the proposition that the dimensions of dominance and warmth are the most important for predicting interpersonal interactions, and thus the current study will focus on this circumplex (Wiggins & Trapnell, 1996).

McCrae and Costa (1989) note that as a circumplex structure is defined by equal spacing of variables across the circle's circumference, no orientation on the circumplex is statistically preferable to another, and thus agency/communion orientations are as empirically correct as extraversion/agreeableness. Additionally, McCrae and Costa (1989) suggest that considering dimensions in isolation does not capture the breadth of interpersonal traits, and as such they propose that the five factor model and the interpersonal circumplex should be viewed as complementary models, with the five factor model providing an overall framework for understanding the interpersonal circumplex while the interpersonal circumplex elaborates on the different combinations of the traits of agreeableness and extraversion. Most importantly to the present study, the

dyadic-interactional perspective suggests that describing behavior along the dimensions of dominance and warmth will be more effective in representing predictable responses to interpersonal behavior.

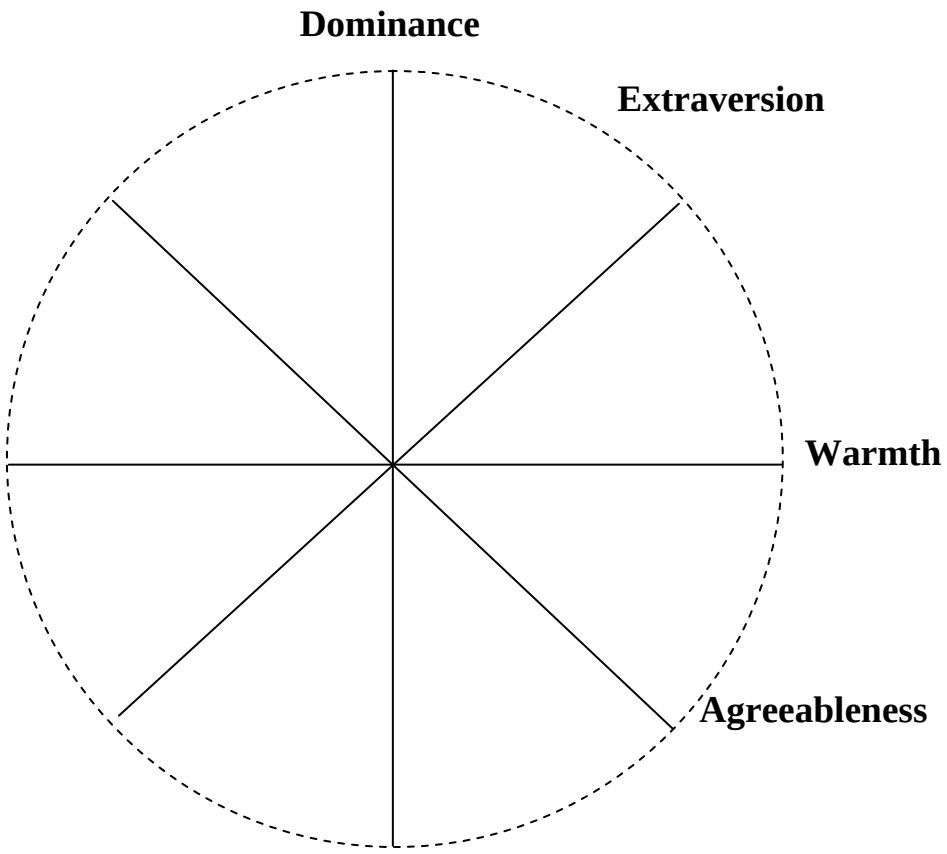

Figure 3. Relationship between dominance-warmth and extraversion-agreeableness.

Interpersonal Complementarity

According to the dyadic-interactional perspective, people develop preferences for certain modes of interaction and learn interaction strategies that promote complementary responses from actors as a strategy to minimize interpersonal anxiety. Wiggins and

Trapnell (1996) noted that recent theoretical conceptions of anxiety are interpersonal in nature, with anxiety operating "as an alarm signal that alerts the individual to the danger of social exclusion" (Baumeister, 1990, p. 266). In general, behavior on the dominance dimension can be conceptualized as an invitation for a response that is opposite in dominance. In contrast, behavior on the warmth dimension is an invitation for a similar level of warmth in the behavioral response. These effects are commonly referred to as interpersonal complementarity (Carson, 1969; Leary, 1957). Thus, a dominant behavior such as telling a subordinate to perform a task is an invitation for a submissive response (i.e., performing the task). A warm behavior, such as an emotional disclosure, is an invitation for a warm response. To be consistent with current I/O theory (e.g., Humphrey, Hollenbeck, Meyer, & Ilgen, 2007), the current paper will depart from the terminology of interpersonal theory by referring to "complementarity" on the warmth dimension as a supplementary effect (i.e., a warm response to a warm behavior). Thus, a complementary response would be opposite in the degree of dominance, while a supplementary response would be similar on the degree of warmth. Responses that match the interpersonal elicitations of an interaction partner is called complementarity in the personality literature, but will be hereafter referred to as matching.

The principle of complementarity has been empirically supported for the warm half (i.e., high levels of communion) of the interpersonal circumplex (e.g., Sadler & Woody, 2003), but there has been mixed evidence that supplementary effects occur for the cold (i.e., low levels of communion) half (Orford, 1986; Strong et al., 1988). Tracey (1994) suggested that the failure to support supplementary effects is due to differences in

the base rates of cold compared to warm behaviors. Warm behaviors are more common than cold, and thus warm behaviors would be expected even in the presence of cold actors. Tracey (1994) demonstrated that the supplementary effect for cold behavior can be identified when differences in base rates are statistically controlled.

Empirical studies of interpersonal theory examine the frequency of individuals' observable behavior in response to the observable behavior of actors, but the complementarity principle is based on an assumption that individuals hold differing beliefs of the efficacy of response behaviors. Thus, a cognitive process is thought to underlie interpersonal behaviors, where people choose the behaviors which are thought be most effective in attaining their interpersonal goals. While most empirical tests of interpersonal theory examine either the frequency of behavioral responses or overall trends in behavior, measurement of the cognitive processes is necessary in establishing that interpersonal complementarity is based on procedural knowledge of effective interactions.

Choosing the most effective behavior from a range of alternatives is likely influenced by the individual's standing on relevant personality traits, and also based on an individual's interpersonal procedural knowledge of the most effective behaviors in different situations. It may be the case that some behaviors are valued in some situations but not others. Interpersonal theory would suggest that warm behavior is seen as more effective in situations where warmth is demonstrated, but it is also possible that warm behavior is generally seen as appropriate as it leads to the establishment of beneficial interpersonal relationships. It is also possible for warmth to be situationally

inappropriate. Similarly, interpersonal coldness may be seen as socially undesirable, but interpersonal theory suggests that it would be seen as more appropriate in situations where interpersonal coldness has been demonstrated. On the agency dimension, interpersonal theory suggests that dominant and submissive behaviors have a complementary relationship where dominant behaviors are seen as more effective in response to submissive behaviors and submissive responses would likely be judged as more effective when associated with dominant behaviors. In work situations, this effect may change as dominant behavior has been demonstrated to be more frequently expressed in supervisor roles, while submissive behavior has been shown to be more frequent for subordinates (Moskowitz, Suh, & Desaulniers, 1994).

In his discussion of complementarity, Carson (1969) proposed that interpersonal behaviors contain information regarding desired responses. Thus, interpersonal interactions contain an invitation to produce matching responses as these behaviors are thought to be associated with the lowest interpersonal anxiety. Tracey (1994) noted that many previous researchers tended to treat complementarity as a deterministic phenomenon, where an interaction partner elicits matching responses and no others. However, matching responses are not the only possible reactions. Even if interaction partners are effective in communicating their interactional preferences, and even if actors correctly interpret those preferences, matching behaviors still might not be produced. When interaction partners initiate interpersonal interactions, they are inviting matching behavior from actors. If the matching responses to that interpersonal behavior are not consistent with the actors' preferred interaction tendencies or in conflict with

contextual knowledge regarding the appropriateness of the behavior, the actors could experience increased anxiety because the behavior expected by the interaction partner and the behavior preferred or believed to be better by the actor would not be the same. In such cases, it is likely that the actors would either terminate the interpersonal interaction or generate an alternative response in an attempt to negotiate a set of mutually acceptable interaction behaviors (Carson, 1969). Thus, even if the matching response is clear, the degree to which an actor's response to initiated behaviors matches those behaviors will depend in part on the interpersonal preferences and goals of actors. Matching responses are mechanistically determined by initiators' behavior.

Carson (1969) proposed that alternative responses can be characterized as anticomplementary or acomplementary. Anticomplementary interactions are defined as behavior opposite of a matching or "complementary" response (i.e., a response that is not supplementary on warmth or complementary on dominance); for example, a warm-dominant initiation (e.g., a supervisor asking, "Please call me when the meeting is over so we can discuss next steps in the consulting project") would be met with a cold-dominant response (e.g., the subordinate replying, "You're not the boss of me."). Anticomplementary responses indicate an outright rejection of the proposed interaction and are proposed to be associated with high interpersonal anxiety. Further, anticomplementary responses are linked to an increased likelihood that either the behavior will change or the relationship will end. It is likely anticomplementary responses from actors will be seen as most effective when the interaction partners' initiating behavior is inappropriate, as anticomplementary responses are the most anxiety

producing and would thus be associated with a higher likelihood of behavioral change. If for example, a subordinate was told to perform an illegal behavior, an anticomplementary dominant refusal may be more effective than complementary compliance.

Acomplementary responses match initiating behavior on only one dimension. For example, acomplementary responses to warm-dominant behavior could be warm-dominant, cold-submissive, or either warm or submissive (neutral on the second dimension). Acomplementary responses indicate a partial acceptance of the proposed interaction. Although they are still proposed to be associated with anxiety, they offer the possibility of the negotiation of a matching interaction. Thus, they are less likely to lead to a termination of the interaction than are anticomplementary responses. Over time, interactions are thought to be negotiated until a balance of matching behaviors is attained (Carson, 1969).

There are clearly a wide range of possible acomplementary responses that may vary in effectiveness. For example, when subordinates break rules, they are displaying dominant behavior, and although their intentions may vary (e.g., seeking attention, incompetence) a complementary response to that dominant behavior would be submissive (i.e., allow the behavior to continue). Rather than responding with an anticomplementary dominant reaction, a supervisor could choose from a range of acomplementary responses such as a warm submissive response of explaining why it is important to follow the rules. In contrast, an example of a cold-submissive response could be if the supervisor chose to withdraw all attention from the subordinates until the

rule breaking behavior stopped. The complementarity literature does not agree on how the relative effectiveness of the various acomplementary responses would be determined *a priori* and without consideration of situational factors. For example, Wiggins (1982) proposed interactive effects between dominance and warmth, although a recent empirical test of this hypothesis failed to find strong support for it (Sadler & Woody, 2003). The current study will therefore focus on the basic propositions of the theory, operationalizing complementarity as a response that is supplementary to observed behavior on the warmth dimension and complementary on the dominance dimension.

Although previous research has examined complementarity as behavioral frequency, the underlying theory proposes that behaviors will be seen as more or less effective based on the dominance or submissiveness displayed by actors. The current study will examine the perceived effectiveness of hypothetical interactions. Using hypothetical interactions rather than actual interactions is a limitation of this study, but this allows the elimination of possible contaminating factors such as prior interaction history, physical attractiveness, and non-verbal communication.

Implicit Trait Policies in the Dyadic-Interactional Perspective

The implicit trait policy hypothesis proposes that perceptions of effectiveness of a behavior are affected by the standing of the judge on the traits that are represented in that behavior. In testing scenarios, this means that the observed correlations between trait-relevant behavior depicted in test response options and ratings of effectiveness are influenced by respondent personality traits and experience. Of the many forms of tests that could be used to examine initiating behavior and responses in interactions,

situational judgment tests (SJTs) are among the most useful for the purpose of testing interpersonal hypotheses. Although situational judgment tests are hypothetical scenarios, and are not actual interpersonal interactions, they are ideal for examining individuals' implicit beliefs of interpersonal behavioral effectiveness as will be described below.

Situational Judgment Tests

A situational judgment test (SJT) is a method for measuring a variety of constructs by placing them in hypothetical situations based on real world contexts (McDaniel, Morgeson, Finnegan, Campion, & Braverman, 2001; Motowidlo, Hooper, & Jackson, 2006a; Schmitt & Chan, 2006). SJTs can measure constructs that are believed to be related to job performance including job knowledge, continuous learning, multicultural appreciation, leadership, interpersonal skills, social responsibility, career orientation, adaptability, perseverance, and integrity (Schmitt & Chan, 2006). Situational judgment tests are composed of an item stem which presents a situationally-based problem to the test respondent, usually based on a critical incident (cf. Flanagan, 1954). In interpersonal situational judgment tests, the item stem could present a hypothetical interaction partner who has demonstrated an interpersonal behavior. Test respondents are presented with a range of behavioral responses to the situation and are usually asked to select the best response or both the best and worst response (Weekley, Ployhart, & Holtz, 2006). Although some attempts have been made to use theoretically based methods for determining the best responses, many SJT scoring systems are based on either subject matter expert judgments or empirically determined relationships between SJT responses and performance outcomes (Bergman, Drasgow, Donovan, Henning, &

Juraska, 2006). Another method of administering SJTs is to have test respondents rate the perceived effectiveness of each behavioral response. Weekley, Ployhart, and Holtz (2006) note that although this method does introduce dependency between the item stem situation and responses, the increased number of scorable items may improve the reliability and validity of SJTs. This method is ideal for testing hypotheses of the relative effectiveness of interpersonal responses, as the effectiveness of responses should be related to the relative dominance and warmth in both the situation presented and in the behavioral responses.

Although SJTs are low-fidelity simulations, and thus an inexact representation of actual work situations, they are predictive of job performance (McDaniel, Whetzel, Hartman, Nguyen, & Grubb, 2006). The low-fidelity nature of SJTs is ideal for testing basic hypotheses of the complementarity principle as they do not introduce extraneous situational influences such as physical appearance or interaction history that could affect actual behavior. Because SJTs are a method that can present hypothetical interpersonal situations to test takers, and because items and response options can be constructed to reflect particular theoretical constructs (e.g., Bergman et al., 2006), SJTs can be used to test hypotheses regarding complementarity. Instructing participants to rate the effectiveness of all possible responses to SJT items rather than just choosing the most and least effective response can give insight into participant perceptions of the relative effectiveness of matching and non-complementary responses. For consistency with the previous theoretical presentation, the term interaction partners will refer to the hypothetical individuals presented in SJT item stems, while participants/respondents to

SJTs will be called actors as they will be choosing responses to behaviors initiated by the interaction partners.

Motowidlo, Dunnette, and Carter (1990) proposed that SJTs measure procedural knowledge or problem solving skills developed based on experience in specific situations. Motowidlo et al. (2006b) suggested that experience influences procedural knowledge directly, as well as indirectly through the partial mediation by implicit trait policies. For example, over time individuals may learn that agreeable behaviors tend to be effective in interpersonal situations, and thus experience may influence both knowledge of effective interpersonal behaviors and the implicit trait policy for agreeableness.

Sullivan (1953) proposed that the motivational force of personality is the avoidance of interpersonal anxiety in the form of a negative evaluation of the self by a relevant other. Interpersonal styles (i.e., personality as represented by the interpersonal circumplex) are thought to be developed in an attempt to minimize anxiety in social situations, therefore individuals would be more likely to think that responses that are congruent with their preferred style of interaction would be less anxiety producing. This view is similar to the implicit trait policy hypothesis based on the accentuation effect tested by Motowidlo et al. (2006a, 2006b), who suggest that the extremity of personality traits would be related to perceptions of effectiveness. Interpersonal theory also suggests that people who are more neutral on the dominance or warmth dimension would also prefer responses that are similar to their interpersonal styles. Thus, it may be the case that the implicit trait policy is better represented as a congruence hypothesis.

Hypothesis 1a: Effectiveness ratings of dominance behaviors will be positively related to the similarity between respondent trait dominance and response dominance.

Hypothesis 1b: Effectiveness ratings of warmth behaviors will be positively related to the similarity between respondent trait warmth and response warmth.

Rigidity

The dyadic-interactional perspective suggests that individuals tend to act in congruence with their interpersonal preferences as measured by the interpersonal circle, and the degree to which individuals tend to vary from these tendencies are a stable individual difference, known as *rigidity*. Highly rigid individuals are characterized by an over-reliance on narrow response patterns (Wiggins, Phillips, & Trapnell, 1989). Wiggins et al. (1989) demonstrated that rigidity as measured by the interpersonal circumplex is a measure of reported trait variability on the interpersonal circumplex that is related to interpersonal problems. In their review of the relationship between normal personality and personality disorders, Widiger and Costa (1994) note that personality disorders are characterized by extreme inflexibility in behaviors, but can be otherwise be described by the same traits as normal personality. Thus, rigidity in personality likely indicates an over reliance on specific behavioral responses that may or may not characterized as a disorder.

The success or failure of an interpersonal negotiation may depend on the behavioral flexibility of the individuals involved in the interaction. Actors who have

highly rigid interpersonal styles would be less likely to deviate from their interaction preference, and would be less likely to establish matching interactions. The implicit trait policy hypothesis suggests that procedural knowledge is developed based on experience directly and indirectly through the partial mediation of implicit trait policies. According to this theory, personality traits influence both the development of implicit trait policies as well as the interpretation of experiences. Individuals with balanced personalities would develop implicit trait policies by modifying their interpersonal preferences with experience, but rigid individuals might incorrectly interpret experience based on their interpersonal preferences, leading to the development of implicit trait policies with a stronger relationship with personality traits.

Hypothesis 2a: Similarity between trait dominance and response dominance will be associated with increased effectiveness for actors with high rigidity.

Hypothesis 2b: Similarity between trait warmth and response warmth will be associated with increased effectiveness for actors with high rigidity.

The Psychology of Situations

Despite several early calls for research in the psychology of situations (e.g., Endler & Magnusson, 1976; Magnusson, 1981), there has only been sporadic coverage in the basic research journals (e.g., Ten Berge & De Raad, 2002; Van Heck, 1989). Although research on work groups has examined many contextual factors influencing performance, the research tends to focus on factors external to the group such as

perceptions of climate, job characteristics, and organizational factors such as training, reward systems, and industry (Sundstrom, McIntyre, Halfhill, & Richards, 2000).

The current study focuses on situations internal to dyadic interactions, decontextualizing the situations in order to focus on the most basic components of individual interactions. Several basic taxonomies of situations have been proposed (for a review see Ten Berge & De Raad, 1999), but most do not distinguish among different types of interpersonal situations. A notable exception is Van Heck (1989) who distinguished between interpersonal conflict, joint working/exchange of thoughts, ideals and knowledge, and intimacy/interpersonal relationships. This work is paralleled in the research on intragroup processes such as communication, coordination, conflict, and collaboration (Sundstrom et al., 2000). However, none of these theoretical perspectives on situations explains where matching, acomplementary, and anticomplementary responses are likely to occur. Situations of communication could trigger matching or non-complementary behaviors. Communication could lead to conflict, relationship building, or other outcomes depending on the topic and course of the discussion. Matching responses are associated with a desire to continue the agentic and communal tone of a conversation. Matching responses would likely be associated with interactions that are seen as desired and appropriate, and thus they are likely to be associated with situations of coordination and collaboration. In contrast, non-complementary responses could be associated with a desire to change the tone of the conversation, on the agentic dimension, the communal dimension, or both. Non-complementary interactions are likely to be characterized as conflict. However, it is important to recognize that matching

conflicts are possible. When initiating behavior is appropriate to the situation, actors will likely select matching responses to avoid a perception of behavioral inappropriateness. Thus, the current study will operationalize situations characterized by matching interactions as those which would be valued by organizational management, while non-complementary interactions will be operationalized as situations that would be discouraged.

According to both implicit trait policies and the dyadic-interactional perspective of personality, in most situations actors will favor behavior that is similar to their personality traits. The dyadic-interactional perspective also suggests that behavioral responses will be seen as more effective if they complement the interaction partner's behavior, with the most preferred behavior being both similar to the actor's personality and matching. Although behavioral interactions are a continuous, reciprocal negotiation for a mutually satisfying relationship, to minimize complexity the present study will focus on single behavior-response interactions between hypothetical interaction partners and actor. The current study will extend the implicit trait policy construct by demonstrating how the interpersonal demands of situations influence the perceived effectiveness of responses in addition to individual trait tendencies. Thus, both the interaction partners' trait-relevant interaction initiating behaviors and actors' personality traits will affect the perceived effectiveness of behavior. In situations where behavior has been *a priori* categorized as being valued by organizations, matching responses will be perceived as more effective, leading to the following hypotheses:

Hypothesis 3a: Dominant responses will be rated as more effective than submissive responses when hypothetical interaction partners display submissive interaction initiating behavior in situations classified as organizationally valued.

Hypothesis 3b: Submissive responses will be rated as more effective than dominant responses when hypothetical interaction partners display dominant interaction initiating behavior in situations classified as organizationally valued.

Hypothesis 3c: Warm responses will be rated as more effective than cold responses when hypothetical interaction partners display warm interaction initiating behavior in situations classified as organizationally valued.

Hypothesis 3d: Cold responses will be rated as more effective than warm responses when hypothetical interaction partners display cold interaction initiating behavior in situations classified as organizationally valued.

Hypothesis 4a: Dominant responses will be rated as more effective than submissive responses when hypothetical interaction partners display dominant interaction initiating behavior in situations classified as organizationally discouraged.

Hypothesis 4b: Submissive responses will be rated as more effective than dominant responses when hypothetical interaction partners display submissive interaction initiating behavior in situations classified as organizationally discouraged.

Hypothesis 4c: Warm responses will be rated as more effective than cold responses when hypothetical interaction partners display cold interaction initiating behavior in situations classified as organizationally discouraged.

Hypothesis 4d: Cold responses will be rated as more effective than warm responses when hypothetical interaction partners display warm interaction initiating behavior in situations classified as organizationally discouraged.

Complementarity and Interpersonal Skill

The implicit trait policy hypothesis may explain why personality traits are found to correlate with situational judgment test responses, but more importantly have several implications for personnel selection. The implicit nature of the measurement of personality through situational judgment test responses may provide incremental validity over traits in predicting job-relevant behavior, or possibly interact with explicit personality traits (cf. Bing, Stewart, Davison, Green, & McIntyre, 2007), and more importantly for the present study, there are likely differences in trait appropriateness in different situations. For example, extraverted behavior may be more appropriate at a wedding than a funeral. Thus, the implicit trait policy may be extended by including theoretical propositions regarding the differential expression of trait by situation.

Across individuals, interpersonal matching tends to occur with as little as 20 minutes of interaction (Sadler & Woody, 2003). However, as the above hypotheses suggest, effectiveness of interpersonal behaviors likely depends on the demands of the situation (i.e., appropriate or inappropriate). The degree to which participants are able to

distinguish between the response demands in interpersonal situations may represent an ability and/or skill that would likely be related to interpersonal performance. Responses to the situational judgment tests that are complementary for dominance and supplementary for warmth are thought to represent a universal interpersonal skill. While the effectiveness of interpersonal behaviors is certainly dependent on situations/contexts, the purpose of this study is to measure to degree to which participants recognize the effectiveness of interpersonal behavior in a work context. The establishment of complementarity in relationships has been shown to predict task performance in dyadic pairs (Estroff & Nowicki, 1992), and thus the ability and/or skill to recognize appropriate dyadic interactions may be related to interpersonal performance. This relationship is similar to the implicit trait policy, but while implicit trait policies are operationalized as the correlation between the trait-relevance of behaviors and their effectiveness ratings, this complementarity score is operationalized as the correlation between the theoretical complementarity of responses and observed ratings of response effectiveness.

Hypothesis 5: The correlation of the distance between theoretical and observed complementarity and ratings of effectiveness will be positively related to interpersonal skills.

CHAPTER II

METHOD

Power Analysis

To determine the sample size needed, a power analysis was performed based on the effect of personality traits on implicit trait policies (Motowidlo et al., 2006b). Power analysis was performed using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007), and Optimal Design (Raudenbush, 1997) indicating at least 383 participants were needed. The total sample size is primarily dependent on the response rate for the raters of participants' interpersonal skills. As the exact effect size was not known a priori, a correlation of .30 was used as an estimate based on the effect of implicit trait policies on behavior, and thus 115 dyads were needed for a power of .95. The total number of participants was planned by assuming a 30% response and a correlation of $r = .30$.

All other hypotheses posit relationships between multiple levels of analyses. For these hypotheses, Level 1 is the participant level, with effectiveness ratings as the outcome, Level 2 is the item response level, and Level 3 is the situation level. These hypotheses examine effects that are likely to be similar to the relationship between personality and implicit trait policies ($r = .29$ to $r = .39$). Because power in multilevel studies is dependent on the size of the sample at the highest level of analysis, and because exploratory analyses with cross validation were planned, multi-level power analyses were performed with $n = 128$ (1/3 the total number of participants) for correlations of $r = .30$. Nine Level 2 groups (responses) yield a power of .95 to detect an effect of $r = .30$; and 16 responses yield a power of .90 to detect an effect of $r = .30$.

Participants

Four hundred nineteen undergraduate students enrolled in an introductory psychology class completed the first survey, 80 (19%) did not complete the second survey, and 31 (7%) were judged to be random responders (nine of whom also did not complete survey 2) using an 8-item validity scale (described later). Correlations were found to be attenuated when the random responders were included, and thus were removed from further analyses yielding a sample size of 317 participants. Participants were 133 males, and 183 females, and 1 non-response, with a mean age of 19.02 (*SD* = 0.97). Only 44 participants had no work experience, with 1 participant reporting 10 years (mean = 2.35, SD = 1.71). Most participants reported their ethnicity as Caucasian (*N* = 258), 16 reported Asian, 18 Black, 35 Hispanic, and 3 as Native American. Participants were asked to provide a name and email address for someone who knew them well. Of the 386 names and email addresses provided, 206 responded for a 53% response rate. Twenty-two were completed for those who did not respond to survey 2, and 13 were completed for those were identified as random responders, yielding a sample of 317 overall and 171 for hypothesis 5, well above the goal of 115 identified in the power analysis.

Measures

Interpersonal Interaction Preferences

Interpersonal interaction preferences were measured using the 64-item Revised Interpersonal Adjective Scale (IAS-R) (Wiggins et al., 1988). The IAS-R is composed of eight subscales representing the eight octants of the interpersonal circumplex rated on a

scale of 1 to 8. Incorporating five factor model naming conventions, and starting at 12 o'clock and moving clockwise the octant scales would be named dominance (α =.81), extraversion (α = .91), warmth (α = .91), agreeableness (α = .79), submissiveness (α =.85), introversion (α = .89), coldness (α = .86), and disagreeableness (α = .88). The overall dominance and warmth scales used in the current study were created by reversing scoring the submissive or coldness items, yielding two 16-item scales.

Five Factor Personality Traits

Although specific hypotheses were not proposed, five factor personality traits were also assessed using the Big Five Inventory (BFI; John & Srivasta, 1999), a 44-item measure of short descriptive phrases responding to the prompt "I see myself as someone who is." Responses were collected on a 5 point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Participants also reported their five factor traits on a 10-item scale developed by Gosling, Rentfrow, and Swann (2003) using a 5 point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. This measure was also completed by friends of the participants for the participant's personality and their own.

Rigidity

According to interpersonal circumplex methodology, the interpersonal preferences of a person can be represented using a single point on the interpersonal circumplex that summarizes a person's scores on all eight octants (Gurtman, 1994). Each of the octant scales was standardized using overall norms provided by Wiggins and Trapnell (1996). These standardized scores were then converted into coordinates on the interpersonal circumplex using a formula provided by Gurtman (1994). An overall

vector length was then computed using the Pythagorean theorem. Scores were generated for each of the eight octants of the interpersonal circle and used to calculate structural summary scores of vector length and angle (Gurtman, 1994).

Control Variables

It is important to include all relevant predictors in the model to avoid misspecification, and thus the predictors of age, sex, ethnicity, years of work experience, years of work supervision experience, years of non-work leadership experience, and type of work experience by industry were examined for predictive validity. Ethnicity was reported by selecting all that apply from the choices of Caucasian, Asian, Black/African American, Foreign National (no responses), Hispanic/Latino, and Native American. Participants were also allowed to indicate other options in a text box. Type of work experience was reported by choosing all that apply from a list of industries from the Bureau of Labor Statistics (http://www.bls.gov). After the second survey participants reported in open-ended format the type of work environment they imagined when completing the situational judgment test. The most common themes in the open-ended responses were dummy coded for (1) general office setting, (2) retail settings, (3) technical work, (4) financial work.

Situational Judgment Test

Twenty-four interpersonal situational judgment items were developed for this study (see Appendix A). For all items, the respondent is put in the role of actor and the item stem contains information about the interaction partner's interaction initiating behavior. Participants were matched to opposite sex hypothetical interaction partners as

research suggests that sex differences are minimized with opposite sex interactions (Sadler & Woody, 2003). Items were interpersonally balanced by showing participants eight situations for each of the three work roles (i.e., supervisor, peer, subordinate) as dominant behavior has been demonstrated to be more frequently expressed in supervisor roles, while submissive behavior has been shown to be more frequent for subordinates (Moskowitz, Suh, & Desaulniers, 1994). The order of situational judgment test items was counterbalanced by role. Within each role, four situations were developed based on judge ratings that the interaction partner's behavior would be encouraged by the organization, and four items were selected that were rated as organizationally discouraged behavior. Each of these four items was developed to demonstrate primarily dominant, warm, submissive, or cold behavior. Responses to each item were developed to represent dominant, warm, submissive, or cold behavior.

Ratings of Trait-Relevant Behaviors

Items (i.e., situations and responses) were generated by the author and rated by groups of advanced graduate student raters (at least three years of studies). The raters included 5 with I/O training (2 male, 3 female), and 5 with clinical training (3 male, 2 female). Situations were rated based on a three-point perceived appropriateness scale, 1 = organizationally valued, 0 = neither, -1 = organizationally discouraged. Both situations and responses were rated on six 5-point scales derived from the Interpersonal Adjective Scale Revised (IAS-R) (Wiggins, Trapnell, & Phillips, 1988). Bipolar adjectives were chosen across the range of the Dominant, Submissive, Warm, and Cold octants based on their angular location on the IAS-R circumplex. The dominance/submissiveness scales

range from -2 = timid to 2 = self-assured, -2 = meek to 2 = firm, and -2 = unaggressive to 2 = domineering. The warm/cold scales range from -2 = ruthless to 2 = softhearted, -2 = cruel to 2 = tenderhearted, and -2 = warmthless to 2 = kind.

Situations and responses were created to measure each of the interpersonal styles of dominance, submissiveness, warmth, and coldness. During development, ratings were analyzed for reliability and accuracy of interpersonal content. Items were discarded if the mean square variance within the item was more than two standard deviations from the mean level, or if the item ratings were not found to measure the interpersonal content planned. There were three rounds of situation development and four rounds of item development in which new items were created to replace those discarded. ICC(1) was calculated by conducting a one way ANOVA, and dividing the mean square variance between groups by the sum of the between and within groups mean square variance. The mean square variance between items was 5.792, and the mean square variance within items ranged from 1.102 to 1.136, all of which correspond to an ICC(1) of .84.

Rating reliability was also calculated with ICC(1) to determine the variance in behavioral ratings due to individual raters, and the variance in behavior ratings that can be explained by either clinical or I/O training. For ratings on the warmth dimension, overall ICC(1) = 0.65, for sex ICC(1) = 0.75, and for training ICC(1) = 0.64. For ratings on the dominance dimension, overall ICC(1) = 0.56, by sex ICC(1) = 0.13, by training ICC(1) = 0.01. This indicates that both sex and training affect warmth ratings, but neither affected dominance ratings, although there was individual variability in dominance ratings. An independent samples t-test was computed to assess these

potential differences. Clinical raters were shown to have a non-significant effect on warmth ratings ($t(865) = 1.32$, $p > .05$), Males were also shown to have a non-significant affect on warmth ratings ($t(865) = -1.72$, $p > .05$). While these results indicate that the potential for biased ratings does exist on the warmth dimension with a positive bias for clinical students and a negative bias for males, ratings were not found to be significantly different in the current study.

Perceived Effectiveness

Perceived effectiveness was the primary dependent variable for the study hypotheses. Perceived effectiveness was measured using a 6 point scale ranging for 1 = extremely ineffective to 6 = extremely effective. A six-point scale was used because an even number of options forces respondents to rate behaviors as either effective or ineffective, even if only marginally one or the other. Theoretically, all of the interpersonal options will have an effect on the interpersonal negotiation along the dimensions of agency and communion, and thus there are no "neutral" options. Indeed, even doing nothing would have an effect on the interpersonal negotiation, as Horowitz et al. (2005) assert. Participants were informed that effectiveness could refer to their ability to complete their tasks, but it could also refer to their ability to develop good relationships with their peers (See Appendix A). Participants were also informed that these two goals often conflict and the decision regarding which goal to follow was left to their discretion when making effectiveness judgments.

Interpersonal Criteria

The SJT in the current study was designed to measure the ability to (1) accurately assess the relative dominance and warmth of a situation and possible responses, and (2) accurately analyze that data when ratings the effectiveness of each response. As no existing measure was found to cover these domains, participants were given two social skills scales and an emotional intelligence (EI) scale.

Social skills were measured with an overall 7-item measure (Ferris, Witt, & Hochwater, 2001). Social skills would likely be a large part of the interpersonal skill domain, but demonstrate a moderately high correlation with the trait of extraversion (r = .44; Ferris, et al., 2001). To broaden the range of social skills measured, a 23-item scale with five subscales of *social perception, social adaptability, expressiveness, self-promotion, and ingratiation* (Baron & Tang, in press) was also included. All items were rated on a four point scale ranging from (1 = false to 4 = very true).

The construct of *emotional intelligence* is based on early research on the construct of social intelligence (Landy, 2005). Thus, an EI measure was included to determine whether the EI construct is related to this interpersonal skills criterion. The definition of the construct of EI varies between test-developers, but most definitions cover the range of behaviors that include understanding, using, perceiving, and managing emotions (Rhodes & Newman, 2007). While the debate over the EI construct is not settled, the literature currently distinguishes between an ability-based model of EI and a mixed model (Van Rooy, Viswesvaran, & Pluta, 2005). The current study used a mixed model of EI due to the limited availability of ability-based models for research

and the recent finding that ability-based models do not provide incremental validity over cognitive ability (Rhodes & Newman, 2007). The Emotional Intelligence Scale (EIS; Schutte et al., 1998) is a 33-item measure of EI with a validity of .25 for predicting job performance (Van Rooy & Viswesvaran, 2004).

As a behavioral criterion, *interpersonal skills* were also assessed by a person the participant identified as knowing him/her well using a fifteen item scale. Items were drawn from the EIS and the social perception, social adaptability, and expressiveness subscales of the Baron and Tang (in press) measure. Only items describing observable behaviors were chosen, and items were reworded for a third person focus (see Appendix B).

Random Responding

Responses were examined for random responding using an eight item validity check from the Personality Assessment Inventory (PAI; Morey, 1991) which measures responses to items which are either false or unlikely to be true with responses ranging from 0 = false to 3 = very true. Items were randomly interspersed between ratings of social skills (Baron & Tang, in press; Ferris, Witt, & Hochwarter, 2001) for the first survey, and between EI items (Schutte et al., 1998) for the second survey. Participants who scored an average of more than 1 across both surveys were marked as random responders (mean = .46, *SD* = .34).

Evaluating Other Ratings

No random response scale was given to participants' friends, but they did complete a ten item Big Five personality trait scale (Gosling et al., 2003), about the

participants and themselves. The participants also completed the scale about themselves. The data was cleaned by identifing the raters who demonstrated the most interpersonal judgments accuracy. As noted by Funder & Colvin (1997), the overall accuracy of judge ratings depends on the judge's experience in observing the participant, their ability to rate accurately, and their motivation to do so. The correspondence between friends' ratings and participants' ratings of their own traits was used to clean the data. Rater accuracy was defined as the correlation between the participant's own rating and the friend's rating of the participant. While it is possible that rater accuracy may change across methods, such that high rating accuracy for traits may not be reflected in high accuracy for interpersonal skills, high rating accuracy for traits supports the proposition that the raters are familiar enough with the participant to have the ability to rater interpersonal skills accurately. A cut score of $r = .33$ was chosen to identify friend ratings unable to account for 10% of the variance in participant ratings of themselves. These analyses identified 55 questionable raters. Analyses were performed with and without this group, with higher correlations demonstrated for the reduced group.

Procedure

Participants completed the study via two surveys over the internet in a setting of their choice. In the first survey, participants completed the interpersonal interaction preferences, five factor personality traits, social skills scales, and control variables. Participants also completed the random response validity check and were asked to provide the name and email address of one person who knows them well. Participants were given 1 week to complete the first survey, lasting between 20-30 minutes. One to

two days after the survey 1 deadline, participants were emailed a link to the second half of the study in which they rated the perceived effectiveness of each SJT response, and completed the EI scale and the random response validity check a second time. Participants were given 1 week to complete the second survey, which lasted 30-40 minutes, at which time the participants were assigned credit towards their course completion requirement.

The individuals identified by the participant as a friend were asked to indicate the nature of their relationship (i.e., acquaintance, friend, romantic partner), how long they had known the participant, and demographic information, in addition to completing a ten item interpersonal evaluation of the participant. Friends were entered into a drawing to win one of two $50 gift certificates.

CHAPTER III

RESULTS

Analyses were conducted with multilevel modeling (MLM) due to the multilevel structure of the data (i.e., effectiveness ratings nested within response options, nested within situations). Failure to account for these dependencies in the data can cause problems such as biased estimation of the standard errors of the regression coefficients, and prevents the discovery of cross-level interaction effects (Raudenbush & Bryk, 2002). Multilevel models are similar to ordinary least squares (OLS) regression in that the gamma coefficients (γ) have the same function as the beta coefficients in OLS regression; they estimate the effect of predictors on the criterion. In contrast to OLS regression, MLM estimates the error terms at multiple nested levels. If responses within situations are more similar than responses between situations then the OLS regression assumption of independence of error terms will be violated and standard errors will likely be underestimated (Raudenbush & Bryk, 2002). This study examines Level 1 participant ratings of response effectiveness (N=334), nested within Level 2 response options (J=96) nested within Level 3 situations (K=24). It is also possible to represent the data as responses nested within situations, nested within participants, but Level 1 data represents random effects, while upper level data represents fixed effects. Random effects represent a sample of the possible units which could be analyzed, and best characterize participants rather than response characteristics, as the study is analyzing this specific SJT and not attempting to make inferences regarding the population of possible SJTs.

Data were analyzed using HLM software v6.06 (Raudenbush & Bryk, 2002). Restricted maximum likelihood estimation (REML) was used to determine the appropriate control variables for the study as overall model comparison can only be conducted with REML for differences in the level 1 model fit if the fixed levels are constant. In contrast, three level models in HLM can only be conducted with Full information maximum likelihood (FIML), and differences in fixed effects are more accurately calculated using FIML.

In a review of the centering literature, Hoffman and Gavin (1998) note that both grand mean centering and uncentered analyses produce equivalent models but grand mean centering reduces correlations between group intercepts and slopes. They recommend that grand mean centering should be used in cases where the original metric is arbitrary and the analysis is intended to demonstrate the main effects of group level variables in predicting outcomes at the individual level. All personality scales were grand mean centered, while the control variables were retained in their original metric to aid interpretation of results. Situation and response ratings were uncentered as negative values indicate the degree of submissiveness and coldness.

In MLM, any coefficient can be separated into fixed and random components. At Level 1, the grand mean can be separated into group means and the main effects of the Level 2 predictors on the grand mean. The Level 1 slopes can be separated into group mean effects and a group cross-level interaction effect on the Level 1 slope. Similarly, Level 3 effects can be modeled to account for the variation of the Level 2 intercepts and slopes. The variance of error terms indicates the amount of variance not accounted for by

the predictors at that level. These variance components (VC) can be used to estimate the proportion of variance within items, among items within situations, within situations, and the proportion of variance accounted for by a fixed effect. The relative fit of two nested models can be evaluated by a Likelihood Ratio test in which the absolute difference between the -2 Log likelihood (-2LL) values for the two models is compared to a chi-square distribution with degrees of freedom equal to the difference in the number of model parameters. REML can be used to compare the random portion of nested models with the same fixed effects, and FIML can be used to compare nested models with different fixed effects. Variables were measured at different levels of analysis, and thus the correlations will be reported separately for each level of analysis. The Level 1 means, standard deviations, reliabilities, and correlations of predictor and control variables are presented in Table 1. The Level 2 and 3 means, standard deviations, and correlations are presented in Tables 2 and 3, respectively.

As can be seen in both Tables 2 and 3, there is a negative correlation between ratings of dominance and warmth in Level 2 (r = -.46), and Level 3 (r = -.38), which is likely due to the operationalization of coldness. Cold behavior has typically been operationalized as hostility, but during item development it became clear that hostility is often interpreted as dominant action. Horowitz et al. (2005) discuss this issue in depth, but as the debate has not been settled in the personality literature. As the personality assessment used in the present study (i.e., IAS-R) is based on the hostility definition of coldness, using the same operationalization in item ratings was most appropriate.

Table 1. *Predictor Means, Standard Deviations, Reliability, and Correlations*

	N	*M*	*SD*	Alpha	1	2	3	4	5	6	7	8	9	10	11	12
1. Dominance	317	5.35	0.96	.89												
2. Warmth	317	6.30	0.91	.93	-0.09											
3. Rigidity	317	1.32	0.68	**	0.34*	0.10										
4. BFI Agreeableness	317	3.88	0.61	.79	-0.10	0.71*	0.01									
5. BFI Conscientiousness	317	3.64	0.61	.78	0.21*	0.18*	0.13*	0.27*								
6. BFI Extraversion	317	3.52	0.79	.85	0.66*	0.16*	0.23*	0.19*	0.20*							
7. BFI Neuroticism	317	2.83	0.81	.82	-0.28*	-0.09	-0.12*	-0.33*	-0.03	-0.28*						
8. BFI Openness	317	3.77	0.62	.80	0.24*	0.19*	0.16*	0.18*	0.09	0.22*	-0.16*					
9. Supervisory Experience	308	0.30	0.72	- -	0.16*	-0.04	0.02	-0.05	0.01	0.10	-0.14*	-0.05				
10. Imagine: Office[a]	285	0.88	0.32	- -	0.00	-0.08	0.02	-0.06	0.02	-0.04	-0.01	0.00	-0.04			
11. Imagine: Retail[a]	285	0.03	0.18	- -	0.04	-0.02	0.03	0.00	0.04	0.10	-0.03	-0.08	-0.01	-0.44*		
12. Social Skills	317	2.64	0.62	.81	0.48*	0.14*	0.35*	0.15*	0.27*	0.42*	-0.18*	0.28*	0.15*	-0.01	0.07	
13. Self Perception	317	2.93	0.61	.81	0.31*	0.15*	0.28*	0.11	0.19*	0.20*	-0.12*	0.27*	0.14*	0.05	-0.08	0.77*
14. Social Adaptability	316	2.64	0.69	.73	0.50*	0.38*	0.29*	0.38*	0.28*	0.61*	-0.25*	0.26*	0.07	-0.13*	0.07	0.61*
15. Expressiveness	316	2.25	0.69	.78	-0.09	0.32*	0.09	0.17*	-0.02	0.10	0.34*	-0.07	0.00	-0.14*	0.01	0.14*
16. Self-promotion	316	2.18	0.73	.82	0.42*	-0.03	0.31*	-0.06	0.09	0.31*	-0.04	0.21*	0.12*	-0.04	0.01	0.39*
17. Ingratiation	316	2.13	0.72	.81	0.17*	0.02	0.25*	0.01	0.00	0.16*	0.01	0.01	0.15*	-0.04	-0.01	0.30*
18. EIS	295	2.90	0.40	.90	0.36*	0.34*	0.31*	0.31*	0.25*	0.32*	-0.17*	0.36*	0.11	-0.04	0.03	0.53*
19. Other-rated Interpersonal Skills	171	3.21	0.55	.89	0.06	0.26*	-0.04	0.20*	-0.06	0.15*	-0.17*	0.02	0.00	-0.15	0.04	-0.01
20. Other-rated Expressiveness	171	3.38	0.66	.81	-0.06	0.42*	-0.04	0.28*	0.00	0.04	-0.08	-0.05	0.05	-0.14	0.06	-0.03
21. Other-rated EI	171	3.25	0.68	.81	-0.04	0.11	-0.12	0.12	-0.13	-0.02	-0.19*	-0.01	-0.01	-0.09	0.04	-0.09
22. Other-rated Social Perception	171	3.24	0.67	.74	-0.04	0.16*	-0.02	0.11	0.01	0.02	-0.06	0.07	-0.01	-0.10	0.05	-0.05
23. Other-rated Social Adaptability	171	2.99	0.76	.75	0.27*	0.16*	-0.01	0.14	-0.06	0.36*	-0.23*	0.02	-0.01	-0.15	0.00	0.07

[a] dichotomous variable indicating whether the participant imagined that situation
*p<.05 two-tailed
-- indicates a single item measure, thus alpha is not appropriate
** rigidity is derived from 8 octant scales using a non-linear combination method, the method of scale construction and reliability for each scale is reported in the method section.

Table 1 (Continued).

	13	14	15	16	17	18	19	20	21	22
1. Dominance										
2. Warmth										
3. Vector Length										
4. BFI Agreeableness										
5. BFI Conscientiousness										
6. BFI Extraversion										
7. BFI Neuroticism										
8. BFI Openness										
9. Supervisory Experience										
10. Imagine: Office										
11. Imagine: Retail										
12. Social Skills										
13. Self Perception										
14. Social Adaptability	0.46*									
15. Expressiveness	0.15*	0.27*								
16. Self-promotion	0.28*	0.38*	0.14*							
17. Ingratiation	0.23*	0.23*	0.29*	0.51*						
18. EIS	0.45*	0.52*	0.17*	0.28*	0.20*					
19. Other-rated Social Skills	-0.01	0.20*	0.13	-0.04	-0.03	-0.02				
20. Other-rated Expressiveness	0.01	0.19*	0.20*	-0.10	-0.02	0.02	0.81*			
21. Other-rated EI	-0.05	0.02	-0.02	-0.03	-0.05	-0.10	0.82*	0.58*		
22. Other-rated Social Perception	-0.03	0.03	0.10	-0.09	-0.08	-0.05	0.80*	0.55*	0.62*	
23. Other-rated Social Adaptability	-0.01	0.30*	0.09	0.01	0.02	0.01	0.80*	0.51*	0.51*	0.56*

Level 1 Random Effects

MLM does not enter predictors into the multilevel regression equation using a stepwise process; instead all variables are simultaneously considered when calculating the likely values for the model parameters. As it is important to include all relevant predictors in the model to avoid misspecification, control variables were first analyzed using two-thirds of the sample to determine which contributed to the random portion (i.e., Level 1) of the model, and the results were cross-validated using the remaining one-third of the data. Using REML, it is possible to compare the random portion of nested models using a -2 Log Likelihood statistic. Beginning with a model with no Level

Table 2. *Response Means, Standard Deviations, and Correlations*

	M	*SD*	1.	2.
1. Response Dominance	0.24	0.98		
2. Response Warmth	0.04	0.95	-0.46*	
3. Response Closeness	0.05	0.92	-0.21*	0.84*

*$p<.05$

Table 3. *Situation Means, Standard Deviations, and Correlations*

	M	*SD*	1.	2.	3.	4.	5.
1. Manager Role	0.33	0.48					
2. Subordinate Role	0.33	0.48	-0.50*				
3. Appropriateness	-0.12	0.63	0.16	-0.06			
4. Situational Warmth	0.08	0.99	0.09	0.03	0.37		
5. Situational Dominance	0.40	0.89	-0.13	-0.04	0.09	-0.38	
6. Situational Closeness	0.24	1.23	-0.03	-0.03	0.55*	0.87*	-0.11

*$p<.05$

1 predictors, each of the control predictors was entered into the model and evaluated in comparison to the model without the predictor as shown in Table 4 in the exploration sample and Table 5 for the cross-validation sample.

Table 4. *Random Effects in the Exploration Samples*

Exploration Sample	Sigma sq	-2LL	df	% Var	VC
Intercept	1.20993				0.72858
Sex	1.20670	53.38	2	0.27%	0.01252
Years Supervising	1.19544	3172.07	3	0.93%	0.00367
Years Work	1.19321	37.39	4	0.19%	
Years Leadership	1.18823	18.42	5	0.42%	
Work: Construction	1.18368	70.17	6	0.38%	
Work: Natural Resources	1.17955	43.84	7	0.35%	
Work: Retail	1.17507	42.75	8	0.38%	
Imagine: Office	1.16082	2674.17	9	1.21%	0.02153
Imagine: Retail	1.15784	57.64	10	0.26%	0.06584
Dominance	1.15784	-9.32	11	0.16%	0.13162
Dominance squared	1.15602	28.14	12	0.37%	0.00138
Warm	1.15360	162.31	13	0.64%	0.19690
Warmth squared	1.14627	118.01	14	1.16%	0.00391
Final Model	1.16184			3.97%	1.22220

Note: VC is the variance components for each group intercept calculated with all listed predictors entered into the model; variance components were only calculated for effects that were included in the final model
% Var is the percentage of Level 1 variance accounted for by the predictor

Table 4 presents all of the control variables that were shown to add to the model based on a significant χ^2 statistic derived from the difference between the -2LL value for a model and the model without the predictor. Demographic variables were evaluated first, followed by work history, the imagined test setting, and finally personality variables. The predictive variables for the exploration sample were sex, years of work supervision experience, years of work experience, years of non-work leadership

experience, experience in the construction, natural resources (i.e., farming and mining), and retail industries, the setting imagined when completing the SJT, and finally the personality variables. These variables were then tested in the cross-validation sample, and only variables found to increment the cross-validation model are presented in Table 5. Personality traits were evaluated in each model after the control variables. Linear dominance was not found to increment the model in the cross-validation sample likely because of a strong quadratic effect. Thus, the -2LL value for the quadratic dominance was calculated by comparing the model with both linear and quadratic dominance to a model without either.

Table 5. *Random Effects in the Cross-Validation Sample*

Cross Validation Sample	Sigma sq	-2LL	df	% Var	VC
Intercept	1.22395				0.90680
Sex	1.21868	630.11	2	0.43%	0.01867
Years Supervising	1.21693	1976.96	3	0.14%	0.00165
Work: Natural Resources	1.20665	80.24	5	0.84%	
Imagine: Office	1.13481	4847.01	6	5.95%	0.06245
Imagine: Retail	1.12987	23.53	7	0.44%	0.11210
Dominance	1.12250	61.68	8	0.65%	0.14998
Dominance squared	1.11895	28.88	9	0.32%	0.00193
Warmth	1.11325	64.87	10	0.51%	0.25053
Warmth squared	1.10827	64.17	11	0.45%	0.00651
Final Model	1.12046			9.31%	1.4921

Note: VC is the variance components for each group intercept calculated with all listed predictors entered into the model; variance components were only calculated for effects that were included in the final model

% Var is the percentage of Level 1 variance accounted for by the predictor

The strongest single Level 1 effect was whether or not students imagined an office setting while responding to the items, accounting for 1.21% of the Level 1

variance in effectiveness ratings in the exploration sample and 5.95% in the cross-validation sample. While most participants reported imagining an office setting, there does appear to be a difference between them and those who imagined other settings. It is possible that the effect is due to the salience of different interaction norms between work contexts. Important differences likely exist between appropriate interactions for a student job in a retail store and what students imagine would be appropriate in an office. This effect might not be as strong if measured in an incumbent or applicant sample as the work context would be the same for incumbents, and applicants likely will have work experience relevant to the job for which they are applying. In order to determine the effect of these differing work experiences, a wide range of organizations would need to be sampled as there would likely be some range restriction of types of work experience due to both self-selection and organizational selection.

The variance components for both imagined office and retail setting indicate a differential effect between items, and therefore additional analyses were conducted to identify item-level characteristics that could explain some of this variance. Analyses were conducted with FIML, as the focus of model comparisons was in the fixed rather than the random effects. Both linear and quadratic response warmth and dominance were entered as predictors of the grand mean. Both dominance ($\gamma = .13$, $SE = .03$) and warmth ($\gamma = .12$, $SE = .03$) were shown to have a positive effect on the imagined office setting slope accounting for 62.8% of the slope variance (VC = 0.00801), indicating that both dominant and warm responses were considered more effective when individuals imagined themselves in an office environment. No item-level predictors were found to

explain the variance of the retail slope. The unexplained variance is likely due to the variance in other work settings not captured by the office/retail distinction. There were individuals who gave unique settings such as teacher (*N*=1) or construction worker (*N*=2), but there were not enough similar responses to justify creating a variable to represent these individual variations.

Work and leadership experience accounted for 2.6% of the Level 1 variance in the exploration sample. However, only supervision experience and natural resources (i.e., mining and farming) work experience was found to contribute to the cross-validation model. As only seven participants reported natural resources experience, it was excluded from further analyses. Personality traits accounted for 2.3% of the Level 1 variance in the exploration sample and 1.9% in the cross-validation sample. There were consistent effects of both quadratic warmth and quadratic dominance in both the exploration and cross-validation samples, and the variance components indicate a substantial amount of variance between responses. The effect of linear dominance did not significantly contribute to the exploration model without also considering the quadratic effect, but the dominance variance component indicates that the effect varies between responses. Overall, only the imagined setting of the test and the linear effects of dominance and warmth were associated with a large proportion of the variance components, indicating that all other modeled effects are similar across items.

Overall, the predictors accounted for 3.9% of the Level 1 variance in the exploration sample and 8.3% of the variance in the cross-validation sample. Finally, the intra-class correlation was calculated based on the Level 1 variance within items and the

Level 2 variance between items. ICC = .49 for the exploration sample and .43 for the cross-validation sample, indicating a substantial degree of between item variance in effectiveness ratings, as expected.

Multilevel Polynomial Regression

Hypotheses 1 and 2 proposed that effectiveness judgments are influenced by the fit between the personality traits of respondents and the trait congruency of the behaviors represented in the interaction responses (i.e., the options for each item). The location of dominance and warmth for traits, responses, and situations can be identified as points on the interpersonal circumplex represented by an angle and a vector length. The complementarity literature operationalizes similarity between traits and behaviors, or between two behaviors, as the Euclidean distance between the two points. If a person's traits = (v_1, θ_1) and response option = (v_2, θ_2), where v is the vector and θ is the angle, then the distance can be computed with equation 1.

$$D = (v_1^2 + v_2^2 - v_1 v_2 \cos(\theta_1 - \theta_2))^{1/2} \quad (1)$$

Edwards (1993; Edwards & Parry, 1993) notes that operationalizing similarity as distance assumes that there is symmetry between positive and negative differences, and the regression coefficient for the relationship between the independent variable (IV) on the dependent variable (DV) is equivalent for the two constructs being compared (i.e., the regression coefficient of θ_1 on effectiveness is equivalent to the coefficient of θ_2). The complementarity literature suggests that the relationship between similarity and effectiveness may be greater for warm behavior compared to cold; however, the exact relationship is unclear. Thus, similarity will be measured using polynomial regression to

identify any unusual effects of traits and responses in their relationship with effectiveness ratings. This will be tested for the dominance scale and the warmth scale using equation 2 where X refers to a personality trait, and Y refers to the trait rating of a response, and Z refers to effectiveness ratings.

$$Z = b_0 + b_1X + b_2Y + b_3X^2 + b_4XY + b_5Y^2 + e \quad (2)$$

In the current study, response effectiveness ratings are nested within response options, and responses are nested within situations. This model indicates that personality traits (X) explain some of the Level 1 variance in effectiveness ratings, but the effect varies between the groups of items, indicated by variance components for both trait dominance and warmth. The main and quadratic effects of the personality traits are shown in equation 3, where β indicates a Level 1 slope, r indicates the Level 1 error, γ indicates a Level 2 effect, and u indicates the Level 2 error. The intercept of equation 3 is decomposed into specific predictors of a main and quadratic effect of trait-congruent response behavior as shown in equation 4. Equation 5 represents the cross-level interaction of the response behavior on the effect of the personality trait in effectiveness ratings. These equations can be substituted back into equation 3 to create equation 6, the mixed model equation.

$$z_{ij} = \beta_{0j} + \beta_{1j}x_{ij} + \beta_{2j}x_{ij}^2 + r_{ij} \quad (3)$$

$$\beta_{0j} = \gamma_{00} + \gamma_{01}y_j + \gamma_{02}y^2_j + u_{0j} \quad (4)$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}y_j + y_{1j} + u_{1j} \quad (5)$$

$$\beta_{2j} = \gamma_{20} + u_{2j}$$

$$z_{ij} = \gamma_{00} + \gamma_{01}y_j + \gamma_{02}y^2_j + \gamma_{10}x_{ij} + \gamma_{11}x_{ij}y_j + \gamma_{20}x_{ij}^2 + \text{error} \quad (6)$$

Analyses were conducted with a three level model to account for situation dependencies. Sex, years of supervision, and imagined setting were entered as control variables at Level 1 along with the trait predictors, as well as the Level 2 predictors of office setting slope. The Level 2 predictors shown in equation 2 and 3 were modeled for both the dominance and warmth effects, but the two hypotheses were tested separately, with the non-hypothesized effects treated as control variables.

Outliers and Influential Cases

Quadratic effects in polynomial regression are especially sensitive to influential observations (Edwards & Rothbard, 1999). Not all outliers are influential, but the criteria for identifying outliers is quantifiable, while influence is determined by visual inspection of scatterplot graphs. To increase the precision of analyses, both Mahalanobis distance and leverage statistics were calculated. One extreme case exceeded the χ^2 cutoff for Mahalanobis distance and appeared disconnected in a scatterplot of leverage and the criterion. Analyses were conducted with and without this case, and as there were no substantial differences between the two analyses, the case was retained in analyses.

Personality Trait-Response Fit

Hypothesis 1 proposed that similarity between traits and response behaviors was associated with higher effectiveness. The effect of similarity can be tested by examining the line of fit where traits and responses are equal. The line of fit line can be calculated by setting $y_j = x_{ij}$ as shown in equation 7.

$$z_{ij} = \gamma_{00} + x_{ij}(\gamma_{01} + \gamma_{10}) + x_{ij}^2(\gamma_{02} + \gamma_{11} + \gamma_{20}) + \text{error} \quad (7)$$

The linear effect of fit can thus be calculated by $\gamma_{01} + \gamma_{10}$, while the quadratic curvature is equal to $\gamma_{02} + \gamma_{11} + \gamma_{20}$. Support for fit hypotheses would be indicated by an overall positive effect for the sum of γ_{01} and γ_{10}. Curvature on the line of fit indicates that the relationship between fit and effectiveness changes at either an increasing or decreasing rate at extreme values of a variable. The main effect of dominance or warmth responses on perceived effectiveness is equivalent to the ITP correlation effect proposed by Motowidlo et al. (2006b). The main effect of the personality trait represents the main effect of the trait on effectiveness ratings, while the cross-level interaction between trait-relevant response options on the effect of the personality trait is equivalent to the correlation between ITPs and traits tested by Motowidlo et al. (2006a) to demonstrate an accentuation effect. Interpersonal theory does not propose quadratic effects, but as interpersonal theory operationalizes similarity with a difference score, any quadratic effects would have been ignored by previous research. Therefore, all analyses were conducted with two-thirds of the sample and results were cross-validated with the remaining one-third to minimize capitalization on chance. Results are presented in Table 6.

As recommended by Cohen (1990), an 80% confidence interval (CI) was used for all analyses. An 80% CI is preferable to a 90% or 95% CI because all analyses contain exploratory elements and are cross-validated. Both 90% and 95% CIs can be used as tests of the null hypothesis, with the competing hypothesis rejected if zero is included in the CI. It is possible to do the same with an 80% CI, but in contrast to a 90%

Table 6. *Polynomial Regression of Trait-Response Fit and Effectiveness Ratings*

Sample	Level 1 Trait	Level 2 Response	Gamma	Std. Error	80% CI Lower	80% CI Upper
1	Mean		3.74	0.10	3.61	3.88
		Warmth	0.46	0.05	0.40	0.53
		Dominance	0.12	0.06	0.05	0.20
		Warmth squared	-0.16	0.04	-0.21	-0.10
		Dominance squared	-0.10	0.06	-0.17	-0.02
	Dominance		0.06	0.05	-0.01	0.12
		Dominance	0.02	0.01	0.01	0.03
		Dominance squared	-0.01	0.01	-0.02	0.00
	Warmth		-0.23	0.04	-0.28	-0.18
		Warmth	0.07	0.01	0.06	0.08
		Warmth squared	0.00	0.01	-0.01	0.01
	Warmth squared		-0.04	0.01	-0.04	-0.03
	Dominance squared		0.00	0.00	-0.01	0.00
2						
	Mean		3.67	0.14	3.48	3.85
		Warmth	0.58	0.06	0.50	0.67
		Dominance	0.08	0.09	-0.04	0.19
		Warmth squared	-0.12	0.04	-0.18	-0.06
		Dominance squared	-0.15	0.06	-0.22	-0.07
	Dominance		0.11	0.06	0.03	0.18
		Dominance	0.01	0.01	-0.01	0.02
		Dominance squared	0.00	0.01	-0.01	0.01
	Warmth		-0.36	0.07	-0.45	-0.26
		Warmth	0.05	0.01	0.04	0.07
		Warmth squared	-0.01	0.01	-0.03	0.00
	Warmth squared		-0.07	0.01	-0.08	-0.06
	Dominance squared		0.08	0.05	0.02	0.14

Note: Sample 1 is the exploration sample, sample 2 is the cross-validation sample. Control variables included in analyses but not reported.

or 95% CI, the 80% CI includes a wider range of values that a researcher may believe are important to examine in a second sample. This avoids the problem of researchers wanting to classify results as "nearly significant." Results are then cross-validated and evaluated based on the confidence intervals for both samples. Finally, a 95% CI can easily be estimated by interested readers with no written calculations by subtracting

twice the standard error from the mean.

The Effect of Dominance Fit

Hypothesis 1a proposed that the fit between trait dominance and the dominance behavior portrayed in a response would have a positive

effect on response ratings. As shown in by the 80% CI in Table 6, response dominance (γ_{exp} = .12) was shown to have a positive influence on effectiveness ratings in only the exploration sample, whereas the effect of trait dominance did not include zero in only the cross-validation sample (γ_{cross} = .11). The only consistent effect between the samples as a negative effect of quadratic response dominance (γ_{exp} = -.10; γ_{cross} = -.15) indicating a negative quadratic implicit trait policy for dominance. Hypothesis 1a was not supported as the overall linear effect of fit was positive but inconsistent between samples.

The Effect of Warmth Fit

Hypothesis 1b was fully supported. Warm responses were seen as more effective than cold responses in both samples (Table 6, γ_{exp} = .46; γ_{cross} = .58). Analyses also revealed a negative effect of trait warmth on effectiveness that was replicated in the cross-validation sample (γ_{exp} = -.23; γ_{cross} = -.36). There was also evidence of a cross-level interaction between response and trait warmth (γ_{exp} = .07; γ_{cross} = .05), and negative effects for both quadratic trait (γ_{exp} = -.04; γ_{cross} = -.07) and quadratic response warmth (γ_{exp} = -.16; γ_{cross} = -.12). The mixed model equations for warmth effectiveness is provided below, with W indicating personality warmth and R indicating item warmth.

Exploration= $3.74 - .23W + .46R + .07RW - .04W^2 - .16R^2$

Cross-Validation = 3.67 - .36W + .58R+ .05RW -.07W^2 -.12R^2

Using equations provided by Edwards and Parry (1993), the slope of the fit line can be described by the sum of the linear coefficients and is positive for both the exploration and cross-validation sample (Exploration = .46-.23 = .23; Cross = .58-.36 = .22). The curvature of the fit line is described by the sum of the interaction and quadratic coefficients, and is negative in both samples indicating a downward curvature (Exploration= .07-.04-.16 = -.13; Cross= .05-.07-.12= -.14). The overall positive effect for the fit line supports Hypothesis 1b. The fit between trait and response warmth positively influences effectiveness ratings, but there is a non-hypothesized curvilinear effect where the effect of fit decreases as the magnitude of the I=W equality increases. Compared the variance components (VC) for a model with only dominance predictors, the Level 2 warmth predictors explained 22.9% of the variance in warmth slopes (VC_1 = 0.08035; VC_2 = 0.06187) in the exploration sample and 13.6% in the cross-validation sample (VC_1 = 0.19885; VC_2 = 0.17181). Response warmth also accounted for 55.4% of the variance in the grand mean in the exploration sample (VC_1 = 0.55332; VC_2 = 0.24684) and 71.1% in the cross-validation sample (VC_1 = 0.57625; VC_2 = 0.1664).

Summary for Hypothesis 1

There was no support for a dominance fit relationship. Positive effects were shown for both trait and response dominance, but neither effect was replicated. Hypothesis 1b was supported for a congruence relationship between trait and response warmth, but also revealed negative quadratic effects. Thus fit between trait and response

warmth would be associated with high effectiveness, but the effect of fit decreases at extreme values of warmth.

Moderation of Fit by Interpersonal Rigidity

Hypothesis 2 proposed that rigidity would moderate the fit relationship. As vector length increases, the effect of fit is expected to be stronger. In a single level study, this hypothesis would be tested by including the moderator variable as a main effect and multiplying it across the polynomial regression equation as shown below:

$$Z = b_0 + b_1Y + b_2Y^2 + b_3X + b_4XY + b_5X^2$$

$$+ b_6M + b_7YM + b_9Y^2M + b_8XM + b_{10}XYM + b_{11}X^2M + \text{error}$$

For the multilevel case, the moderator is entered at Level 1 in addition to the Level 1 interaction terms as shown in equation 8, and the cross level interactions are calculated as shown in equation 9. These are then combined in a mixed model equation (10).

$$z_{ij} = \beta_{0j} + \beta_{1j}x_{ij} + \beta_{2j}x_{ij}^2 + \beta_{3j}m_{ij} + \beta_{4j}x_{ij}m_{ij} + \beta_{5j}x_{ij}^2m_{ij} + r_{ij} \quad (8)$$

$$\beta_{0j} = \gamma_{00} + \gamma_{01}y_j + \gamma_{02}y^2_j + u_{0j} \quad (9)$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}y_j + u_{1j}$$

$$\beta_{2j} = \gamma_{20} + u_{2j}$$

$$\beta_{3j} = \gamma_{30} + \gamma_{31}y_j + \gamma_{32}y^2_j + u_{3j}$$

$$\beta_{4j} = \gamma_{40} + \gamma_{41}y_j + u_{4j}$$

$$\beta_{5j} = \gamma_{50} + u_{5j}$$

$$Z = \gamma_{00} + \gamma_{01}y_j + \gamma_{02}y^2_j + \gamma_{10}x_{ij} + \gamma_{11\,j}x_{ij}y_j + \gamma_{20}x_{ij}^2 + \gamma_{30}m_{ij} + \gamma_{31}m_{ij}y_j \quad (10)$$

$$+ \gamma_{32}m_{ij}y^2_j + \gamma_{40}x_{ij}m_{ij} + \gamma_{41}x_{ij}y_jm_{ij} + \gamma_{50}x_{ij}^2m_{ij} + \text{error}$$

The fit line can be calculated by setting $y_j = x_{ij}$ as shown in equation 11.

$$y_{ij} = \gamma_{00} + \gamma_{30}m_{ij} + x_{ij}(\gamma_{01} + \gamma_{10} + \gamma_{31}m_{ij} + \gamma_{40}m_{ij}) \quad (11)$$

$$+ x_{ij}^2(\gamma_{02} + \gamma_{11} + \gamma_{20} + \gamma_{32}m_{ij} + \gamma_{41}m_{ij} + \gamma_{50}m_{ij})$$

The effects of interest for Hypothesis 2 are those that interact with rigidity (i.e., γ_{31}, γ_{40}, γ_{41}, γ_{32}, and γ_{50}). An overall positive effect of $\gamma_{31} + \gamma_{40}$ would indicate that the moderator increases the linear effect of fit, while the moderator would be shown to increase the quadratic effect of fit when the overall effect of $\gamma_{32} + \gamma_{41} + \gamma_{50}$ is positive.

As shown in Tables 7 and 8, Hypothesis 2a was not supported. Response dominance had a negative cross-level interaction ($\gamma_{31(exp)}$ = -.09; $\gamma_{31(cross)}$ = -.17) with rigidity and trait dominance was not shown to interact with rigidity. Figure 4 demonstrates the cross-level interaction between response dominance and rigidity. Hypothesis 2b was also not supported. Results for rigidity and warmth were inconsistent between samples. Rigidity was shown to interact with response warmth with different signs ($\gamma_{31(exp)}$ = -.19; $\gamma_{31(cross)}$ = .70), while trait warmth was not shown to interact with rigidity.

Summary for Hypothesis 2

Although the hypothesis was not supported, interesting effects for dominance were demonstrated that are consistent with interpersonal theory. An examination of Figure 1 demonstrates the observed interaction between rigidity and judgments of response effectiveness. As the main effect of response effectiveness is equivalent to an ITP, this demonstrates that rigidity moderates ITPs, with highly rigid participants not showing differences between the effectiveness of dominant and submissive responses. The results indicate that highly rigid people might not develop dominance ITPs, and might not respond well to situational cues.

Table 7. *The Effect of Level 2 Responses and Level 1 Rigidity on Effectiveness Ratings for the Exploration Sample*

Level 1	Level 2	Gamma	Std. Error	80% CI Lower	80% CI Upper
Mean		3.82	0.12	3.67	3.97
	Warmth	0.52	0.07	0.43	0.61
	Dominance	0.12	0.07	0.03	0.22
	Warmth squared	-0.18	0.05	-0.25	-0.11
	Dominance squared	-0.15	0.06	-0.22	-0.07
Dominance		0.28	0.23	-0.01	0.58
	Dominance	-0.01	0.02	-0.04	0.02
	Dominance squared	-0.01	0.01	-0.02	0.01
Warmth		-0.40	0.15	-0.58	-0.21
	Warmth	0.01	0.04	-0.04	0.05
	Warmth squared	0.00	0.01	-0.01	0.01
Warmth squared		-0.06	0.02	-0.09	-0.03
Dominance squared		-0.03	0.02	-0.06	0.00
Rigidity		0.17	0.41	-0.36	0.71
	Dominance	-0.09	0.07	-0.18	-0.01
	Dominance squared	-0.02	0.02	-0.04	0.00
	Warmth	-0.19	0.12	-0.35	-0.04
	Warmth squared	-0.01	0.01	-0.03	0.01
Rigidity*Dominance		-0.04	0.09	-0.16	0.08
	Dominance	0.02	0.01	0.01	0.03
Rigidity*Warmth		-0.01	0.11	-0.15	0.13
	Warmth	0.04	0.02	0.01	0.06
Rigidity*Dom sq		0.00	0.01	-0.01	0.01
Rigidity*Warm sq		0.00	0.01	-0.01	0.01

Note: Control variables included in analyses but not reported

Table 8. *The Effect of Level 2 Responses and Level 1 Rigidity on Effectiveness Ratings for the Cross-Validation Sample*

Level 1	Level 2	Gamma	Std. Error	80% CI Lower	80% CI Upper
Mean		3.69	0.15	3.50	3.88
	Warmth	0.66	0.09	0.55	0.77
	Dominance	0.10	0.09	-0.02	0.22
	Warmth squared	-0.17	0.06	-0.24	-0.09
	Dominance squared	-0.13	0.07	-0.22	-0.04
Dominance		0.09	0.39	-0.40	0.59
	Dominance	-0.07	0.04	-0.13	-0.02
	Dominance squared	0.00	0.02	-0.02	0.02
Warmth		-0.70	0.27	-1.04	-0.35
	Warmth	0.22	0.06	0.14	0.29
	Warmth squared	-0.02	0.01	-0.04	0.00
Warmth squared		-0.12	0.05	-0.18	-0.06
Dominance squared		-0.01	0.04	-0.06	0.04
Rigidity		0.66	0.97	-0.58	1.90
	Dominance	-0.17	0.12	-0.32	-0.01
	Dominance squared	0.01	0.03	-0.03	0.04
	Warmth	0.70	0.20	0.44	0.96
	Warmth squared	-0.01	0.02	-0.03	0.02
Rigidity*Dominance		0.17	0.17	-0.05	0.38
	Dominance	0.04	0.02	0.01	0.07
Rigidity*Warmth		-0.28	0.27	-0.63	0.07
	Warmth	-0.10	0.03	-0.14	-0.06
Rigidity*Dom sq		0.00	0.02	-0.02	0.02
Rigidity*Warm sq		0.02	0.02	0.00	0.05

Note: Control variables included in analyses but not reported

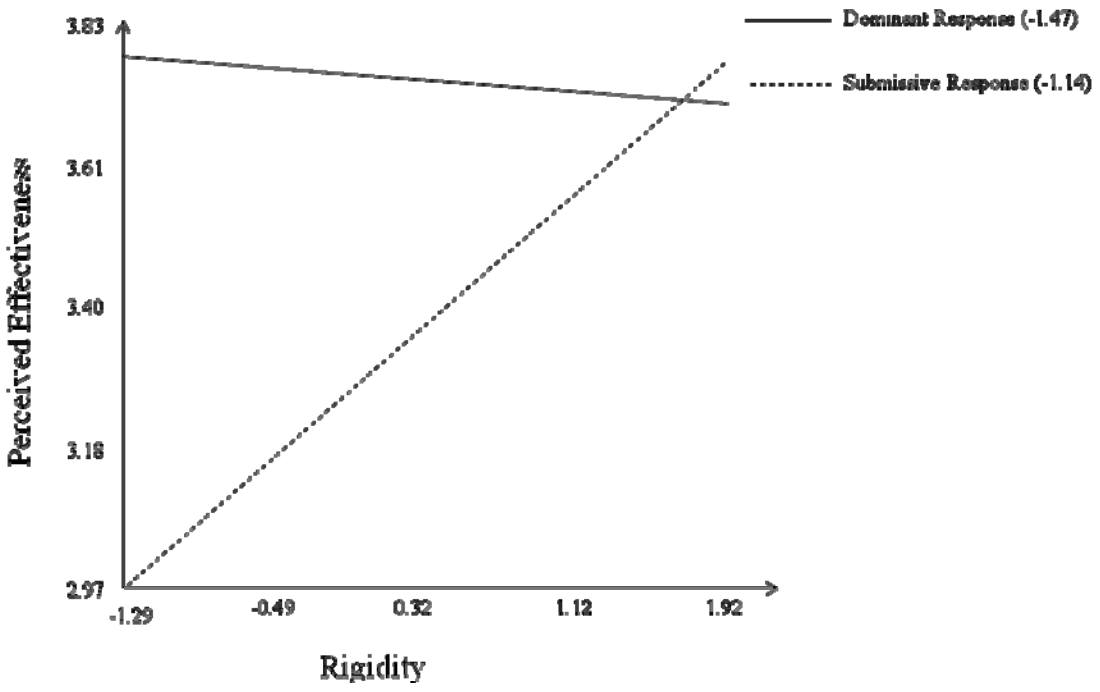

Figure 4. Cross-level interaction between response dominance and rigidity.

Relationship between Interpersonal Situations and Responses

Hypothesis 3 proposed interactions between situations rated as organizationally appropriate and responses, and follows the basic propositions of interpersonal theory. Dominant responses are proposed to be more effective than submissive responses in submissive situations (3a). Submissive responses are proposed to be more effective than dominant responses in dominant situations (3b). Warm responses are proposed to be more effective than cold responses in warm situations (3c). Cold responses are proposed to be more effective than warm responses in cold situations (3d). These hypotheses imply a cross-level interaction between the Level 3 situation and the main effect of the response (γ_{01}). Only situations rated as organizationally appropriate were included in

these analyses. Table 9 presents the results for Hypothesis 3. In this group of situations, the dominance complementarily principle is not supported, as indicated by 80% CI for the Level 2 and Level 3 linear, quadratic, and cross-level interaction dominance predictors. Only quadratic response dominance demonstrated a gamma coefficient larger than the standard error (γ_{20} = .12), and this effect was not replicated in the cross-validation sample (γ_{20} = -.38). Thus, Hypothesis 3a and 3b were not supported. In

Table 9. *Appropriate Situation-Item Interactions*

Sample	Level 2	Level 3	Gamma	Std. Error	80% CI Lower	80% CI Upper
1	Mean		4.01	0.24	3.70	4.32
		Warmth	0.25	0.15	0.06	0.44
		Dominance	0.04	0.05	-0.02	0.10
		Warmth squared	0.03	0.11	-0.11	0.17
		Dominance squared	-0.03	0.10	-0.15	0.09
	Dominance		0.05	0.11	-0.09	0.19
		Dominance	-0.08	0.11	-0.22	0.05
	Warmth		0.47	0.09	0.36	0.59
		Warmth	0.06	0.01	0.05	0.08
	Warmth squared		-0.18	0.06	-0.26	-0.10
	Dominance squared		0.12	0.08	0.02	0.23
2	Mean		4.05	0.22	3.78	4.32
		Warmth	0.05	0.08	-0.05	0.15
		Dominance	0.01	0.07	-0.08	0.10
		Warmth squared	-0.14	0.08	-0.24	-0.04
		Dominance squared	0.01	0.09	-0.10	0.12
	Dominance		0.13	0.11	-0.01	0.27
		Dominance	-0.05	0.06	-0.12	0.02
	Warmth		0.44	0.11	0.30	0.58
		Warmth	0.10	0.07	0.01	0.19
	Warmth squared		-0.22	0.07	-0.31	-0.13
	Dominance squared		-0.38	0.08	-0.48	-0.28

Note: Level 3 effects are modeled only for the grand mean; random and Level 2 effects are the same as in analyses for hypothesis 1.

contrast, response warmth displayed a positive linear (γ_{10} = .47) and negative quadratic (γ_{20} = -.18) main effect that were replicated in the cross-validation sample. Additionally, there was evidence for a positive cross-level interaction in both the exploration and cross-validation samples (γ_{exp} = .06; γ_{cross} = .10). Hypothesis 3c is fully supported by the positive main effect of warmth, however Hypothesis 3d was not supported by the cross-level interaction as shown in Figure 5.

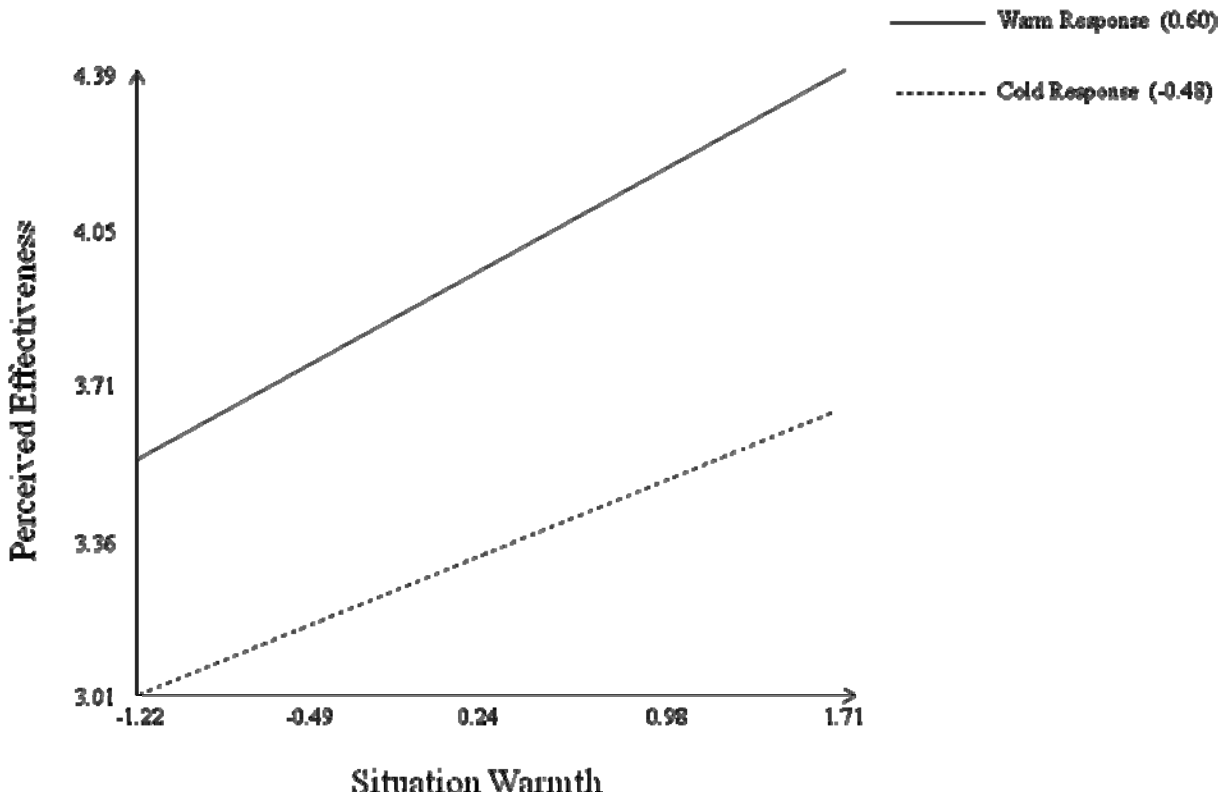

Figure 5. Situation and response warmth.

Hypothesis 4 proposed interactions between situations and responses within situations rated as organizationally inappropriate. Dominant responses are proposed to

be more effective than submissive responses in dominant situations (4a). Submissive responses are proposed to be more effective than dominant responses in submissive situations (4b). Warm responses are proposed to be more effective than cold responses in cold situations (4c). Cold responses are proposed to be more effective than warm responses in warm situations (4d). Results are shown in Table 10. Response dominance demonstrated a positive main effect (γ_{100} = .20) and a negative quadratic effect (γ_{200} = -

Table 10. *Inappropriate Situation-Item Interactions*

	Level 2	Level 3	Gamma	Std. Error	80% CI Lower	80% CI Upper
1	Mean		4.01	0.17	3.80	4.22
		Warmth	0.08	0.07	-0.01	0.17
		Dominance	0.02	0.06	-0.05	0.09
		Warmth squared	-0.08	0.06	-0.15	-0.01
		Dominance squared	-0.08	0.08	-0.18	0.02
	Dominance		0.20	0.08	0.10	0.30
		Dominance	-0.08	0.05	-0.14	-0.02
	Warmth		0.44	0.09	0.33	0.55
		Warmth	0.04	0.06	-0.03	0.11
	Warmth squared		-0.18	0.06	-0.25	-0.11
	Dominance squared		-0.25	0.07	-0.34	-0.16
2	Mean		4.03	0.21	3.77	4.29
		Warmth	0.05	0.08	-0.05	0.15
		Dominance	0.01	0.07	-0.08	0.10
		Warmth squared	-0.13	0.08	-0.23	-0.03
		Dominance squared	0.01	0.09	-0.10	0.12
	Dominance		0.14	0.11	0.00	0.28
		Dominance	-0.04	0.06	-0.11	0.03
	Warmth		0.45	0.11	0.31	0.59
		Warmth	0.10	0.07	0.01	0.19
	Warmth squared		-0.20	0.07	-0.29	-0.11
	Dominance squared		-0.39	0.08	-0.49	-0.29

Note: Level 3 effects are modeled only for the grand mean; random and Level 2 effects are the same as in analyses for hypothesis 1.

.25) on effectiveness ratings, both of which were supported by the cross-validation results. Hypothesis 4a was partially supported as the positive linear main effect of dominance indicates that dominant responses are seen as more effective, but the negative quadratic effect indicates that this effect decreases as the magnitude of response dominance increases. Hypothesis 4b was not supported as the negative interaction between situation and response dominance (γ_{11} = -.08) was not replicated in the cross-validation sample.

The linear and quadratic effect of response warmth is consistent across samples, and similar to the main effect for appropriate situations. This indicates that response warmth is universally seen as appropriate, failing to support the interaction effect proposed in Hypothesis 4c and 4d. An interaction was observed in the cross-validation sample, but as shown in Figure 6, warm responses are seen as more effective in response to inappropriate warm situations.

Model Exploration

Analyses of hypotheses 1, 3, and 4 revealed several unhypothesized curvilinear effects, and as proposed the data was reanalyzed to find a model that fit both theory and the data. These analyses will also examine whether the lack of support for hypotheses 3 and 4 may have been due to analyzing appropriate and inappropriate situations separately. Overall, there were three changes to the models previously analyzed. First, rigidity was included as a Level 1 predictor for the overall model. Second, all situations were included in analyses of the relationship between Level 2 and Level 3 trait congruent behaviors. Ratings of situational appropriateness were included as a Level 3

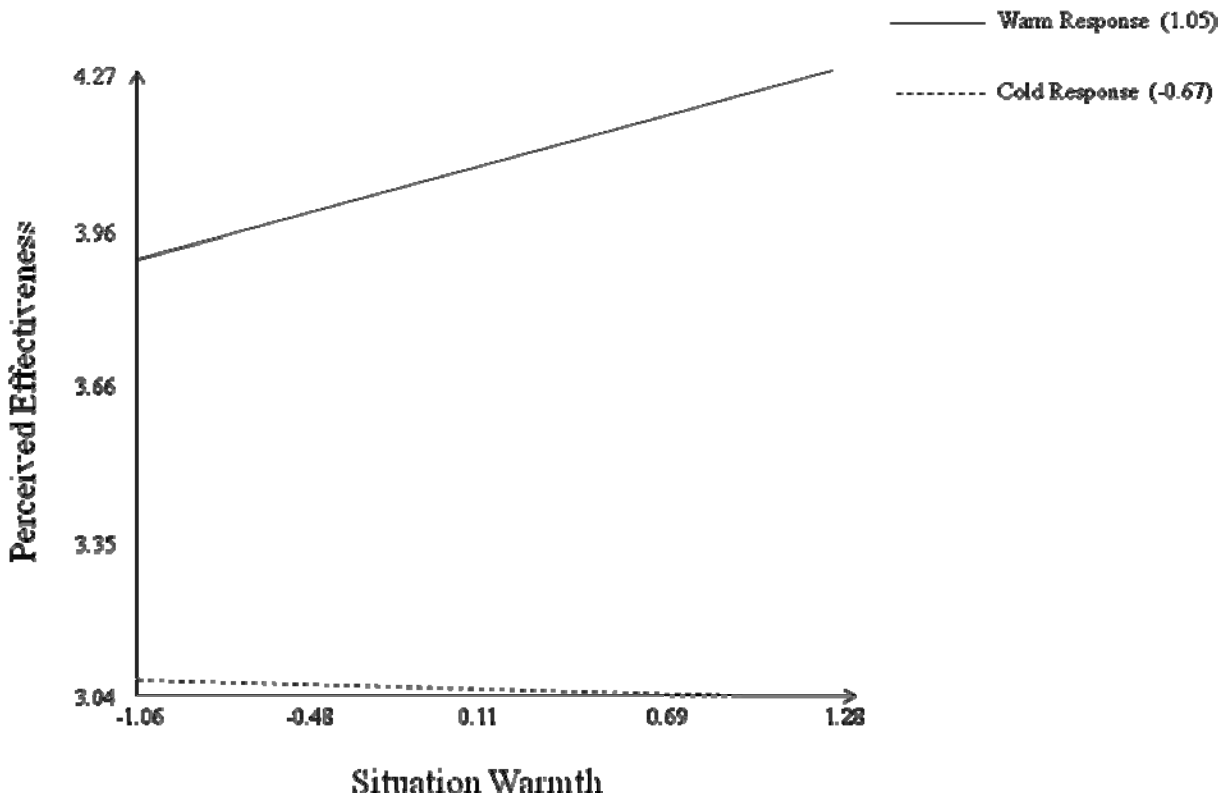

Figure 6. Interaction of inappropriate situation and item warmth in the cross-validation sample.

main effect and as interactions between appropriateness and both situational dominance and warmth. Finally, the role taken by the participant was dummy coded for manager and subordinate, with coworker as the comparison condition.

Variance components are displayed in Table 11 for Level 2 predictors and Table 12 for Level 3 predictors. As the Level 1 variance components is 1.17124 for the exploratory sample, 59.79% of the variance is within response options, 40.03% is among responses within situations, and 1.18 % is among situations. In the cross-validation sample, the Level 1 variance components is 1.11397, and thus 40.74% of the variance is

within response options, 57.48% between responses within situations, and 1.77% of the variance is between situations. Table 11 also indicates that trait dominance and warmth are associated with the largest proportion of variance components for any Level 2 predictor. These variance components indicate variance in the slope of trait dominance

Table 11. *Level 2 Variance Components*

Variance Components	Exploratory	Cross-Validation
Item Intercept	0.23997	0.19769
Sex	0.00960	0.02396
Supervise Experience	0.00137	0.00112
Trait Dominance	0.34759	0.62462
Trait Warmth	0.12904	0.48218
Warmth Squared	0.00293	0.01300
Dominance Squared	0.00340	0.00621
Imagine: Office	0.00665	0.08439
Imagine: Retail	0.03717	0.11281
Rigidity	0.01967	0.02570
Total	0.79739	1.57168

Table 12. *Level 3 Variance Components*

Variance Components	Exploratory	Cross-Validation
Situation Intercept	0.00274	0.03284
Response Warmth	0.00107	0.00223
Response Dominance	0.01120	0.00608
Trait Dominance	0.00383	0.00128
Trait x Response Dominance	0.00083	0.00010
Trait Warmth	0.00033	0.00081
Trait x Response Warmth	0.00035	0.00003
Vector Length	0.00079	0.00067
Vector x Response Warmth	0.00019	0.00316
Vector x Response Dominance	0.00222	0.00132
Total	0.02355	0.04852

and warmth between items. Thus, there are likely unidentified differences between responses which affect the relationship between personality traits and perceptions of effectiveness.

Implicit Trait Policies and Personality

Hypothesis 1 proposed that fit between a trait and trait-congruent response would have a positive influence on effectiveness ratings. While a congruence effect was only supported for warmth, there were inconsistent effects for dominance, and a clear negative quadratic effect for response dominance. As shown in Table 13, across both samples a negative linear (γ_{exp} = -.36; γ_{cross} = -.40), and a negative quadratic influence on effectiveness ratings (γ_{exp} = -.30; γ_{cross} = -.23). These effects indicate that high trait warmth is associated with low ratings of effectiveness. It may be the case that as none of the responses were designed to be clearly correct, warm individuals responded with an overall decrease in effectiveness ratings. As expected, response warmth had a positive main effect (γ_{exp} = .24; γ_{cross} = .20), indicating an ITP that warm behavior is effective, but response warmth also was shown to have a negative quadratic effect (γ_{exp} = -.30; γ_{cross} = -.16), indicating a tendency to rate very warm or cold responses as less effective than moderate responses. Finally, a positive interaction with trait warmth (γ_{exp} = .07; γ_{cross} = .05) supports previous research indicating that traits interact with implicit trait policies (Motowidlo et al., 2006b).

Situations and Implicit Trait Polices

Implicit trait polices have previously been measured as the effect of trait-congruent responses on perceptions of response effectiveness. The current study extends

Table 13. *Effect of Traits and Trait-Congruent Responses*

Sample	Level 1	Level 2	Gamma	Std. Error	80% CI Lower	80% CI Upper
1	Mean		3.72	0.23	3.43	4.01
		Warmth	0.24	0.12	0.09	0.38
		Dominance	-0.14	0.13	-0.31	0.03
		Warmth squared	-0.30	0.08	-0.40	-0.20
		Dominance squared	-0.14	0.10	-0.26	-0.01
	Dominance		0.21	0.10	0.09	0.34
		Dominance	0.02	0.01	0.01	0.03
		Dominance squared	0.00	0.01	-0.02	0.01
	Warmth		-0.36	0.07	-0.45	-0.27
		Warmth	0.07	0.01	0.06	0.09
		Warmth squared	0.00	0.01	-0.01	0.01
	Warmth squared		-0.30	0.08	-0.40	-0.20
	Dominance squared		-0.14	0.10	-0.26	-0.01
	Rigidity		0.09	0.03	0.05	0.13
		Dominance	0.01	0.02	-0.01	0.03
		Dominance squared	-0.02	0.02	-0.04	0.00
		Warmth	0.03	0.02	0.01	0.06
		Warmth squared	-0.01	0.01	-0.03	0.01
2	Mean		3.47	0.28	3.11	3.84
		Warmth	0.20	0.15	0.01	0.39
		Dominance	-0.17	0.17	-0.39	0.05
		Warmth squared	-0.16	0.06	-0.24	-0.08
		Dominance squared	-0.16	0.08	-0.26	-0.07
	Dominance		0.17	0.16	-0.03	0.37
		Dominance	0.01	0.02	-0.01	0.03
		Dominance squared	0.00	0.02	-0.02	0.02
	Warmth		-0.40	0.14	-0.57	-0.24
		Warmth	0.05	0.02	0.03	0.07
		Warmth squared	-0.02	0.01	-0.03	0.00
	Warmth squared		-0.23	0.09	-0.35	-0.11
	Dominance squared		-0.27	0.12	-0.43	-0.11
	Rigidity		0.01	0.06	-0.05	0.08
		Dominance	0.08	0.03	0.04	0.11
		Dominance squared	0.05	0.03	0.02	0.08
		Warmth	-0.01	0.02	-0.03	0.02
		Warmth squared	0.00	0.03	-0.03	0.03

Note: Model includes control variables described in Table 11.

the ITP effect by proposing relationships between situations and responses. Hypothesis 3 and 4 proposed an interaction between situations and responses that would change between situations. As the lack of effect was likely due to range restriction caused by analyzing appropriate and inappropriate situations separately, the current analyses examines all situations with situational appropriateness as a moderator. Results are displayed in Table 14 for the exploration model and Table 15 for the cross-validation model. As all situations were included in

the model, the interaction of situational appropriateness was explored for the linear and quadratic effects of situational dominance and warmth.

Effect of Situation Roles

Overall, no effects of the situation role cross-validated. The lack of effect for the role could be due to small sample size, as the situations spanned three roles, there were only eight situations for each role, four of which were organizationally appropriate and four were organizationally inappropriate.

Situation and Response Warmth

The results for situation warmth follow earlier findings where warmth is generally seen to be effective. Situation (γ_{exp} = .16; γ_{cross} = .14) and response warmth (γ_{exp} = .24; γ_{cross} = .20) were found to have a main effect on mean effectiveness ratings. Response warmth was also found to have a negative quadratic effect (γ_{exp} = -.30; γ_{cross} = -.23), indicating that extreme levels of warmth were undesirable, but the quadratic effect of situation warmth was found to interact with response warmth (γ_{exp} = .14; γ_{cross} = .23) indicating that high situation warmth is associated with increased effectiveness of warm

Table 14. *Effect of Situations and Responses in the Exploratory Sample*

Level 2	Level 3	Gamma	Std. Error	80% CI Lower	80% CI Upper
Mean		3.72	0.23	3.43	4.01
	Manager	0.13	0.22	-0.16	0.41
	Subordinate	-0.14	0.21	-0.42	0.13
	Appropriateness	-0.88	0.26	-1.21	-0.54
	Warmth	0.16	0.08	0.05	0.26
	Dominance	-0.20	0.22	-0.48	0.08
	Dominance squared	0.04	0.02	0.01	0.06
	Warmth squared	0.00	0.06	-0.08	0.08
	Dom*App	-0.16	0.28	-0.51	0.20
	Wrm*App	-0.12	0.09	-0.23	-0.01
	Wrm2*App	0.13	0.08	0.02	0.24
	Dom2*App	0.04	0.08	-0.06	0.14
Dominance		-0.14	0.13	-0.31	0.03
	Manager	0.23	0.11	0.08	0.37
	Subordinate	-0.10	0.11	-0.25	0.04
	Appropriateness	-0.68	0.19	-0.92	-0.44
	Dominance	-0.43	0.19	-0.67	-0.18
	Dominance squared	0.04	0.02	0.02	0.06
	Dom*App	-0.37	0.23	-0.67	-0.08
	Dom2*App	0.13	0.07	0.05	0.22
Warmth		0.24	0.12	0.09	0.38
	Manager	0.08	0.13	-0.08	0.24
	Subordinate	0.14	0.12	-0.01	0.30
	Appropriateness	-0.09	0.09	-0.21	0.03
	Warmth	-0.01	0.06	-0.09	0.07
	Warmth squared	0.14	0.06	0.06	0.21
	Wrm*App	0.10	0.08	-0.01	0.21
	Wrm2*App	-0.01	0.08	-0.11	0.09
Warmth squared		-0.30	0.08	-0.40	-0.20
	Manager	-0.02	0.10	-0.14	0.11
	Subordinate	0.07	0.11	-0.06	0.21
	Appropriateness	0.24	0.08	0.14	0.34
Dominance squared		-0.14	0.10	-0.26	-0.01
	Manager	-0.23	0.14	-0.40	-0.05
	Subordinate	0.00	0.13	-0.17	0.17
	Appropriateness	0.31	0.10	0.18	0.43

Note: Model includes control variables and effects described in Table 13.

Table 15. *Effect of Situations and Responses in the Cross-Validation Sample*

Level 2	Level 3	Gamma	Std. Error	80% CI Lower	80% CI Upper
Mean		3.47	0.28	3.11	3.84
	Manager	0.35	0.27	0.00	0.69
	Subordinate	0.03	0.26	-0.31	0.36
	Appropriateness	-1.13	0.32	-1.54	-0.71
	Warmth	0.14	0.10	0.02	0.27
	Dominance	0.02	0.26	-0.32	0.36
	Dominance squared	0.05	0.02	0.02	0.08
	Warmth squared	0.06	0.08	-0.04	0.16
	Dom*App	0.14	0.34	-0.29	0.58
	Wrm*App	-0.21	0.10	-0.34	-0.07
	Wrm2*App	0.17	0.10	0.04	0.30
	Dom2*App	-0.07	0.09	-0.19	0.05
Dominance		-0.17	0.17	-0.39	0.05
	Manager	0.11	0.14	-0.07	0.30
	Subordinate	-0.32	0.14	-0.51	-0.14
	Appropriateness	-0.81	0.24	-1.12	-0.51
	Dominance	-0.48	0.25	-0.80	-0.16
	Dominance squared	0.04	0.02	0.01	0.06
	Dom*App	-0.49	0.30	-0.87	-0.10
	Dom2*App	0.19	0.09	0.08	0.31
Warmth		0.20	0.15	0.01	0.39
	Manager	0.02	0.15	-0.17	0.22
	Subordinate	0.11	0.15	-0.08	0.29
	Appropriateness	-0.14	0.12	-0.29	0.01
	Warmth	-0.04	0.07	-0.13	0.05
	Warmth squared	0.23	0.07	0.13	0.32
	Wrm*App	0.22	0.10	0.08	0.35
	Wrm2*App	-0.02	0.09	-0.14	0.10
Warmth squared		-0.23	0.09	-0.35	-0.11
	Manager	-0.06	0.12	-0.21	0.09
	Subordinate	-0.03	0.13	-0.20	0.14
	Appropriateness	0.38	0.09	0.26	0.50
Dominance squared		-0.27	0.12	-0.43	-0.11
	Manager	-0.14	0.17	-0.35	0.07
	Subordinate	-0.05	0.16	-0.26	0.16
	Appropriateness	0.33	0.12	0.17	0.49

Note: Model includes control variables and effects described in Table 13.

responses. These results indicate a positive curvilinear effect for warm responses and a negative curvilinear effect for cold responses as shown in Figure 7 for appropriate situation and in Figure 8 for inappropriate situations.

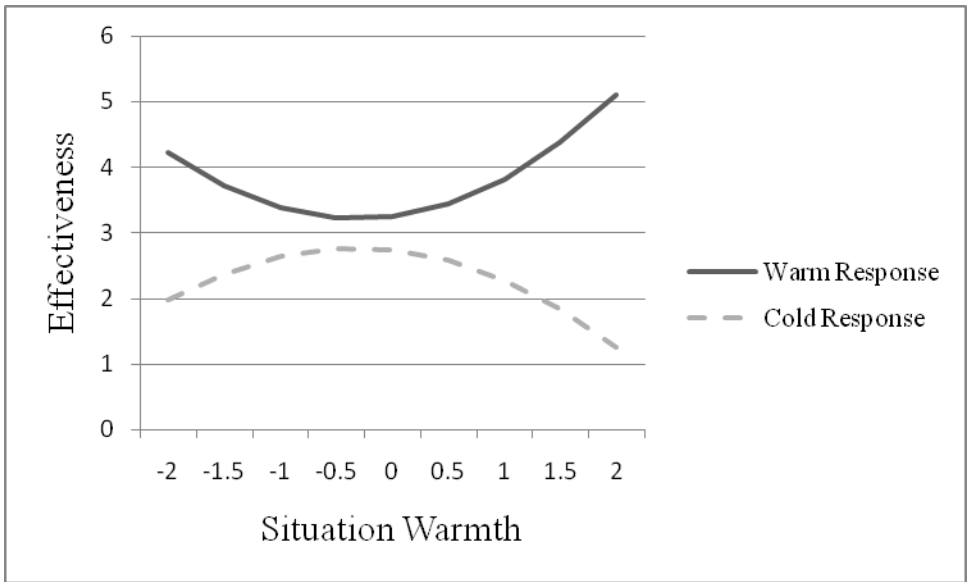

Figure 7. Situation and response warmth in appropriate situations.

Situation and Response Dominance

Situation dominance was shown to have a negative linear influence on effectiveness ratings (γ_{exp} = -.68; γ_{cross} = -.48) as well as a positive quadratic effect (γ_{exp} = .04; γ_{cross} = .05), indicating that effectiveness perceptions decrease as situational dominance increases, with higher effectiveness ratings for extremely high dominant and submissive situations. A negative interaction with the effect of linear response dominance (γ_{exp} = -.43; γ_{cross} = -.48) indicates a complementary effect for dominance in accordance with interpersonal theory. This effect was not demonstrated in the analyses

of Hypothesis 3 and 4 due to the restricted range of interpersonal behaviors (i.e., either appropriate or inappropriate situations).

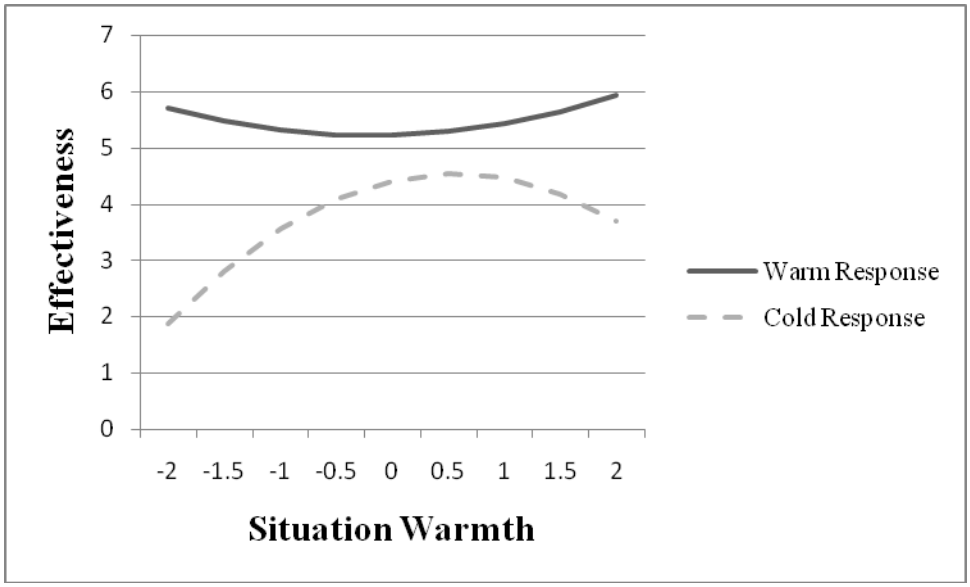

Figure 8. Situation and response warmth for inappropriate situations.

The Effect of Situation Appropriateness

Overall situation appropriateness had a negative influence on effectiveness ratings (γ_{exp} = -.88; γ_{cross} = -1.13), but demonstrated cross-level interactions with both situation and response characteristics. In support of Hypothesis 3a/4a and 4a/4b, where differential effects were proposed for situational dominance depending on the appropriateness of the situation, situational appropriateness was found to interact with the cross-level interaction of both linear situation dominance (γ_{exp} = -.37; γ_{cross} = -.49) and quadratic situation dominance (γ_{exp} = .13; γ_{cross} = .19) on the effect of response dominance. Thus, the dominance ITP is affected by a negative interaction of

appropriateness and situational dominance where the negative effect of situation dominance on response dominance is amplified for appropriate situations. The quadratic effect is also amplified such that extremely dominant or submissive responses do have higher effectiveness ratings than median responses, and this effect increases in appropriate situations. The effects are reversed for inappropriate situations. Situational appropriateness also has a negative cross-level interaction (γ_{exp} = -.68; γ_{cross} = -.81) on the effect of response dominance, and a negative interaction with the cross-level interaction of situation dominance on response dominance (γ_{exp} = -.37; γ_{cross} = -.49). Thus dominant responses are seen as appropriate for inappropriate situations and inappropriate for appropriate situations, as shown in Figures 9 and 10.

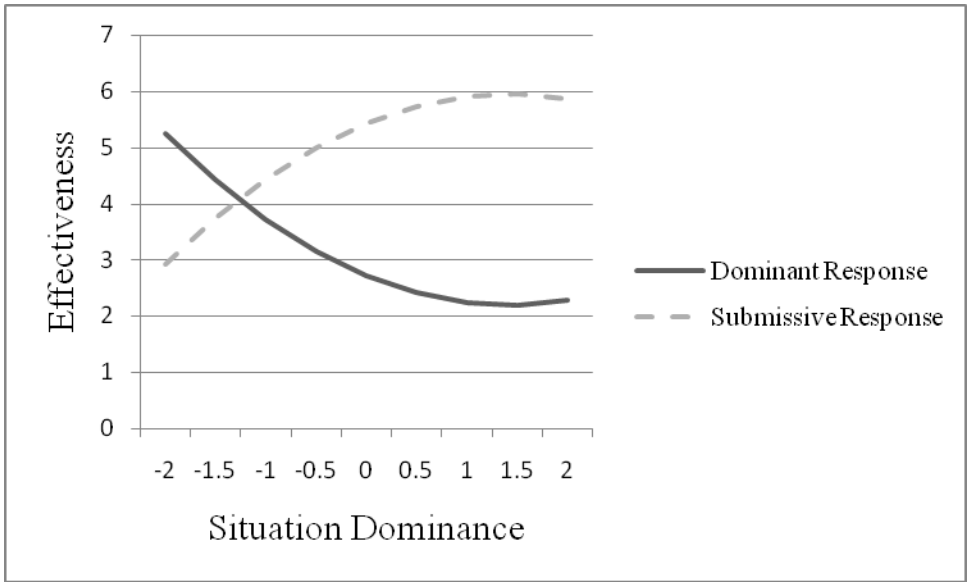

Figure 9. Interaction between response and situation dominance for appropriate situations.

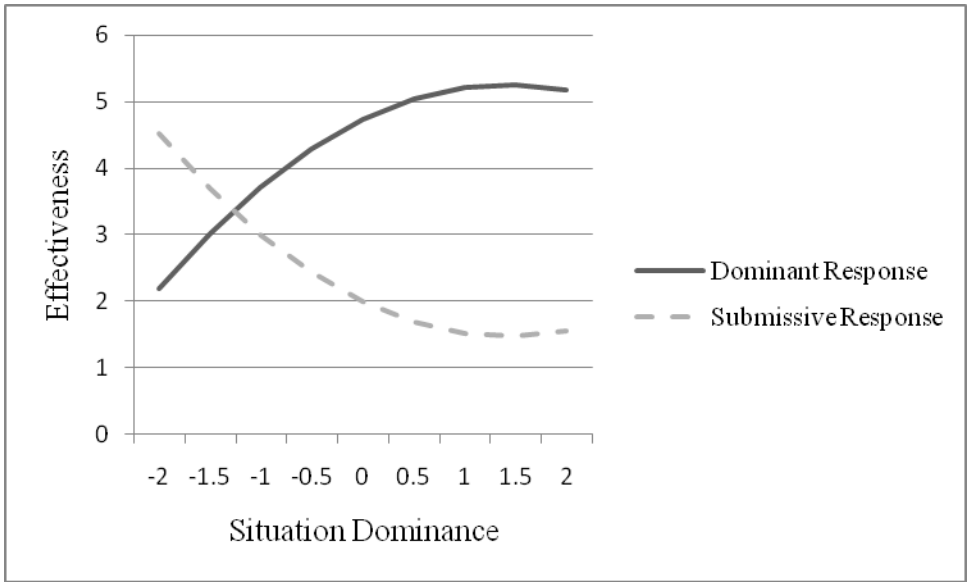

Figure 10. Interaction between response and situation dominance for inappropriate situations.

Situational appropriateness was found to have a negative interaction with linear situational warmth (γ_{exp} = -.12; γ_{cross} = -.21) and a positive interaction with quadratic situational warmth (γ_{exp} = .13; γ_{cross} = .17) on the mean effectiveness ratings. Appropriateness also was found to increase the effect of quadratic response warmth (γ_{exp} = .24; γ_{cross} = .38). This indicates that as situations become more appropriate, there is a decrease in the perceived effectiveness of warm situations for cold responses, and an increase in the effectiveness of warm responses, with perceptions of effectiveness increasing for extremely warm or cold appropriate situations. Thus, situational appropriateness does moderate the relationship between situations and responses as proposed in Hypothesis 4b, but the main effect of response combined with the positive

cross-level interaction between situational and response warmth indicates that warm responses will likely be seen as more effective than cold responses across situations.

Predictive Validity of the Situational Judgment Test

Hypothesis 5 proposed that SJT effectiveness ratings would reflect implicit knowledge of the principles of complementarity, which would in turn predict interpersonal skill. As shown in Figure 11, the relationship between traits, experience, and implicit trait policies proposed by Motowidlo et al. (2006a) can be applied to interpersonal complementarity. Traits influence the types of interpersonal experiences a person will have, and along with these interpersonal experiences influence the development of implicit trait policies of effective interpersonal behavior. Hypothesis 5

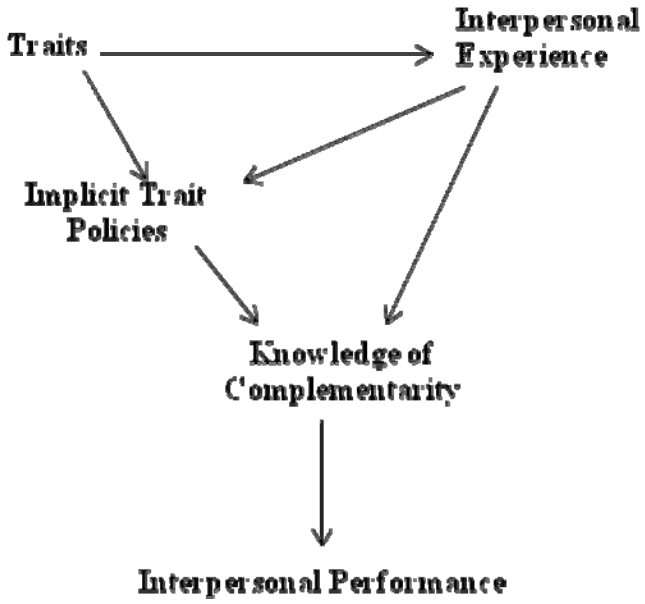

Figure 11. Implicit trait policies and interpersonal skill.

proposes that those individuals who develop interpersonal procedural knowledge based on the principles of complementarity will also be seen as demonstrating effective interpersonal behavior.

Results of exploratory hypotheses supported the general complementarity prediction, but as suspected there appear to be important curvilinear effects that are not accounted for in the general complementarity principle. Two scoring keys, a complementarity key, and an empirical key were generated and compared. Each situation and response was scored by dominance and warmth, with negative scores indicating submissiveness and coldness. For the complementarity key, situation dominance scores were reversed to indicate the theoretically appropriate matching response to the situation and a Euclidean distance was computed between the dominance and warmth coordinates of the situation and the dominance and warmth coordinates of the response. Effectiveness ratings for each person were then correlated with this complementarity key. Since a shorter Euclidean distance between the response and the situation complement should be rated as more effective, the sign of the resulting correlation coefficient was reversed before being used as a predictor.

The complementarity key is based on traditional interpersonal circumplex methodology, and is based on an assumption of no curvilinear effects of the dominance and warmth dimensions on the criterion. To represent the curvilinear effects, an empirical scoring key was created. A mixed model equation was constructed with the effects that were replicated in the cross-validation sample. As regression coefficients in

any single sample can be inflated, the smallest of the two gamma coefficients was used to generate the following equation:

$$\text{Effectiveness} = -.88\text{App} + .14\text{SitW} + .04\text{SitD}^2 + .13\text{SitW}^2\text{App} + \text{RspW}(.20+.14\text{SitW}^2)$$
$$+ \text{RspD}(-.68\text{App} - .43\text{SitD} + .04\text{SitD}^2 - .37\text{SitD*App} + .13\text{SitD}^2\text{*App})$$
$$+ \text{RspW}^2(-.23 + .24\text{App}) + \text{RspD}^2(-.14 + .31\text{App})$$

It is important to note that this equation represents the overall effect of situations and responses on effectiveness ratings in this sample only. Cohen (1990) recommends that only the sign on the regression coefficients be used in predicting results in other samples. As the current analyses are concerned with the predictive validity of the response patterns in this sample only, the gamma coefficients were used to create an empicical scoring key. Correlations were then computed between each person's effectiveness ratings and the empirical scoring key. Each of these methods was used to create an overall score based on the effectiveness rating for each of the 96 responses. Correlations were then computed between the complementarity score (i.e., the reversed correlation), the effectiveness score (a correlation), and the overall friend reported social skills scale. As detailed in the method section, friend ratings were analyzed for accuracy. Analyses were computed with both the full set of ratings (N=169) and the reduced set (N=114), revealing stronger correlations for the reduced set. As can be seen in Table 16, neither the complementarity nor the empirical effectiveness scale were significant predictors of overall other-rated social skills score. Thus Hypothesis 5 was not supported.

The social skills scale was derived from three social skill subscales and observable items

Table 16. *Correlation between SJT Scoring Methods and Overall Social Skills*

	1	2	3
1. Other-rated social skills			
2. Empirical Key	0.10		
3. Complementarity Key	0.05	0.44*	

*p<.05; N=114

from an EI scale. Although the overall reliability of the combined scale was good (α = .89), it was possible that some subscales might have a stronger correlation to the SJT than others. This type of post-hoc analysis capitalizes on chance, and thus the following analyses should be viewed as exploratory. As shown in Table 17, the SJT scoring methods demonstrated moderate correlations with the EI scale but not with the other social skills scale, although it is possible that the correlations with social perception might be significant with a larger sample size. The differential results between the EI and social perception scales is especially interesting because they are very highly correlated (r=.53). Correlations between SJT scores and self-report social

Table 17. *Correlation between SJT Scoring Methods and Social Skills Subscales*

	1	2	3	4	5
1. Empirical Key					
2. Complementarity Key	0.44*				
3. Emotional Intelligence	0.26*	0.21*			
4. Social Perception	0.09	0.08	0.53*		
5. Social Adaptability	0.03	-0.04	0.47*	0.45*	
6. Expressiveness	0.03	-0.06	0.50*	0.50*	0.42*

Note: All social skill subscales were rated by a friend
*p<.05; N=114

skills, EI and personality trait scales were examined with both the exploration and cross-validation samples as shown in Tables 18 and 19. A negative relationship between the self-report EI scale and the complementarity score (r = -.13, p = .07) was observed and

Table 18. *SJT Scoring Methods and Self-Report Scales (Exploratory)*

	1	2	3	4	5	6	7	8
1. Complementarity								
2. Effectiveness	0.41*							
3. Emotional Int.	-0.13	-0.04						
4. Self Perception	0.03	0.07	0.51*					
5. Dominance	-0.02	-0.04	0.36*	0.32*				
6. Warmth	-0.01	0.00	0.33*	0.14*	-0.02			
7. Conscientiousness	-0.04	0.03	0.30*	0.06	-0.09	0.70*		
8. Neuroticism	-0.10	-0.08	0.27*	0.19*	0.24*	0.14*	0.22*	
9. Openness	-0.03	-0.06	0.33*	0.22*	0.62*	0.22*	0.24*	0.22*

*p<.05

Table 19. *SJT Scoring Methods and Self-Report Scales (Cross-Validation)*

	1	2	3	4	5	6	7	8
1. Complementarity								
2. Effectiveness	0.51*							
3. Emotional Int.	-0.19	-0.23*						
4. Self Perception	0.20*	0.01	0.34*					
5. Dominance	0.15	0.01	0.36*	0.29*				
6. Warmth	0.03	-0.03	0.38*	0.17*	-0.17			
7. Conscientiousness	-0.09	-0.10	0.33*	0.15	-0.18*	0.73*		
8. Neuroticism	0.19	0.01	0.21*	0.22*	0.12	0.23*	0.34*	
9. Openness	0.15	-0.07	0.30*	0.11	0.66*	0.07	0.09	0.10

*p<.05

replicated in the cross-validation sample (r = -.19, p = .07). While no effect (r = -.04) between the empirical effectiveness score and EI was observed in the exploration sample, there was a negative effect in the cross-validation sample (r = -.23, p=.03). This differential relationship between self and other-report of EI is interesting. As the other-reported scale focused only on observable behaviors, it does not capture the entire range of the EI construct, and parts of this construct may have a negative correlation with interpersonal skills (as measured by the SJT). It is also possible that the participants may not have developed adequate introspection skills to accurately report their emotional intelligence.

For a final exploratory analysis, correlations were conducted with the residual EI controlling for the three other-reported social skills scales and the self-report versions of those scales. Both the empirical effectiveness score (r = .27) and the complementarity score (r = .31) were found to correlate with the residual other-reported EI score. This increase in correlations provides limited support to the proposition that the SJT measures part of the EI construct that is distinct from social skills.

CHAPTER IV

DISCUSSION

This dissertation proposed to examine the implicit trait policy hypothesis using interpersonal theory. The overall goal of this dissertation was to understand how perceptions of behavioral effectiveness are influenced by personality traits, behavior of hypothetical interaction partners, and behavioral responses. To this end, the implicit trait policy hypothesis was examined for the interpersonal traits of dominance and warmth, and the basic propositions of interpersonal theory were tested by examining the effect of both situational and behavioral responses on perceptions of behavioral effectiveness.

Theoretical Contribution

The current study contributes to our understanding of implicit trait policies by integrating interpersonal theory. Interpersonal theory proposes that extraversion and agreeableness can also be represented as the traits of dominance and warmth. Furthermore, according to interpersonal theory, there are predictable relationships between the dominance and warmth of situations and responses. The theory of implicit trait policies proposed by Motowidlo et al. (2006a) states that people develop implicit beliefs regarding the effectiveness of behaviors based on trait-congruency, and these implicit beliefs are influenced by both traits and experience. The current study extends this theory by demonstrating how situational differences can influence implicit trait policies when interpersonal behavior is operationalized by the dimensions of dominance and warmth. As predicted by interpersonal theory, situations and responses were shown to have a complementary effect for dominance and a supplementary effect for warm

responses. The dominance effect was reversed for inappropriate situations, indicating that dominant and submissive behavior can be thought of as a way to correct inappropriate behavior. Contrary to interpersonal theory, results indicated that warm responses were rated as more effective than cold responses across situations. Although the current study focuses only on interpersonal situations, it may be the case that there are situational moderators for other implicit trait policies. For example, if there is an implicit trait policy for proactivity, effectiveness would likely differ greatly between situations, as not all proactive behavior is effective. There may also be other situational differences similar to situational appropriateness that moderates situational effects.

Interpersonal Implicit Trait Policies

According to Motowidlo et al. (2006a, 2006b), implicit trait policies are implicit beliefs influenced by both experience and traits. The implicit trait policy hypothesis proposes that judgments of behavioral effectiveness are influenced by implicit beliefs, which are in turn influenced by personality traits and experience. The current study was not designed to test this interaction between traits and experience, instead it focused on the joint effect of situations and responses on judgments of behavioral effectiveness.

Previous research (e.g., Motowidlo et al., 2006b) measured implicit trait policies as either a correlation between trait-congruent responses and effectiveness ratings or as the difference between effectiveness scores for high and low example of trait-congruent responses. Correlations between those ITP scores were then correlated with personality to test an interaction hypothesis. Both techniques ignore the dependencies in the data (i.e., participant ratings are nested within responses, which are nested within situations),

and thus may underestimate standard errors, increasing the chance of a Type 1 error. Thus, it was possible that the implicit trait policy correlations found by Motowidlo et al. (2006b) were biased and could be a Type I error. This study accounted for this issue by using multilevel modeling.

According to the theory proposed by Motowidlo et al. (2006a), implicit trait policies are created based on the joint influence of experience and traits. However, it is unclear whether traits provide a substantive contribution to the accuracy of implicit trait policies or whether this effect represents a bias toward trait-congruent behaviors. Trait dominance is associated with higher overall effectiveness ratings while trait warmth is associated with lower overall effectiveness ratings. As these effects are statistically independent of responses, they reflect a trait-specific bias in perceptions of behavioral effectiveness. Implicit trait policies are the perceptions of the perceived effectiveness of trait-relevant responses and are statistically independent of the effect of personality traits. Trait warmth was also shown to have a positive interaction with response warmth, which supports Motowidlo et al.'s (2006a) proposition that implicit trait policies are influenced by traits, but does not address the question of whether this influence is substantive or represents a bias. It is likely that both alternatives have some truth. Traits influence behavior, and thus warm people likely have a wider range of warm experiences. While it is likely that warm people value warm behavior more than cold behavior, it is also possible that the experiences of warm people increases their ability to judge the effectiveness of warm behavior.

Results provide full support for an implicit trait policy based on interpersonal warmth. Both linear and quadratic response warmth were shown to positively influence effectiveness ratings. A cross-level interaction between trait and response warmth was also observed, which is essentially the effect Motowidlo et al. (2006a, 2006b) were testing by examining the correlation between personality traits and the ITP score. This cross-level interaction supports the proposition that traits influence the relationship between responses and effectiveness ratings. The positive linear main effect of both trait and response warmth supports a fit relationship where increased congruence between responses and personality traits increases perceptions of response effectiveness. The quadratic main effects demonstrate that analyses with a difference score are not the most appropriate method because the relationship between the predictors and the criterion change at different levels of the predictor.

The effects for interpersonal dominance were not as clear. While response dominance was shown to have a linear main effect on perceived effectiveness, the effect was not replicated in the cross-validation sample. In contrast, the negative main effect of quadratic response dominance was demonstrated in both samples. This indicates that individuals hold beliefs regarding the effectiveness of dominant behavior in the workplace, with extremely dominant and submissive behaviors seen as less effective than moderate behaviors.

These results raise questions regarding the implicit trait policies for extraversion and agreeableness. According to interpersonal theory, the interpersonal circumplex can be defined by the dimensions of extraversion and agreeableness with an axis rotation. As

the ITP for both agreeableness and extraversion were shown to correlate with their respective personality traits (Motowidlo et al., 2006b), it was expected that the same relationship would be observed with the dimensions of dominance and warmth. The results of the current study suggest that the relationships observed by Motowidlo et al. (2006b) between ITP scores for extraversion and agreeableness and the corresponding personality traits may be due to the shared variance of both the extraversion and agreeableness with interpersonal warmth. If this is correct, then trait dominance does not influence perceptions of behavioral effectiveness, but it is also possible that there is an unmeasured moderator variable that would reveal an effect of trait dominance. The large variance components for trait dominance compared to trait warmth supports this proposition.

Finally, it is also possible that the dominance dimension is not sufficient for representing the agentic aspect of interpersonal interactions. The structural analysis of social behavior (SASB; Benjamin, 1974) provides an alternative view of the interpersonal circumplex by separating the dimensions of domination/submission into control/emancipation and separation/submission. This implies that two types of agentic responses should be considered, but research in this area would require a well-developed measure of SASB personality traits. Clearly more research is needed on the implicit trait policy for dominance.

Interpersonal rigidity was shown to affect ratings of perceived effectiveness for dominant responses. Interpersonal rigidity is operationalized as the length of the vector from the origin of the interpersonal circumplex to the point representing a person's

preferred interpersonal style. Vector length increases as the scores for one octant increases while opposing octant scores decreased. Thus, vector length can be seen as an overemphasis on one interpersonal style to the exclusion of others. This overreliance on one type of interpersonal response was proposed to also affect ratings of SJT responses. An effect of rigidity represents a response bias based on an overemphasis on a limited range of interpersonal responses. The cross-level interaction observed between response dominance and rigidity indicates that rigid people over rely on their trait bias and ignore situational cues when judging the perceived effectiveness of responses. Rigidity demonstrated mixed results between the two samples for response warmth. Results indicated that the overall effect of warmth fit was increased by rigidity, but did not indicate a predictable response bias as the signs of the interactions between rigidity and both the trait and response warmth changed signs between samples. Results support the hypothesis that rigid people prefer responses that match their preferred interaction style on the warmth dimension, however the mixed effects for warmth may also indicate a Type I error.

Implicit Trait Policies and Interpersonal Theory

Interpersonal theory proposes that the effectiveness of interpersonal responses depends on the situation. As the implicit trait policy is the perceived effectiveness of trait-relevant responses, situational characteristics are likely part of ITPs because effectiveness is, in part, situationally dependent. To test the application of interpersonal theory to ITPs, the effect of situations on responses were examined for both appropriate and inappropriate situations. Scores were then derived based on the propositions of

interpersonal theory and also from the empirically-derived ITP scores. The predictive validity of these scores was then examined for social skills.

While Hypotheses 3 and 4 were not supported as stated, the propositions of the theory were supported in later exploratory analyses when situational appropriateness was included in the model. In support of Hypothesis 3, in appropriate situations the perceived effectiveness of dominant responses decreased as situations became more dominant, while the effectiveness of submissive responses increased. In support of the propositions of Hypothesis 4, results indicate that this effect is reversed in inappropriate situations. The effect for warmth does not support the propositions of interpersonal theory. While results indicate that warm responses are generally considered to be more effective than cold responses in warm situations, warm responses were also rated as more effective in cold situations. This effect held for both appropriate and inappropriate situations. It is possible that this result is due to the operationalization of cold behavior as hostile.

Finally, for Hypothesis 5, the predictive validity of an interpersonal implicit trait policy was evaluated using social skills as a criterion. The most surprising result was the lack of relationship between the SJT and most of the social skills measures. Other-reported emotional intelligence was found to have a positive relationship with the ITP, but a negative relationship was observed for self-report emotional intelligence. While it is not appropriate to overanalyze the relationship between the SJT, social skills, and self-report EI given the unexpected and unhypothesized nature of these results, it is appropriate to propose areas of future research.

While the hypothesized relationship between SJT scores and other-rated social skills was not supported, a relationship between the SJT and EI was expected. To accurately rate the SJT, a participant would need to have the ability to accurately assess the relative dominance, warmth, and appropriateness of both the situation and potential responses. Furthermore, the participant must have the ability to accurately determine how the situation and response variables interact to create an effective response. The former ability is likely related to self-perception, but as the "interactions" in the SJT are hypothetical, it is not surprising that correlations with self-perception are low in the case of other-ratings, and inconsistent for self-report (Table 18; $r = .20$). It is the latter ability that is of most interest and may be relevant to the results of the present study. While this is not the same as the ability to understand, use, perceive, and manage emotions, it would not be surprising to find that similar analytic techniques are used to perform both these EI skills and to determine behavioral effectiveness. As previously noted in the literature (e.g., Landy, 2005), this commonality is likely related to general mental ability (GMA). While this would explain the positive relationship between the ITP scores and other-rated emotional intelligence, it does not explain the negative relationship between the ITP scores and self-report of emotional intelligence. Other-rated emotional intelligence demonstrated a non-significant correlation ($r = -.09$) with the self-report scale, indicating that the self-report scale and the 4 item scale based on observable behaviors measure different constructs.

Limitations, Implications, and Future Research Directions

The most serious potential limitation is the possibility of bias in situation selection. The interpersonal situational judgment test items were not gathered using the critical incident method as is typical in SJT development. Instead, they were developed by the author to match the interpersonal dimensions of dominance and warmth across the roles of manager, subordinate, and co-worker, and to represent both appropriate and inappropriate behavior. Situations were dropped or revised based on ratings along these dimensions, but the operationalizations of dominance and warmth were narrowly defined to increase methodological rigor. As the literature tends to focus on applications of interpersonal theory to clinical issues rather than more general interpersonal interactions, the operational definition of dominance and warmth was created based on the IAS-R (Wiggins, Trapnell, & Phillips, 1988), a widely accepted measure of interpersonal traits (Locke, 2006). Thus the situations were developed based on interpersonal theory to conform to the personality scale, through a similar method to that used by Motowidlo et al. (2006a).

During situation development, it became clear that a wide range of responses could be generated on the broad dimensions of dominance and warmth that would not be rated as dominant or warm behavior using these rating scales. Thus, the present study can only be generalized to a relatively small range of dominance and warmth behaviors, although interpersonal theory suggests that the same relationships will occur across all operationalizations of dominance and warmth, and more broadly for agency and communion. Future research might collect critical incidents of appropriate and

inappropriate situations and select a representative sample of situations for the dimensions of dominance and warmth (and also possibly for extraversion and agreeableness). Once a representative sample of situations was gathered, actual responses could be collected from employees, which may improve the validity of a future SJT with work-related criteria.

The SJT situations and response options were developed to primarily measure one type of interpersonal behavior (i.e., warm, cold, dominant, submissive), but most behaviors are combinations of both the dominance and warmth dimensions. While recent research does not support interactions between dimensions in determining behavioral frequency (Sadler & Woody, 2003), it is possible that differential relationships exist for perceptions of behavioral effectiveness. These interactions may be even more likely in organizational roles where warm behavior may be seen as a job requirement, or at least strongly encouraged. Additionally, responses were constructed to be plausibly effective, but the boundary conditions of interpersonal theory could be evaluated by constructing response options based on interpersonally rigid behaviors.

Interpersonal theory suggests that these findings should generalize to all contexts, but the use of a student sample does limit the generalizability of the empirical results of the present study. Students have limited life and work experience compared to most employees. As ITPs are based on both traits and experience, it is possible that student ITPs are more heavily influenced by traits than experienced workers. While almost all students reported some work experience, it is likely that experience in one student job is more closely related to the set of student jobs than to the set of full time career positions.

However, it is also possible that a student job in a specific industry can be more closely related to full time jobs in that industry than to the set of student jobs. For example, a student who works in a restaurant or a construction site likely has many similar experiences to full time workers. Thus, the limitation is not necessarily based on the participants being students, but the correspondence of the SJT setting to the participants' experiences. Most students reported imagining an office setting, but the most common work experiences were in the retail and hospitality industries. In responding to the SJT, students likely drew upon both their past interpersonal experiences and their experience of workplace normative behavior. Future research could investigate the generalizability of these findings by creating SJTs in hospitality and retail settings, and randomly assigning participants to matching or non-matching SJTs.

A related finding of the current study was the relationship between imagined work setting and perceptions of behavioral effectiveness. A relationship between past work experience and behavioral effectiveness was also observed in the exploration sample but was not shown to replicate in the cross-validation sample. As noted previously, it is possible that each of the effects relates to different workplace norms, as appropriate behaviors for a student job in a retail store are likely different from what students may imagine would be appropriate in an office. From an implicit trait policy perspective, these norms represent prior experiences that led to the development of the implicit trait policies. The identification of other norms that influence implicit trait policies would be interesting as individual variation on these norms could influence how situational appropriateness is interpreted. For example, traditionally masculine jobs

likely have different norms regarding the appropriateness of interpersonal warmth than neutral or traditionally feminine jobs (Eagly, 1987). Jobs that differ in the degree of hierarchy likely differ in the appropriateness of interpersonal dominance. Finally, these norms could potentially be a used as a test of Motowidlo et al.'s (2006a) hypothesis that implicit trait policies are influenced by both traits and experience.

While there is utility in performing initial validation of a SJT on a student sample, the experience of most students is likely limited to either blue collar jobs or internship experience. Clearly, a potentially valuable direction of future research would examine the generalizability of these findings to leadership positions or other interpersonally intensive positions. It is possible, for example, that implicit trait policies for the participant role (i.e., manager, coworker, subordinate) will be clearer for workers who have extensive experience in all of these roles. While interpersonal theory proposes that the relationship between situations and responses is universal, there is little research on workplace interpersonal relationships. Research in work contexts would also likely reduce the variance in the accuracy of other-ratings compared to the current study. Finally, research with employee samples would allow the measurement of more traditional I/O criteria such as ratings of leader behaviors (i.e., initiating structure and consideration), teamwork, sales performance, and customer service performance, which could add to the nomological net of the underlying construct measured by the SJT.

The use of SJT methodology is another limitation. While the SJT methodology was well suited to the questions proposed for the current study, future research should investigate other methodologies if knowledge of implicit trait policies is to be advanced.

Motowidlo et al. (2006b) proposed that implicit trait policies are a construct that can be measured with an SJT, but if the implicit trait policy is a psychological construct and not a measurement artifact, there are likely numerous different methods that could be used. Interpersonal theory is derived from actual behavioral interactions. According to the theory, ineffective behaviors would tend to elicit undesired responses, and through a form of interpersonal negotiation, a dyad would achieve a complementary relationship (or terminate interactions). The current study only measures perceived effectiveness. While Motowidlo et al. (2006b) demonstrated that agreeableness implicit trait policies predicted agreeable behavior, they did not examine whether implicit trait policies predict the enactment of *effective* agreeable behavior. It is possible that these interactions merely represented an agreeableness-specific bias toward agreeable behaviors.

For example, interpersonal behaviors could be gathered through actual interactions such as the role-plays used by Motowidlo et al. (2006b) or through open-ended responses to situations. Rating these behaviors for trait-relevance and actual effectiveness could resolve the question of trait bias in effectiveness ratings as behaviors would be rated by judges rather than responses rated by participants. Future research could also examine both perceived and actual effectiveness in ongoing interpersonal interactions. For example, using an experimental situation with a confederate, an interpersonal negotiation could be used to measure the actual effectiveness of interpersonal behavior, and participants could be asked to rate the perceived effectiveness of behaviors during the experiment.

In general, more research is needed on a taxonomy of situations. While work in this area has recently been revived in the personality literature (e.g., Ten Berge & De Raad, 1999), personality researchers are most interested in defining the basic dimensions of situations. While this work could be valuable for applied researchers, there is very little programmatic work applying this situational research to organizational settings. For example, Ten Berge and De Raad (2002) identify dimensions of pleasure, interpersonal conflict, social demand, and individual adversity, and the relationship between the situations and the Big Five personality traits. These are clearly dimensions that apply to the workplace, and there is extensive literature on most of these dimensions in work settings. Future research should integrate these research streams with the goal of developing a comprehensive theory of situations in the workplace.

Future research should also examine how the complementarity relationship generalizes to different types of agency and communion. Interpersonal theory suggests that dominance and warmth are only one possible operationalization of agency and communion. Extant theory in the organizational sciences indicates that this relationship may generalize to other forms of agency and communion. For example, citizenship behaviors could be characterized as communal behavior if they are based on prosocial motives, or agentic behavior as supervisors tend to include citizenship behavior in performance ratings (Van Scotter, Motowidlo, & Cross, 2000). The current research would indicate that communal citizenship behavior would be more likely to occur in situations that are high on the communal dimension, while agentic citizenship behavior

would be more likely to occur in situations with low agency such as a lack of task work, or with ineffective leadership.

As another example, Thompson (1967) discusses agency in the context of organizational politics. If we assume that discretionary behavior and power seeking are forms of agentic behavior and dependence on others is analogous to situational dominance, then Thompson essentially suggested an anticomplementary relationship in his proposition that "individuals in highly discretionary jobs seek to maintain power equal to or greater than their dependence on others in the organization" (p. 125). Examining this situation using interpersonal theory indicates that high situational dominance (i.e., dependence) influences the enactment of dominant behavior, either through enhancing personal sources of power or through seeking coalitions.

If Thompson (1967) essentially proposed that people react to situational dominance with anticomplementary dominance, the present research indicates that a moderator condition likely exists. An important research question would investigate the organizational characteristics which promote complementarity between organizational members. The present operationalization differentiates between appropriate and inappropriate organizational behavior, which suggests a basis in commonly held organizational norms of agentic and communal behavior. The establishment of superordinate goals is likely one moderator. Group behavior research in social psychology may be applicable to research in this area (e.g., McGrath, Arrow, & Berdahl 1998).

Research in this area would necessarily span organizational levels, and thus an important question is the degree of multi-level homology for agency-communion relationships. Kozlowski and Klein (2000) discuss how constructs at different levels of analysis can be related. Assuming that similar relationships occur at multiple levels can be an ecological fallacy. Some constructs, such as cooperation, emerge at the group level of analysis and cannot be measured at the individual level. Other constructs, such as individual and organizational learning, change at different levels of analysis. Clearly, interpersonal theory is intended to describe relationships at the dyadic level of analysis, but research indicates that the dimensions of agency and communion can also be applied to groups through social categorization theory (e.g., Pickett & Brewer, 2001; Turner, 1975).

Much of organizational research is conducted at the microsystem level, but macrosystems research, specifically the strategy research on inter-organization networks (e.g., Jarillo, 1988; Provan, Fish, & Sydow, 2007), is a possible area for application of this research. Competition and cooperation are clear agency and communion themes for inter-organization networks, however these divisions are simplifications of the range of interactions between organizational units. For example, organizations could cooperate in research and development but still compete over raw materials.

CHAPTER V

CONCLUSION

This dissertation examined the implicit trait policy hypothesis using interpersonal theory, making a contribution to the literatures on ITP, interpersonal theory, and SJTs. First, the results of this study indicate that implicit trait policies should be analyzed using multilevel methodology. The implicit trait policy is the effect of a response characteristic and may be influenced by the characteristics of the situation. The effect of personality traits likely represent a bias, but the cross-level interaction between traits and response characteristics could represent a bias but could also represent trait-specific knowledge. These results correct previous methodological weaknesses in operationalizations and provide support for the existence of this implicit construct. Second, the results clearly indicate that situations can be very important in participants' judgments of response effectiveness and suggest that more research on the effect of situations on behavior is needed. Finally, the results support the basic propositions of interpersonal theory and extend the theory by identifying situational appropriateness as a moderator of the situation-response relationship.

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APPENDIX A

General Instructions: You will be asked to imagine that you are a manager, a subordinate, or a coworker. A different role will be presented on each page. Please try to set aside time to complete the survey without distractions (such as TV or roommates). Each situation will present a different problem for you to solve and present 4-6 responses. For each response tell us how effective the response would be in solving the problem. You will be reading a set of situations about hypothetical employees in an organization. You will be asked to respond as if you were the person's supervisor, subordinate, or co-worker. Please tell us how effective each response would be in a real work situation. There are two broad goals you should consider when judging the effectiveness of situational responses. First, what would be the effect of the response on your ability to do your job, and second what would be the effect of the response on your relationships with your coworkers, manager, or subordinates. Sometimes these two goals may conflict. Read through all of the responses. Assume that they are all true, so if an answer suggests that you don't like your job, assume that you don't for all of the answers for that question. However, each question is a new situation, so don't use information from previous questions when you make your effectiveness judgment. Finally, do not assume that responses will or will not be combined with other responses. Just ask yourself how effective a response is relative to your two goals.

Manager Situation Instructions: For these situations, imagine that you have recently been put in charge of an office where you have five subordinates reporting to you. You are accountable for the performance of your entire group, so if your group performs poorly, your performance evaluation will reflect that. How effective is each response in solving the problem? Remember that effectiveness depends on how well the response gets the job done, and how well the response develops good relationships with your coworkers. Sometimes one goal may be more important than another.

Behavior	Appropriateness	Situation & Responses
Dominant	**Appropriate**	**Your subordinate disagrees with you about how to accomplish a team goal.**
Dominant		Convince him of the merits of your approach.
Submissive		Ask the team what they think about the two plans.
Warm		Tell him that you appreciate his input.
Cold		Listen to his disagreement and criticize any problems.
Dominant	**Inappropriate**	**Your subordinate gives you a list of reasons why she deserves a pay increase.**
Dominant		Detail the reasons why she was not given a pay increase.
Submissive		Tell her that you will consult higher management and get back to her.
Warm		Acknowledge her hard work and frustration.
Cold		Tell her that she is lucky she has a job.

Warm	Appropriate	**Your subordinate asks you how your presentation to the vice president went.**
Dominant		Direct her to start research on answering questions from the meeting.
Submissive		Tell her that you will talk about it later.
Warm		Tell her that you appreciate the team's hard work.
Cold		Tell her that the vice president was not happy with the presentation.

Warm	Inappropriate	**Your subordinate finds out that you missed an office party due to a family emergency, and leaves you several late night voicemail messages to see if you are ok.**
Dominant		Tell her not to call late at night unless there is a work-related emergency.
Submissive		Don't mention it unless she brings it up first.
Warm		Reassure her that everything was fine.
Cold		Tell her that calling you late at night is not appropriate.

Submissive	Appropriate	**Your subordinate tells you that she thinks she might be doing a task wrong.**
Dominant		Tell him that you will look at it later.
Submissive		Ask him if it would be ok to look at it later.
Warm		Boost his confidence by complementing him.
Cold		Tell him to try to figure it out on his own.

Submissive	Inappropriate	**Your subordinate asks for help on a task for which she has trained extensively.**
Dominant		Tell him that you will look at it later.
Submissive		Ask him if it would be ok to look at it later.
Warm		Boost his confidence by complementing him.
Cold		Tell him that you can reassign the task to one of his teammates if he can't handle it.

Cold	Appropriate	**Your subordinate tells you that one of your workers consistently leaves work early.**
Dominant		Tell her that you will make sure that the behavior stops right away.
Submissive		Ask her what she thinks the penalty should be.
Warm		Praise her for bringing this to your attention.
Cold		Ask her if she tried to resolve this problem with the team before coming to you.

Cold	Inappropriate	**Your subordinate always keeps quiet in your weekly team meeting, never speaking unless asked a direct question.**
Dominant		Tell her to start participating more in meetings.
Submissive		Do nothing.
Warm		Ask her if there is anything you can do to help her get more involved.
Cold		Note the behavior on her performance evaluation.

Subordinate Instructions: For these situations, imagine that you work have worked in an office long enough to be good at your job, and you have recently been given a new supervisor.

Behavior	Appropriateness	Situation & Responses
Cold	**Appropriate**	**Your supervisor tells you that she is going to give you the toughest assignments she can find, to see how much you can handle.**
Dominant		Tell her that you can handle any task she gives you.
Submissive		Accept the assignment without comment or complaint.
Warm		Tell her that she has a great strategy for identifying talented employees.
Cold		Make records of all the projects you complete so she can't blame you if you fail.
Cold	**Inappropriate**	**Your supervisor is friendly to your other co-workers, but ignores you, gives you tasks by email, and always seems in a hurry when you are meeting with her.**
Dominant		Tell her that you think you should be treated the same as the other workers.
Submissive		Tell her that you think you should be treated the same as the other workers.
Warm		Do nothing.
Cold		Try to be friendly with her whenever you have a chance. Act the same way to her.
Warm	**Appropriate**	**Over lunch in the cafeteria, your boss asks you how you like working for the company.**
Dominant		Tell her that you think the work is boring.
Submissive		Don't tell her anything that might reflect badly on you.
Warm		Tell her how much you like your coworkers.
Cold		Tell her that you like it as long as the pay remains competitive.
Warm	**Inappropriate**	**Your supervisor brings you a message that your spouse is delayed at work, and offers to pick up your kids at daycare and take them out to dinner.**
Dominant		Tell her that you will take care of it.
Submissive		Ask her if it is ok for you to go yourself.
Warm		Thank her for helping you in a tough situation.
Cold		Tell her that you can take care of your own kids.
Submissive	**Appropriate**	**Your supervisor seems nervous and asks you for her opinion on her upcoming presentation to the CEO.**
Dominant		Tell her what is good and what needs improvement.
Submissive		Before giving negative feedback, ask a coworker for a second opinion
Warm		Complement her on her skill
Cold		Critically examine the presentation, identifying all possible weaknesses.

Submissive	**Inappropriate**	**You are working on an important project and are waiting for your supervisor to make a decision before you can proceed, but she is putting it off.**
Dominant		Point out that time is running out and suggest the decision you favor.
Submissive		Continue to wait until she makes a decision.
Warm		Ask her if there is anything you can do to help her.
Cold		Save emails and other records of her behavior so you can blame her when the project isn't completed.

Dominant	**Appropriate**	**Your supervisor asks you to do a difficult task which is technically in your job description, but you have never done it before.**
Dominant		Tell her that you will take care of it.
Submissive		Point out that you don't know how to do the task.
Warm		Thank her for giving you such an interesting project.
Cold		Sarcastically tell her thank you.

Dominant	**Inappropriate**	**Although you always do a good job, your supervisor micro-manages everything you do.**
Dominant		Tell her how her behavior is making you feel.
Submissive		Let her do what she wants.
Warm		Thank her for her help.
Cold		Complain to her supervisor.

Coworker Instructions: For these situations, imagine that you work have worked long enough to be good at your job, and you have recently been assigned to a new work team.

Item Stem	Matching	Items and Reponses
Dominant	**Appropriate**	**Your coworker tells you that the previous holders of your job quit because of the long hours and demanding work.**
Dominant		Tell her that it won't be a problem for you.
Submissive		Ask her what you should do differently so you can handle the work.
Warm		Tell her that it sounds like a very challenging job.
Cold		Tell her that they obviously aren't as good at their jobs as you.

Dominant	**Inappropriate**	**Your coworker interrupts you during an important meeting.**
Dominant		Talk over her.
Submissive		Do nothing.
Warm		Thank her for her input.
Cold		Find a way to criticize her and take back control of the meeting.

Submissive	**Appropriate**	**Your coworker asks you if you think her approach to completing a project is good.**
Dominant		Tell her how you think she should do it.
Submissive		Tell her that you will look at it later.
Warm		Boost her confidence by complementing her.
Cold		Tell her that you don't have time to go over it.

Submissive	**Inappropriate**	**You and your coworker are put on a project together, but when you ask for ideas, she says "I don't know, whatever you think is best."**
Dominant		Take charge of the project.
Submissive		Tell her that you don't know either.
Warm		Tell her that you value her input.
Cold		Tell her that you think its best that she start pulling her weight.
Warm	**Appropriate**	**Your coworker says that you seem stressed and offers to take you out for coffee.**
Dominant		Tell her that you need to finish your work first.
Submissive		Tell her that you wish you could get away from your work.
Warm		Tell her that it is very nice of her to notice that you are stressed.
Cold		Ask her if she is going to work late with you when you don't finish your work.
Warm	**Inappropriate**	**A coworker has cancelled her personal plans to help you after hours, but she doesn't have the experience on the project to really be of help.**
Dominant		Tell her that you have everything under control.
Submissive		Find something for her to do.
Warm		Thank her for her support.
Cold		Ask her what she intends to do to help you.
		Tell her that you have everything under control.
Cold	**Appropriate**	**Your coworker comes by your office and tells you that you are doing a bad job on the project that you are both responsible for.**
Dominant		Suggest that you go over the project together.
Submissive		Ask her what you should do differently.
Warm		Apologize for not holding up your end of the project.
Cold		Point out her shortcomings on the project.
Cold	**Inappropriate**	**Your coworker has told the whole team about the embarrassing things you did last weekend.**
Dominant		Ask her why she is telling everyone about what you did.
Submissive		Do nothing.
Warm		Let her know that you value her friendship.
Cold		Start spreading gossip about her.

APPENDIX B

Interpersonal evaluation scale

Please indicate how much each of these statements are true for your friend.

Emotional Intelligence

1. My friend knows when to speak about his/her personal problems to others.
2. My friend presents himself/herself in a way that makes a good impression on others.
3. My friend is able to control his/her temper and handle difficulties rationally.
4. My friend has good control of his/her emotions.

Expressiveness

1. My friend is sensitive to the feelings and emotions of others.
2. Other people find it easy to confide in my friend.
3. My friend compliments others when they have done something well.
4. My friend helps other people feel better when they are down.

Social Adaptability

1. My friend can easily adjust to being in just about any social situation.
2. My friend can talk to anybody about almost anything.
3. My friend has no problem introducing himself/herself to strangers.
4. People tell my friend that he/she is sensitive and understanding.

Social Perception

1. My friend is a good judge of other people.

2. My friend can usually read other people well – tell how they are feeling in a given situation.
3. My friend generally knows when it is the right time to ask someone for a favor.

VITA

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