

COMBINING TRAIT AND PROCESSING PERSPECTIVES OF THE INDIVIDUAL:
TOWARD A NEW ASSESSMENT MODEL OF INTERPERSONAL COMPETENCE

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ABSTRACT

Satisfying interpersonal relationships are an important and beneficial part of life. However, despite that fact that most people desire close interpersonal relationships, some people are less successful at forming and maintaining these relationships than others. One plausible explanation for such individual differences is that people differ in their levels of interpersonal competence – their ability to consistently enact behaviors that are effective, socially appropriate, and satisfying to others. The present research sought to examine different approaches to understanding and assessing interpersonal competence. A comparison of these approaches led to the creation of an Integrated Interpersonal Competence Model (IICM) that sought to maximize the strengths of each individual approach.

This new model was tested in two studies (total $N = 348$) with the goal of understanding why people receive higher (or lower) interpersonal competence (IC) scores and how competence is related to successful interpersonal functioning. Both Studies 1 and 2 examined how the individual components of the IICM contributed to one's overall IC score. Both studies found that the ability to accurately process social information was related to one's likelihood of receiving a high IC score. In addition, how an individual evaluated response options seemed to play the largest role in determining whether or not the person would enact the response. Finally, IC appeared to be composed of a blend of interpersonal warmth and dominance.

Study 1 also examined the relationship between IC and daily life outcomes. Results showed that higher competence individuals tended to experience a greater frequency of positive events, higher levels of prosocial feelings and satisfaction, and enacted fewer hostile and submissive behaviors on a daily basis. Study 2 investigated how IC was perceived by others. Individuals who were higher in IC were perceived to have fewer antisocial feelings, and be less

selfish by peers and parents, and had higher quality relationships with their parents. Interestingly, processing abilities were unrelated to daily and informant-reported outcomes, but personality-like tendencies toward enacting friendly and hostile behaviors were consequential. Overall, the integrated model produced insights into interpersonal competence and can provide a useful guide for future investigations of interpersonal competence.

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INTRODUCTION

Forming and maintaining positive, ongoing interpersonal relationships is thought to be a fundamental human need (Baumeister & Leary, 1995). Indeed, having high quality relationships has been linked to a number of desirable, long-term outcomes including greater academic and occupational success (Berman, West, & Richter, 2002; Wentzel, 2009), better psychological adjustment (Campell, Hansen, & Nangle, 2010), and even improved physical health and longer lifespans (Berkman, Glass, Brissette, & Seeman, 2000). Unfortunately, despite the benefits associated with interpersonal relationships, it is an area where not everyone succeeds (Wrzus, Zimmerman, Mund, & Neyer, 2017). In fact, forming and maintaining these relationships can be quite challenging for some and there are large individual differences in both the number and quality of interpersonal relationships that people have (Wrzus et al., 2017).

Because interpersonal relationships are so beneficial, it is perhaps no surprise that there is a large body of research concerned with understanding why people differ in their likelihood of having successful relationships. It is likely that many factors contribute to such individual differences (e.g., luck, physical characteristics). However, in the 1920s, Edward Thorndike proposed that some people were more likely to succeed in their social relationships because they possessed the knowledge and abilities needed to understand and manage others (Thorndike, 1920). Although Thorndike's particular conceptualization was later criticized, the idea that there were individual differences in the ability to effectively interact with others quickly gained traction (Kihlstrom & Cantor, 2000). Researchers began to develop methods to assess interpersonal knowledge, skills, and abilities (Strang, 1930; Thorndike & Stein, 1937), and recognize their value in workplace (Link, 1944), educational (Froe, 1950), and clinical settings (Zigler & Phillips, 1961).

By the 1980s, the study of interpersonal abilities had blossomed (Ladd, 1999), spanning a variety of disciplines of psychology, including clinical, developmental, industrial/organizational, social, and personality psychology. This research continues to thrive to this date. As a result of decades of research from diverse perspectives, there is robust support for the notion that interpersonal abilities are highly consequential for the ultimate success of a relationship (Farmer & Chapman, 2016; Oswald, 2017; Vangelisti, 2011). In addition, considerable progress has been made on identifying a wide assortment of traits (Kanning & Horenburg, 2014), skills (Robles, 2012), cognitive processes (Crick & Dodge, 1994), and situations (Horstmann, Rauthmann, & Sherman, 2017) that may affect a person's ability to competently enact behaviors that support successful relationships.

The multidisciplinary nature of this research has certainly benefitted the field. At the same time, however, there are some downsides to having such a large, multidisciplinary body of research. In particular, one of the biggest challenges is that the literature is often not well integrated (Spitzberg & Cupach, 1989). With interpersonal relationships being such an important element in many different life domains, various lines of research were able to emerge and flourish independently of each other (Spitzberg & Cupach, 1989). As a result, different disciplines often possess their own theories and techniques for assessing interpersonal abilities and behaviors (Dirks, Treat, & Weersing, 2007; Dodge, 1985). Even within a discipline, construct labels, definitions, and assessment methods can vary from researcher to researcher (Dodge, 1985). The result is an unwieldy sprawl of ideas about how to best conceptualize and assess interpersonal abilities, which can create difficulties in making connections among the various strands of research.

Yet, in principle, it should be possible to integrate diverse perspectives on interpersonal abilities. Traditions such as the interpersonal circumplex are capable of organizing different constructs, behaviors, situations, interactions, and more into a systematic framework (Smith, Glazer, Ruiz, & Gallo, 2004; Wiggins, Trapnell, & Phillips, 1988). Moreover, comparing and contrasting different approaches might shed light on certain advantages or disadvantages to particular methodologies and perhaps point to a combined approach that maximizes the advantages of the individual approaches.

The present research aims to articulate and test such an integration. The remainder of the introduction will set the stage for the creation and testing of an integrated model. First, the paper will begin by clarifying terms and definitions relevant to the research. Following this terminology section, the paper will summarize existing approaches to studying competent interpersonal behavior – the global trait approach, the interpersonal circumplex approach, the social-cognitive approach, the social information processing approach, and the situational judgment test approach. A comparison of these approaches will highlight key issues that should be considered when attempting an integration. Finally, the paper will describe how the different approaches could be integrated into a model.

Interpersonal Relationships and Interpersonal Competence

One major challenge to integration efforts is that interpersonal relationships and interpersonal abilities can be hard to define (Berscheid, 1994; Dirks et al., 2007). Interpersonal relationships can take on many forms (e.g., friendship, romantic, parent-child, etc.), and the specific qualities that are considered important often vary by the type of relationship (Furman & Buhrmester, 1985). Interpersonal abilities are also quite abstract and highly variable, and researchers often differ in both the labels and definitions used to describe individuals whose

abilities lend themselves to successful relationships (Spitzberg & Cupach, 1989). Therefore, it is necessary to define the terminology that will be used and articulate the scope of the research before attempting an integration.

In very broad terms, interpersonal relationships involve at least two people and can be characterized as intimate, interdependent, and ongoing (Clark & Reis, 1988). Because interpersonal relationship can take on so many different forms, however, the present research will specifically examine interpersonal relationships in the form of friendships and peer relationships. This is due to the fact that friendships are the most voluntary form of relationship, and lack the legal, economic, and societal restraints found in parent-child, work, and romantic relationships (Wrzus et al., 2017). The voluntary nature of friendships and the relative lack of complicating restraints should make it the best form of interpersonal relationship to examine basic processes and behaviors related to interpersonal functioning.

In terms of interpersonal abilities, it has been widely accepted that there are individual differences in the ability to enact certain behaviors within a relationship (Crick & Dodge, 1994; Farmer & Chapman, 2016). However, the construct that captures this ability remains somewhat elusive, and there have been disagreements as to exactly what the construct should be called (Kanning & Horenburg, 2014). Popular labels include “social intelligence”, “social skills”, and “social competence”. These labels are sometimes used interchangeably (Dodge, 1985), but there actually are theoretical distinctions (Kanning & Horenburg, 2014). “Intelligence” tends to emphasize the cognitive components of social behavior (e.g., memory) and has sometimes been criticized for sharing an overlap with other forms of intelligence (Keating, 1978; Weis & Süß, 2005). “Skills” are thought to be a narrow specification of ability – emphasizing individual skills and select behaviors (e.g., communicating with opposite sex peers) in isolation (Spitzberg &

Cupach, 1989). “Competence” is the most encompassing, defined as the multidimensional collection of knowledge, skills, and abilities needed to consistently enact behaviors that are effective, situationally-appropriate, and satisfying to others (Rose-Krasnor, 1997; Spitzberg, 2003).

The present research ultimately aims to understand broad abilities to enact behaviors across different types of situations that could potentially arise in an interpersonal relationship. Therefore, the term “interpersonal competence” will be used to describe the abilities of interest. The word “interpersonal” captures the idea that there may be basic processes that should generalize to different forms of interpersonal relationships. “Competence” highlights that the ultimate focus is on abilities and behaviors rather than intelligence, and on a broad set of behaviors and abilities rather than narrow focus on isolated skills.

Approaches to Understanding Interpersonal Competence

Before attempting an integration, it is also necessary to summarize several of the common approaches to studying interpersonal competence. It should be noted that the approaches that will be described are not comprehensive of all possible perspectives. However, certain approaches are especially enlightening and could benefit from integration. In particular, five approaches will be highlighted: the global trait approach, the interpersonal circumplex approach, the social cognitive approach, the social information processing approach, and the situational judgment test approach. Each approach possesses its own strengths. Yet, at the same time, each approach possesses weaknesses that can and have been addressed by other approaches. The following section will provide theoretical background and will discuss the strengths and weaknesses of each of the approaches.

The global trait approach to personality views traits as general patterns of behaviors that are highly stable across time and situation (Allport, 1937, Funder, 1991, McCrae & Costa, 1999). Certain traits tend to be associated with interpersonal success (e.g., agreeableness, assertiveness, self-control) whereas others (e.g., anger, aggression, shyness) appear to be linked to interpersonal difficulties (Eisenberg, Fabes, & Spinard, 2006; Jensen-Campbell, Knack, & Gomez, 2010; Wilkowski & Robinson, 2008). These traits are typically assessed using broad, self-reported questionnaires that collapse across contexts in order to emphasize a person's average, or typical, behavioral tendencies (McCrae & Costa, 1999). Due to the relative lack of contextualization, global traits are thought to possess a broad scope of prediction (Funder, 1991). Thus, knowing a person's general tendencies toward certain traits should allow researchers to predict whether that person will be interpersonally successful in multiple (and even novel) situations and domains.

The global trait approach is quite common in psychology as it uses a relatively easy form of assessment and seems to capture a good deal of information about a person (Funder, 1991). Perhaps as a result, over 100 different personality traits and characteristics have been implicated in interpersonal competence (Kanning & Horenburg, 2014). This fairly unorganized abundance of possibilities may be problematic in that it is difficult to detect overlaps or key differences between constructs. The Interpersonal Circumplex (IPC) can provide an organizing framework that may provide clarity to the global trait approach. The IPC is a model of interpersonal tendencies that is circularly arranged around two major axes (Wiggins & Broughton, 1985). The vertical axis represents dominance and submission while the horizontal axis represents warmth (friendliness) and coldness (hostility). This is illustrated in Figure 1. By understanding the interpersonal characteristics of high scorers on a given scale, one can map any construct that is

interpersonal in nature into a circumplex space, which, in turn, helps classify and compare the different interpersonal constructs (Wiggins & Broughton, 1985). When constructs relevant to interpersonal competence are mapped onto the circumplex space, they tend to reveal a pattern: the traits and abilities associated with competent interpersonal behavior are ones that reflect warmth and dominance (Gurtman, 1999) whereas the traits and abilities associated with maladaptive interpersonal behavior are ones that reflect hostility and submission (Jones & Paulhus, 2011; Horowitz, Rosenberg, & Bartholomew, 1993). Thus, knowing a person's global tendencies towards warmth and dominance should provide valuable insight into a person's interpersonal competence.

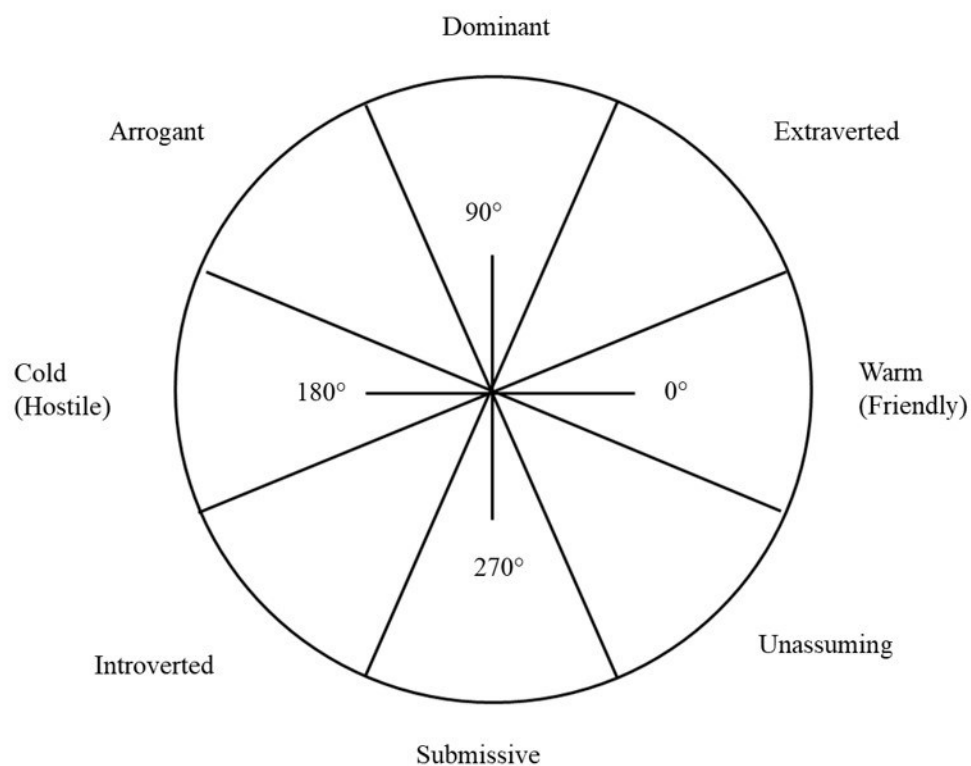


Figure 1. Diagram of the Interpersonal Circumplex.

The global perspectives adopted by the global trait approach and IPC tradition have been criticized on some grounds, however. Due to the decontextualized, self-report nature of the assessments, there are some concerns about potential bias and inaccuracies of responding (Dunning, Heath, & Suls, 2004; Tangney et al., 1996). In addition, ignoring the context in which a behavior occurs may obscure nuances and situation-specific patterns of behavior. For instance, while it is true that some people are, on average, angrier and more aggressive than others (Spielberger, 1999), these people are not necessarily angry and aggressive all the time. Rather, it is specific situations, often involving provocation or frustration, that appear to elicit angry and aggressive reactions (Deffenbacher, 1992).

The social-cognitive approach to personality is often posed as the counter to the global trait approach and seeks to address these criticisms. Rather than view traits as average tendencies toward certain classes of behavior, the social-cognitive approach considers personality to be a complex, underlying cognitive and affective system that interacts with situational forces to produce overt patterns of behaviors across particular situations (Bandura, 1986; Cervone & Shoda; 1999; Mischel & Shoda, 1995). Through repeated behavioral observations across multiple situations, one can begin to identify the situational features (e.g., provocation) and cognitive processes (e.g., outcome expectancies) that tend to elicit certain classes of behavior. For example, a person might demonstrate a pattern in which he reacts aggressively when he is provoked by a peer, but not when he is provoked by an authority figure or receives praise. This objective information can be used to make highly precise predictions about the person's aggressive behavior in future interactions (Mischel, 1973).

One issue with the social-cognitive approach, though, is that conducting the necessary behavioral observations is time-consuming and the resulting data tends to encourage analyses

that are highly idiographic in nature (Funder, 2009; McCrae & Costa, 1999). As a result, there is little guidance as to what situations matter for interpersonal behavior and the exact cognitive processes thought to underlie behavior have not really been combined or tested as a comprehensive model (Cervone, 2004). In the developmental literature, social information processing (SIP) models have sought to create such comprehensive models as a way of explaining how children come to enact competent or incompetent interpersonal behaviors. Though several of these models exist, perhaps the most enduring is Dodge and colleagues' SIP model (Crick & Dodge, 1994; Dodge, Pettit, McClaskey, & Brown, 1986). In this tradition, SIP tendencies are usually tested by presenting children with vignettes or play acting scenarios. These scenarios will typically represent a social situation that may be particularly revealing (e.g., an ambiguous provocation) or commonly challenging (e.g., peer group entry) and are much more manageable than the behavioral observations of the social cognitive approach. Children's responses to the scenarios reveals information about how the children (1) encode situational cues, (2) mentally represent and interpret these cues, (3) clarify their goals, (4) access or construct possible responses to the situation, and (5) select a response to enact (Crick & Dodge, 1994).

Comparisons of children who belong to different behavioral categories (e.g., aggressive, withdrawn, socially competent) tend to reveal systematic differences at each SIP step. For instance, socially competent children tend to accurately encode relevant features of the situation (Dodge, Murphy, & Buchsbaum, 1984), have relationship-oriented goals (Bell, Luebke, Swenson, & Allwood, 2009), access responses that are prosocial, friendly, and assertive, and evaluate these types of responses more positively (Nelson & Crick, 1999). Aggressive children, on the other hand, often attend to hostile and irrelevant information (Huesmann, 1998), favor

goals related to competition and retaliation (Asher, MacEvoy, & McDonald, 2008), access responses that are more aggressive, and evaluate aggressive responses more positively (Crick & Dodge, 1996). Understanding these differences can be valuable for explaining why some children are less competent than others and provide clear means for intervention.

However, as with the other approaches, there are some criticisms of the SIP methodology. First, broad behavioral labels such as “aggressive” or “withdrawn” are often poor ways of categorizing individuals, and as a result, there may be a good deal of heterogeneity within a given group (Coie, 1985; Kazdin, 1990). Second, there is little guidance for how scenarios are created and validated. The I/O literature may be able to address some these criticisms. The workplace is an area in which many jobs contain social components such as working on teams, managing subordinates, reporting to supervisors, and interacting with customers (Robles, 2012). Therefore, when seeking to hire new employees, organizations will often assess applicants’ ability to perform the job, both technically and in terms of their abilities to interact with others (Lievens & Motowidlo, 2016). One common method for assessing the latter abilities is the situational judgment test (SJT) approach. Like the SIP approach, the SJT uses a scenario-based format in which the potential employee is presented with a variety of critical scenarios (e.g., dealing with an angry customer; managing an uncooperative employee). Unlike the SIP approach, however, a great deal of attention has been given to the development and validation of the scenarios and responses, and there is extensive procedural guidance for a researcher wishing to create a SJT (Weekley, Ployhart, & Holtz, 2006).

Within the SJT, each scenario is paired with several possible ways of responding, and these responses tend to vary in effectiveness. The potential employees are asked to read each scenario, and then indicate which response they “should” do (as a measure of effectiveness

knowledge) or which response they “would” do (as a measure of behavioral tendency) (McDaniel, Hartman, Whetzel, & Grubb, 2007; Ployhart & Ehrhart, 2003). These evaluations are then scored on the basis of whether or not the person endorses effective ways of responding. Although the scenarios themselves are context-specific, the final product of the SJT is an average of a person’s responses in the test – a much more global assessment of a person’s ability to successfully perform in a given domain.

People who score higher on SJT tests tend to be better employees, even after controlling for other relevant qualities such as global personality traits, cognitive ability, or job experience (Corstjens, Lievens, & Krumm, 2017; Whetzel & McDaniel, 2009). Additionally, some research has suggested that SJTs can tap broader interpersonal skills and personality characteristics (Christian, Edwards, & Bradley, 2010), making the approach relevant beyond the workplace (Robinson, Fetterman, Hopkins, & Krishnakumar, 2013). The downside to this approach, however, is that much of the research has focused on the predictive validity of the SJT approach rather than articulating a theory of why people make the judgments that they do (Lievens & Motowidlo, 2016; Schmitt & Chan, 2006).

In summary, it is clear that each of the summarized approaches possess considerable promise for understanding interpersonal competence. Nonetheless, they possess limitations as well – limitations that can potentially be addressed by other approaches. Examining these different approaches together, then, may reveal important insights into interpersonal competence beyond what has been found using each individual approach in isolation.

Key Issues and Considerations

Beyond simply illuminating the strengths and weakness of the five approaches, the comparisons also reveal a number of key conceptual issues that should be considered when

integrating the approaches. Should researchers study social behavior at a general or specific level? What is more important – the overt behavior or the underlying process? Should the ultimate focus be on the effectiveness of one’s social behavior or simply characterizing tendencies in a non-evaluative manner? How should we deal with the lack of organization within the study of interpersonal competence? Considering these questions might further our understanding of interpersonal competence and point to an integrated framework.

The first key issue raised is whether interpersonal competence should be assessed in terms of a person’s response to a specific situation or as a set of global characteristics and generalized response tendencies. The social cognitive and SIP approaches emphasize the relative importance of the situation in understanding interpersonal behavior. Providing contextual information appears to increase the accuracy of assessment (Lievens, De Corte, & Schollaert, 2008) and allows for precise prediction of social behaviors that are, in fact, situationally contingent (Bettencourt, Talley, Benjamin, & Valentine, 2006; Burgess, Wojslawowicz, Rubin, Rose-Krasnor, & Booth-LaForce, 2006). However, interpersonal competence requires more than just being effective in particular types of situations. Rather, a person must demonstrate competence in a wide variety of situations and domains. The global trait and IPC approaches are appealing for this reason, as their broad scope of prediction allow for greater generalizability into multiple and/or novel situations (Funder, 2009).

An ideal solution, then, would be to combine the situation-specificity of the social-cognitive and SIP approaches with the broad generalizability of the global trait and IPC approaches. The SJT tradition may provide such an approach. SJTs are essentially summaries of people’s responses to specific scenarios. Because people are thinking about their behavioral tendencies in response to specific situations, SJTs should possess the accuracy and nuance of the

situational approaches (Tangney et al., 1996). Because the overall score is an average of responses across scenarios, the same SJT can also possess desirable levels of broad generalizability (Costa & McCrae, 1992).

A second key issue is the extent to which assessments should focus on overt behaviors or on processes that are likely to produce those behaviors. The global trait, IPC, and SJT approaches tend to emphasize overt behaviors and their likely relationship to interpersonal outcomes. In these approaches, typical tendencies (e.g., with respect to agreeableness or effectiveness) are used to predict people's likelihood of success within their interpersonal relationships (McCrae & Costa, 1999; McDaniel et al., 2007). Within the other approaches, overt behaviors are more typically used to reveal the processes underlying the behavior (e.g., outcome expectancies or information-processing tendencies).

Focusing on describing behavior has benefits because the overt behavior often has a more direct effect on one's relationship than the individual processes underlying the behavior (Dodge, 1985). Yet, at the same time, the underlying processes are critical for explaining why people behave the way they do (Cervone, Shadel, & Jenicus, 2001). For example, two individuals could enact the exact same overt behavior, but the underlying systems (e.g., goals, expectancies) that produced the behavior could be completely different. (Crick & Dodge, 1996). Therefore, if one wanted to explain why a person behaved the way they did or create an intervention, it would be useful to assess the underlying processes.

This question of whether to focus on overt behavior or underlying processes could potentially be resolved by reflecting on the research questions being asked (Funder, 2009). If research is concerned with describing a person and their interpersonal relationships, then an overt behavioral focus may be warranted. However, research questions that attempt to explain why

people behave in certain manners are likely to benefit from considering the underlying processes. One could also reasonably combine the two emphases by assessing both underlying processes and actual behavioral enactment (e.g., Fleenon & Jayawickreme, 2009).

A third issue concerns effectiveness judgements of the interpersonal behaviors under investigation. The phrase “interpersonal *competence*” implies a focus on people’s ability to enact effective, socially-appropriate behavior within their interpersonal relationships (Buhrmester, Furman, Wittenberg, & Reis, 1988; Rose-Krasnor, 1997). However, some approaches, such as the global trait, IPC, and social cognitive approaches simply examine behavioral tendencies and their correlates rather than explicitly defining what is considered “effective social behavior”. For instance, the global trait of agreeableness is strongly and consistently related to successful interpersonal relationships (Jensen-Campbell et al., 2010), and is sometimes viewed as being equivalent to interpersonal competence in relationship contexts.

However, agreeable behavior may not be effective in all situations (Boudreaux, 2016). In fact, what is considered “effective” may vary considerably depending on the individual, their social group, the larger cultural context, and person evaluating the behavior (Dirks et al., 2007). Other approaches, such as the SIP and SJT approaches, do more precisely define “effective social behavior” and structure their research around these ideas. The focus on “effectiveness” is likely to be a better reflection of a person’s ability to enact interpersonally competent behaviors. Yet, at the same time, conceptualizing behavior along an effective-ineffective dimension may overlook the myriad of ways one can be “ineffective”. In this sense, capturing behavioral tendencies such as tendencies toward aggression or withdrawal may be more informative. Therefore, there may be some utility in emphasizing both tendencies toward certain classes of behavior and the evaluated effectiveness of particular behaviors.

The fourth and final issue to discuss is the lack of organization within the study of interpersonal competence. Contributing to this lack of organization is the fact that there are many different types of interpersonal relationships, a wide variety of situations that can reasonably occur within relationships, and a great number of possible responses to such situations (Berscheid, 1994; Dirks et al., 2007). In addition, different researchers from the global trait, social cognitive, SIP, and SJT approaches have their own unique ideas about how to define interpersonal relationships and interpersonal competence, as well as what situations, traits, and underlying processes matter for interpersonal success (Dodge, 1985; Kanning & Horenberg, 2014). The result is some confusion about how these ideas compare to each other as well as what does or does not matter for understanding interpersonal competence.

The IPC tradition may provide some clarity to a disorganized area of study. The IPC has been successfully used to categorize and compare different interpersonal constructs. For example, positive affect, expressivity, interaction anxiousness, and initiation have been used as independent predictors of interpersonal competence, but IPC analyses reveal that they are all measuring basically the same blend of warmth and dominance (Gurtman, 1999). In addition, the IPC appears capable of categorizing different situations and responses - a situation could be characterized as one that reflects hostility and a response could be characterized as one that reflects warmth (Smith et al., 2004). Thus, rather than retaining the hundreds of possible situations, behaviors, and processes that have been proposed in the literature, one could organize everything within the circumplex space. So, for instance, seemingly different situations could be characterized as ones that reflect warmth or ones that reflect a blend of hostility and dominance. Doing so would allow for easy comparison of situations and theorizing about the types of responses that would likely follow.

Toward an Integrated Model

The summaries of the five approaches and the key questions raised by these approaches set the stage for an integrated model of interpersonal competence. To fully understand a person's interpersonal competence, it appears necessary to have knowledge of the situational context in which a behavior occurs, the cognitive processes underlying the behavior, the actual behavior that is enacted, and an evaluation of the behavior's effectiveness. In addition, an integrative model should maximize the desirable aspects of both the situation specific and global approaches, assess both overt behavior and underlying process, and capture both tendencies and effectiveness. Finally, the integration should include an organizing framework for conceptualizing situations and their responses. Such a model, termed the integrated interpersonal competence model (IICM), is illustrated in Figure 2 and will be described in the remainder of this section.

Situational Elements

Consistent with a social cognitive model, situational factors seem to matter for determining how one behaves (Bettencourt et al., 2006; Burgess et al., 2006), and including situational elements in one's predictions increases the accuracy of assessment (Lievens et al., 2008). However, a person also needs to consistently demonstrate socially appropriate behavior across multiple situations in order to be considered "competent" (Rose-Krasnor, 1997). The SJT approach is capable of capturing both the situation specific elements of interpersonal behavior and global tendencies toward competent behavior. In addition, the SJT approach possesses a rich methodology for developing scenarios and responses. Therefore, the SJT approach will serve as the base for the present integrated model.

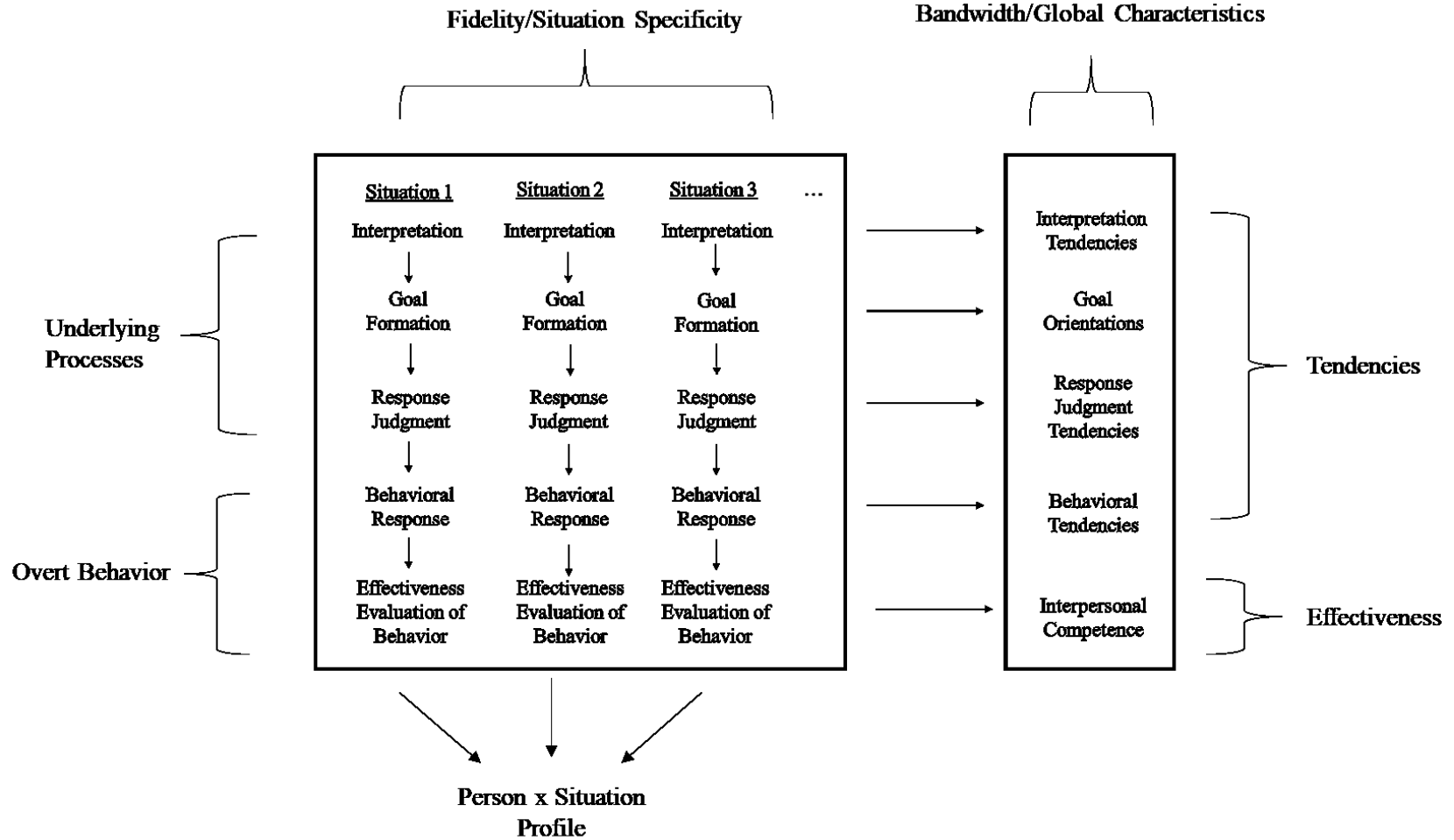


Figure 2. An integrative model of interpersonal competence.

Social Cognitive Processes

A limitation of the SJT approach, however, is that it focuses mainly on the behaviors people endorse without much theory for explaining why people make the judgments they do (Schmitt & Chan, 2006; Martin-Raugh & Kell, in press). Accordingly, the SJT approach will be expanded to incorporate the underlying cognitive processes posited by the social-cognitive and SIP approaches. Doing so may reveal processes that lead certain people to endorse interpersonally competent behavior. In particular, the processes included are situation perception, goal formation, and response evaluation. These processes can be examined in the form of mean-level tendencies to process social information in particular ways, abilities to accurately process social information, or situation-specific patterns of processing.

Situation Perception. The first social-cognitive process included in the integrated model is situation perception. This step involves attending to and interpreting the situational cues and characteristics of the situation (Crick & Dodge, 1994). In addition, situation perception often requires an individual to make inferences about the thoughts, intentions, and emotions of the people involved in the situation (Rockstuhl, Ang, Ng, Lievens, & Van Dyne, 2015). Situations possess objective characteristics, but there is also room for individuals to make subjective interpretations, such that two individuals may perceive the same situation differently (Serfass & Sherman, 2013). In support of this notion, previous research has found that the average agreement between people's perception of the same situation tends to be in the $r = .40-.50$ range, and that the perception of situational features can vary as a function of personality and gender (Serfass & Sherman, 2013; Sherman, Nave, & Funder, 2013).

Perceptions of the situation appear to matter for interpersonal competence. Individuals who accurately evaluate situations are more likely to engage in prosocial behavior and be

labelled as competent (Dodge et al., 1984; Rockstuhl et al., 2015). Conversely, individuals who misperceive situations as hostile are more likely to enact aggressive behaviors (Orobio de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002) and individuals who misperceive situations as being threatening are more likely to respond by withdrawing (Bell et al., 2009).

Goal Formation. Situation perceptions may be important because an inaccurate perception of the situation may lead an individual to form inappropriate goals (Martin-Raugh & Kell, in press). The goal formation step captures the motivational forces that help orient an individual toward producing particular behavioral outcomes (Crick & Dodge, 1994).

Understanding motivations should be important because people tend to behave in ways that satisfy their goals (Ajzen, 1985; Horowitz et al., 2006). Importantly, the goals elicited by the same situation may vary from person to person (Horowitz et al., 2006), and some goals are less likely to produce interpersonally competent behavior. For example, goals related to getting revenge, hurting others, protecting oneself, or maintaining status in response to ambiguously hostile situations were related to aggressive behavior (Erdley & Asher, 1996).

Response Evaluation. The final social-cognitive processing step included in the integrated model is the evaluation of possible ways of responding to the situation. Part of this evaluation process is being able to accurately recognize the social and moral qualities of a response option (Fontaine & Dodge, 2006). For example, hitting another person would typically be considered a hostile and socially undesirable action, but particularly aggressive children would view this action as less hostile and more desirable (Crick & Dodge, 1996). Another part of the evaluation process is judging the extent to which the response would lead to desired outcomes (Fontaine & Dodge, 2006). Here, the previous processing steps should have an

influence. For instance, a hostile action may seem more enticing if the person had previously formed a hostile goal in response to a hostile situation (Martin-Raugh & Kell, in press).

Behavioral Response

After processing the information in the situation and responses, a person must decide how they are going to act. In the SJT literature, response decisions are assessed by measuring behavioral tendencies toward provided response options. Essentially, people are asked to indicate the likelihood that they would enact a particular response, either by selecting the option they would be most/least likely to do or by rating the likelihood that they would enact each response option (Ployhart & Ehrhart, 2003). Although these behavioral tendencies are tracking simulated behavior as opposed to actual behavior, they are still thought to capture the same sorts of intentions and decision-making processes that would be relevant when actually responding to a real-world event (Corstjens et al., 2017; Motowidlo, Dunnette, & Carter, 1990). Therefore, people who endorse a certain behavior in the context of a SJT should perform that behavior when they encounter a similar scenario in their lives (Motowidlo, et al., 1990). Importantly for the present purpose, these behavioral tendencies can be scored either as personality-like tendencies toward certain types of behavior (e.g., a person tends to do behaviors that agreeable) or as indicators of competence (e.g., a person tends to do behaviors that are effective).

Interpersonal Circumplex

Rather than characterize situations, goals, and responses by their nominal features (Shoda, Mischel, & Wright, 1994) or evaluate them using theoretically unconnected terms (e.g. aggressive, withdrawn), the IPC framework allows the situations, goals, and responses to be characterized by the interpersonal qualities they possess. Filtering everything through the IPC framework should therefore help organize and conceptualize the situations, processes, and

responses. Doing so will aid with making conclusions about both people's abilities (in regards to accurately recognizing the interpersonal properties of situations, goals, and responses) and interpersonal tendencies (in regards to whether they possess tendencies towards certain evaluations and behaviors). The integrated model will emphasize the four major IPC dimensions of hostility, friendliness, dominance, and submission.

Hostility. The hostility dimension of the IPC is characterized by coldness and cruelty. This hostility tends to be problematic for interpersonal relationships. Hostile situations are associated with an increased likelihood of reacting in aggressive or antisocial manners (Deffenbacher, 1992). Hostile individuals also tend to report difficulties with getting close to others and also having too many conflicts with others (Horowitz, Dryer, & Krasnoperova, 1997).

Friendliness. The friendliness dimension of the IPC is characterized by warmth and agreeableness (Gurtman, 1999; Wiggins et al., 1988). It is associated with communal values and motivations, such that friendly individuals are highly oriented toward fostering and maintaining affiliative relationships with others. In some instances, being overly friendly can be problematic in that people may consistently put the needs of others before their own (Helgeson & Fritz, 1999). However, friendliness is typically seen as being very positive. Friendly situations are unlikely to elicit hostile behavior (Wright & Mischel, 1988), and friendly goals and behaviors tend to be highly beneficial for interpersonal relationships (Jensen-Campbell et al., 2010).

Dominance. The dominance dimension of the IPC is characterized by assertiveness and self-assuredness (Gurtman, 1999; Wiggins et al., 1988). It is associated with agentic goals focused on the self's interests and status. Being assertive and able to do what is best for oneself are typically seen as desirable characteristics (Buhrmester et al., 1988). In fact, assertiveness skills are often a target of social skills interventions and can help with a number of interpersonal

problems (Farmer & Chapman, 2016). However, the role of dominance in interpersonal relationships can be complicated. Dominance tends to elicit submissive responses (Dryer & Horowitz, 1997). If a person is too domineering, controlling, or overly focused on the self, this can restrict other people's agency, and result in negative interactions and unsatisfying relationships (Helgeson & Fritz, 1999; Sajikaj, Moskowitz, & Zuroff, 2017).

Submission. The submission dimension of the IPC is characterized by timidity and meekness, and tends to be problematic for interpersonal relationships (Horowitz et al., 1997). Submissive individuals are often sensitive to punishment and seek to avoid conflict in their interpersonal relationships (Moskowitz & Zuroff, 2004). Horowitz and colleagues found that the majority of interpersonal problems discussed in therapy were associated with being overly submissive (Horowitz, Rosenberg, Baer, Ureño, & Villaseñor, 1988). For instance, people often report struggles with standing up for themselves, discussing grievances, and letting others take advantage of them (Dunbar & Burgoon, 2005; Horowitz et al. 1997).

Summary

In summary, the integrated model starts with a situation, then unpacks decision-making processes by assessing interpretations, goals, and evaluations of possible responses. It then assesses likely behavioral responses while quantifying the effectiveness of the behavior. This assessment sequence would be repeated across multiple situations or situation types. The measurement model possesses high levels of fidelity through the use of situation descriptions while also capturing global characteristics through aggregated, mean-level variables. The model also assesses underlying processes (situation perception, goals, response evaluation) as well as the overt behaviors that are likely to follow from them. Finally, the model could be used to score

processing and behavioral tendencies towards certain interpersonal qualities, as well as the effectiveness of the behaviors.

INITIAL CONSIDERATIONS AND SUPPORTING RESEARCH

As described in the previous section, the SJT approach provides a strong base for developing an integrated interpersonal competence model (IICM) due to its situation-based methodology. Typically, creating an SJT would require an intensive process that would include generating critical scenarios and reasonable response options, followed by the testing and validation of the new measure. Fortunately, considerable work has already been done in developing a basic SJT for assessing competence in the friendship domain. The friendship-based SJT (Persich, Krishnakumar, & Robinson, in press) is a 10-scenario measure that presents participants with a variety of situations that could reasonably occur within a friendship. Participants are shown scenarios involving a protagonist and his/her friend, and these scenarios are then paired with four possible ways of responding. Participants are asked to rate each of the ways of responding based on either how effective the response would be (as a measure of interpersonal knowledge) or how likely they would be to do this response if they were in the situation (as a measure of their own behavioral tendencies) (Ployhart & Ehrhart, 2003). Participants' responses are scored on the basis of how well they match normatively keyed ratings of effectiveness (Krishnakumar, Hopkins, Szmerekovsky, & Robinson, 2016), and then averaged across scenarios to produce a global evaluation of their interpersonal competence.

The psychometric validity of this friendship SJT has been established (Persich et al., in press). In addition, Persich et al. (in press) found that people with high friendship competence (here defined as rating effective responses as being effective and ineffective responses as ineffective) tended to have better friendships. This was true when outcomes were self-reported – people with higher interpersonal competence tended to report greater social support from friends and family ($r = .17, p = .021$ & $r = .26, p < .001$ respectively), better quality friendships ($r = .39,$

$p < .001$), and felt that their basic needs for relatedness were being met ($r = .29, p < .001$). This was also true when outcomes were peer reported. Peers tended to view higher competence individuals as being better at social relationships ($r = .29, p = .004$), more comfortable in group settings ($r = .30, p = .003$), more popular ($r = .26, p = .014$), less shy ($r = -.22, p = .035$), and less angry ($r = -.22, p = .035$). Perhaps most importantly, these peers tended to rate the quality of their friendship with the participant as higher when the participant was higher in interpersonal competence, as assessed by the friendship SJT ($r = .35, p < .001$).

Further research has examined the use of behavioral tendency instructions (i.e., “what would you do”) as a way of predicting values, beliefs, and behavior. Persich and Robinson (2020) found that people with higher interpersonal competence (here defined as possessing a tendency toward doing effective behavior and not doing ineffective behavior) reported higher prosocial tendencies in the form of altruistic philosophies of human nature ($r = .39, p = .004$), positive attitudes toward helping ($r = .44, p < .001$), and prosocial behavior ($r = .48, p < .001$). Those higher in interpersonal competence also demonstrated more altruistic behavior in laboratory decision making games, including donating more money to charity ($r = .32, p < .001$) and giving more in a dictator game ($r = .29, p < .001$). Notably, these relationships remained significant when controlling for the global trait of agreeableness, suggesting that there is utility to incorporating situational specificity in measures of interpersonal competence (Persich & Robinson, 2020). In the current research, this basic SJT will be expanded into a set of interpersonal competence components, which incorporate elements of some of the other approaches mentioned in the introduction.

RESEARCH OVERVIEW AND HYPOTHESES

The overall objective of the present research was to determine whether it is possible gain insights into interpersonal competence by integrating diverse perspectives. Specifically, the question was whether a scenario-based approach that incorporates underlying cognitive processes and is organized using the interpersonal circumplex framework would reveal important information about a person's interpersonal competence. This research had three main goals: to explain why people choose to endorse certain responses over others (Studies 1 & 2), to understand the relationship between interpersonal competence and daily experiences (Study 1), and to determine whether interpersonal competence is apparent to others (Study 2).

The first goal of the present research was to explain individual differences in a person's interpersonal competence scores by examining the different components of the IICM. Because the IICM is a complex model, the data produced can be scored and examined in many different ways. As a quick guide, Table 1 provides a summary of the key components that will be examined, along with an operational definition and description of which of the key issues the variable is addressing. To highlight a few important features of Table 1, the phrase "interpersonal competence" will operationally refer to the tendency to endorse behaviors that are considered to be effective ways of handling the situations (and the tendency to not endorse ineffective options), as was defined by Persich & Robinson (2020). This score will be the main variable of interest – both as an outcome used to examine how social cognitive processes predict interpersonal competence and as a predictor in how it relates to experiences and relationships with others. In addition, all variables contain situational elements due to the use of the SJT method, but only situation-specific analyses examine the role of individual scenarios and responses. All the other variables are averaged across situations to produce a score that is more similar to a global

assessment. A variable is considered a “process” variable if it involves the ratings of situation perception, goal formation, and response evaluation, and a “behavior” if it only uses the ratings of one’s likelihood of enacting the response options. Finally, a variable is considered a “tendency” if it relates to how people tend to endorse situations and responses according to the IPC framework (e.g., hostile, dominant), whereas “effectiveness” refers to variables that are scored with respect to ability or effectiveness.

Table 1

Summary of IICM Components, Their Definitions, and Descriptions of Key Issues Being Addressed

| Label | Definition | Level of Analysis | Behavior or Process | Tendency or Effectiveness |
|-------------------------------|--|-----------------------------|---------------------|---------------------------|
| Situation-Specific Processing | Analyses that examine how specific scenarios or responses are processed | Situation Specific | Process | Neither |
| Processing Tendencies | Variables that assess broad tendencies to view situations, form goals, and evaluate responses as more hostile, friendly, dominant, or submissive | Aggregated Across Situation | Process | Tendency |
| Processing Accuracy | Variables that assess an individual’s ability to accurately perceive situations, form appropriate goals, and properly evaluate responses, as determined by consensus-based norms | Aggregated Across Situation | Process | Effectiveness |
| Behavioral Tendencies | Tendencies to endorse behaviors that are considered to be hostile, friendly, dominant, or submissive | Aggregated Across Situation | Behavior | Tendency |
| Interpersonal Competence | Tendencies to endorse behaviors that are considered to be effective ways of responding to the situation | Aggregated Across Situation | Behavior | Effectiveness |

Processing tendencies were examined by calculating the mean ratings of hostility, friendliness, dominance, and submission for situation perceptions, goals that are activated, and evaluations of behavioral responses across scenarios. Following the literature documenting the attributional biases of aggressive and withdrawn children, it would be expected that higher average ratings of hostility and submission may be linked to lesser interpersonal competence

(Burgess et al., 2006; Orobio de Castro et al., 2002). Second, the research quantified general tendencies toward accurate perceptions, goals, and response evaluations (as defined by consensus-based criteria). Being able to accurately process information should increase the likelihood that a person would receive a higher interpersonal competence score (Martin-Raugh & Kell, in press). Third, endorsing hostile, friendly, dominant, or submissive behavior might reasonably be expected to reflect personality-like tendencies toward certain classes of behavior (Lievens & Motowidlo, 2016). Following the research on the IPC and interpersonal problems, it may be expected that tendencies towards hostile and submissive behavior would result in lower interpersonal competence scores whereas tendencies toward friendliness and dominance would result in higher scores (Horowitz et al., 1997). Finally, situation-specific, within-person processes were examined to investigate how a particular individual's processing of a situation and its response option was associated with that individual's likelihood of enacting the response.

Hypothesis 1 (Processing Tendencies): People who, on average, have a tendency to perceive situations, rate goals, and evaluate responses as more hostile and submissive will receive lower interpersonal competence scores.

Hypothesis 2 (Processing Accuracy): People who accurately perceive situations, form appropriate goals, and properly evaluate responses should receive higher interpersonal competence scores.

Hypothesis 3 (Behavioral Tendencies): Behavioral tendencies toward dominant and friendly behavior should be positively correlated with interpersonal competence, whereas tendencies towards hostile and submissive behaviors should be negatively correlated.

Hypothesis 4 (Situationally-Specific Processing): How a person perceives the situation, the goal the person forms in response to the situation, and the person's evaluation of the

response options should predict the likelihood that the person would enact a particular response.

Hypothesis 5 (Situationally-Specific Processing): A person should be more likely to enact responses that would be more congruent with their perceptions and goals.

Exploratory Question 1: Which sorts of scores will explain the most variance in interpersonally competent behavior? The perception of the situation is undeniably important because inaccurate evaluations may influence the goals and responses that are produced (Martin-Raugh & Kell, in press). But certain motivational tendencies (e.g., for relational versus instrumental goals) could potentially override negative situation perceptions and ultimately lead to competent behavior (Burgess et al., 2006).

Alternatively, as Dodge (1985) suggests, individual processes each explain their own unique variance and must be taken together as a whole in order to truly understand interpersonal competence. This question will be tested using a multiple regression analysis in which the three processing stages are entered as simultaneous predictors of interpersonal competence.

The second goal of the present research was to examine the effects of interpersonal competence on daily life experiences and behaviors. Study 1 utilized a daily diary protocol in which participants reported on the events they experienced, feelings that they had, behaviors that they enacted, and satisfaction with relationships. Some of these variables captured problematic social interactions that tend to produce maladaptive interpersonal behavior (e.g., provocation); other variables were aligned with more positive occurrences. Analyzing daily event variables will provide information about event frequencies as well as tendencies to react to such occurrences as a function of interpersonal competence levels. In addition, some exploratory

analyses investigated the role of more particular social cognitive processes in accounting for daily life patterns.

Hypothesis 6: People who are interpersonally competent should experience fewer problems in their daily social interactions, enact fewer maladaptive behaviors, and experience greater satisfaction with their relationships than those who are less competent.

Hypothesis 7: People who are interpersonally competent should be less reactive to interpersonally negative events, relative to people low in interpersonal competence.

Exploratory Question 2: Do different cognitive processes link up to different daily experiences? For instance, people who tend to perceive scenarios as more hostile than they actually are might tend to perceive more hostility in their daily life as well. By contrast, goal activation patterns may be more strongly linked to actual behavior (Higgins, 1996). These differential process-outcome ideas will be tested by comparing the strength of the relevant process-outcome coefficients.

A third goal was to investigate how interpersonally competent people are perceived by others. Study 2 related participants' interpersonal competence scores to informant-based reports. These reports came from friends and family. The informants provided a variety of information including perceptions of the participant, the participant's skills and behaviors, and the quality of their relationship with the participant.

Hypothesis 8: People who are interpersonally competent should be more positively evaluated by their friends and family in comparison to those who are less interpersonally competent.

Exploratory Question 3: How do more particular social cognitive processes (e.g., situation perception) relate to informant impressions of the target? On one hand, if

cognitive processes are the mechanism that produce a person's tendencies toward certain behaviors (Mischel, 1973), then these processes should influence how others feel about the person. Yet, at the same time, an overt behavior is likely to have much more of a direct effect on a relationship than an isolated cognitive process. Or, stated in other terms, informants may not be sensitive to the precise cognitive process that led to a socially inappropriate behavior – only to the behavior itself. Thus, it might not necessarily be expected that the underlying process measures would correlate with the informant-reported outcomes as strongly as a more general interpersonal competence score does.

Finally, it is important to establish discriminant validity. The global trait approach is the most straightforward and easy-to-administer approach. Despite concerns about the fidelity of such global, self-reported assessments, this approach has still enjoyed considered success in identifying people likely to succeed or struggle in their interpersonal relationships (Jensen-Campbell et al., 2010). Therefore, it is important to show that the integrated approach explains variance beyond simply asking people “are you a nice person?” or “are you a good friend”?

Hypothesis 9: By incorporating elements of situational specificity and underlying cognitive processes, the integrated model should explain variance beyond what is explained by the global trait approach. Therefore, any significant findings should remain significant even after controlling for self-reported personality.

GENERAL METHODS

General Lab Procedures

Participants were NDSU students who were recruited through SONA, an online participant management system. There were no restrictions on participation, other than a willingness to complete all requirements of the study. Participants first reported to a lab in groups of six or fewer. They were given in-depth instructions about the study, they signed consent forms, and they also provided any contact information needed for the portions of the studies that occurred outside the lab. Then, participants were placed in individual computer rooms within which they completed the measures for the integrated interpersonal competence model, a demographic survey, and the questionnaires for the control variables.

General Measures

The Integrated Interpersonal Competence Model Assessment

A previously developed friendship-based SJT (Persich et al., in press; Persich & Robinson, 2020) provides a solid basis for the current research. The validated situations and responses provide the situational specificity advocated by the social cognitive approach while the overall competence score that is produced by averaging across scenarios approximates the broad generalizability of the global trait approach. However, the friendship SJT (Persich et al., in press) still suffers from the same issues that all other SJTs do. Namely, it focuses on describing the judgments that people make without explaining *why* people are making those judgments. A key element of the integrated model is exploring such “why” issues with depth and nuance. Accordingly, in the present research, the original SJT was expanded to incorporate elements of social information processing (Crick & Dodge, 1994; Dodge et al., 1986). In addition, the expanded SJT used the interpersonal circumplex to guide judgments and responses. This

expanded SJT, termed the Integrated Interpersonal Competence Model (IICM), is included in Appendix A.

The IICM begins by gauging participants' perception of the situation. Each of the 10 scenarios from the original friendship SJT were presented on their own, with no ways of responding to the situation attached. Participants were asked to read each scenario and indicate the extent to which the scenario protagonist's friend was acting in each of the four circumplex-defined ways (hostile, friendly, dominant, submissive). Before this task, participants were given definitions of hostility, friendliness, dominance, and submission to ensure that they understood what they were being asked to rate. Next, participants rated the extent to which each of the 10 scenarios would trigger hostile, friendly, dominant, and submissive goals. Again, the scenarios were presented without response options and participants were given definitions and examples of the different types of goals in order to reduce confusion.

After completing the situation perception and goal formation portions of the measure, participants were asked to evaluate the ways of responding. The ways of responding were presented in a "decapitated" manner (Krumm et al., 2015). That is, the ways of responding were presented without the scenario attached so that the ratings would not be influenced by a confounding of the situational and response elements. In this task, participants were asked to rate how hostile, friendly, dominant, and submissive each of 40 ways of responding are. Finally, the scenarios and ways of responding were put together. Participants made ratings of how likely they would be to do the response if they were in the situation. All participants followed the same order for judgment type (situation perception -> goals -> response rating -> behavioral tendency rating), but scenarios, responses, and interpersonal trait ratings varied in a randomized order. There was also a break between the processing part of the protocol (perception, goals, and

response ratings) and the behavioral tendency ratings so that the behavioral tendency rating would not be heavily influenced by the preceding activities.

Demographic and Control Variables

In addition to the IICM, participants completed several demographic and control questionnaires in the lab. The participants were asked to report basic demographic information, such as age, sex, and race. They were also asked to report their ACT scores. These ACT scores served as an indicator of general intelligence (Koenig, Frey, & Detterman, 2007), and were used as a control variable to ensure that the IICM assesses more than just general mental ability or reading comprehension (McDaniel et al., 2007). Finally, participants were asked to self-report their interpersonal characteristics using the Interpersonal Adjectives Scales (Wiggins et al., 1988). Based on previous research (Gurtman, 1999), it would be expected that interpersonal competence would correlate with self-reported friendliness and dominance. However, any relationships between interpersonal competence and social outcomes should remain significant when controlling for these self-reported characteristics.

STUDY 1: INTERPERSONAL COMPETENCE IN DAILY LIFE

Study 1 had two main purposes. First, this study conducted a full-scale investigation into the processes that underlie people's behavioral responses to friendship-relevant situations. By assessing people's perceptions of the situation, goals, and evaluation of responses, and filtering these processes through the interpersonal circumplex framework, it may be possible to explain some of the variance in interpersonal competence. A second goal of the study is to examine how people's responses to hypothetical situations and the processes that drive those responses translate into their everyday life experiences. To do so, Study 1 included a daily diary component that captured daily events, feelings, behavior, and satisfaction.

Methods

Participants and Procedure

The daily diary portion of the study followed sample-size recommendations for research using multi-level modelling (Fleeson, 2007; Scherbaum & Ferrer, 2009). A multi-level power analysis using the MLPowSim software (Browne, Golalizadeh-Lahi, & Parker, 2009) revealed that a level 2 sample size of 160 and a level 1 sample size of at least 9 days/person should produce an estimated power of .80 to detect small to medium effects for cross level interactions ($\alpha = .05$, two-tailed). Given that there is often attrition over the course of a daily diary study, a recruitment target of 190 participants was set.

This study was completed in two parts. First, participants were asked to report to a laboratory where they completed a variety of questionnaires including the previously described IICM and control variables. At this time, they were also asked to provide contact information for the daily section of the study. This portion of the study was run for two weeks. Due to concerns about subject pool usage, anyone who did not have a complete set of data from the laboratory

portion was excluded from participating in the daily diary section. The participants who did have complete data began to receive daily emails with a link to an internet-based Qualtrics survey after the laboratory portion of the study was fully completed. These emails were sent out at 7:00 pm each day and they had until 9:00 am the next morning to complete the surveys. At 9:00 am, the link to the survey was disabled as a way to minimize error due to length of retrospection. Emails were sent every day for 14 days.

To ensure the quality of the data and to increase the power of within-person analyses, there was an a priori rule to drop participants with fewer than 9 days of daily reports (West, Ryu, Kwok, & Cham, 2011). Participants were given a warning after their 4th and 5th missed survey and then dropped from the mailing list after their 6th missed survey. Participants were also screened for issues with patterned responding, overly fast survey completion (e.g., multiple surveys under 2 minutes), and multivariate outliers. In total, 217 people participated in the laboratory portion of the study. Of these 217, 9 did not fully complete the IICM, 3 were identified as overly fast and patterned responders, and 14 completed fewer than 9 of the daily surveys. This resulted in a well-powered sample of $n = 191$ ($M_{age} = 18.66$, $SD_{age} = 1.35$, 75% female, 92% Caucasian). These participants completed a total of 2402 daily surveys.

Laboratory Measures

During the laboratory portion of the study, participants completed the IICM, which will be described in more detail below. They also reported their ACT score as a proxy for general intelligence ($M = 23.74$, $SD = 3.61$). Finally, they completed the Interpersonal Adjectives Scale (Wiggins et al., 1988), which is a 64-item assessment of interpersonal characteristics. The scale consists of 8 subscales for octants of the IPC (see Figure 1). However, to parallel the IICM conceptualization and for the sake of parsimony, IAS scores were condensed using Wiggins and

Broughton's (1991) formula for scoring the IAS along the warmth and dominance dimensions. Using a weighted formula, the 8 octant scores can be reduced to two factor scores that can range from approximately +3 (reflecting high warmth or high dominance) to -3 (reflecting high hostility or high submission). These scores captured tendencies for interpersonal warmth ($M = 1.54$, $SD = .74$), and tendencies for interpersonal dominance ($M = .87$, $SD = .91$).

Daily Measures

Events. The measures of daily events focused on positive and negative experiences that people could have throughout their day. One specific type of negative event assessed was provocation, which is a common trigger of aggressive and antisocial behavior (Wilcowski & Robinson, 2008). Participants rated their experiences of daily provocation (e.g., "someone criticized me today") on a 4-point scale ranging from 0 = *not a single time* to 3 = *more than two times* ($M = 1.30$, $SD = .50$, $\alpha = .72$). Participants also reported on broader positive and negative social experiences using a checklist format. Participants were presented with a checklist of 15 positive social events (e.g., "I was complimented by someone") followed by a checklist of 15 negative social events (e.g., "A friend did not return a call/text"). Participants were instructed to check all the events that occurred to them on a given day. In general, positive events occurred more frequently ($M = 5.04$, $SD = 2.40$) than negative events ($M = .69$, $SD = 1.45$).

Feelings. Positive and negative feelings can be elicited by events and affect behavior (Orobio de Castro, Slot, Bosch, Koops, & Veerman, 2003). Participants were asked to indicate the extent to which they experienced certain feelings each day on a 5-point scale ranging from 1 = *not at all* to 5 = *extremely*. These feelings included antisocial feelings (e.g., "angry", $M = 1.68$, $SD = .79$, $\alpha = .75$) and prosocial feelings (e.g., "caring", $M = 3.65$, $SD = .90$, $\alpha = .81$).

Behaviors. Interpersonal competence should matter for the types of behavior one enacts on a day-to-day basis. The measures of daily behavior were structured so that they mirrored the interpersonal ratings of the situations in the SJT. The participants were asked to report the frequency of their behaviors using a 4-point scale, $0 = \text{not a single time}$; $3 = \text{more than 5 times}$ (*i.e., often*). The behaviors targeted friendly (e.g., “helped someone”, $M = 1.79$, $SD = .54$, $\alpha = .60$), hostile (e.g., “insulted someone”, $M = 1.26$, $SD = .41$, $\alpha = .71$), dominant (e.g., “told someone what to do”, $M = 1.78$, $SD = .54$, $\alpha = .55$), and submissive actions (e.g., “let others make decisions for me”, $M = 1.68$, $SD = .53$, $\alpha = .77$).

Satisfaction. The quality of interpersonal relationships is a highly important and consequential outcome (Lucas & Dyrenforth, 2006). Participants were asked to indicate the extent to which they felt satisfied with their self, their friends, and their social interactions, using a 5-point scale, $1 = \text{not at all}$; $5 = \text{extremely}$ ($M = 3.46$, $SD = .92$, $\alpha = .82$).

Results

IICM Scoring

The IICM is a complex model and produced a rich source of information that can be used to understand interpersonal competence. As such, the IICM was scored in multiple ways to answer different questions, as summarized in Table 1 (pg. 26). The first set of scores tracked tendencies toward effective behavior, as well as personality-like tendencies toward hostile, friendly, dominant, or submissive behavior. Another set of scores assessed processing abilities in terms of one’s accuracy in situation perception, goal formation, and response evaluation. A third set of scores examined mean level tendencies toward hostile, friendly, dominant, and submissive processing. A final set of scores examined situation-specific relationships between a person’s processing of information and their likelihood of enacting a given response.

Interpersonal Competence and Behavioral Tendencies. It is important to note that the basic friendship SJT (described in the supporting results section) was not specifically written so that certain responses were effective or ineffective, hostile, friendly, dominant, or submissive. Rather, the measure simply tracks natural variations along the aforementioned dimensions (Persich et al., in press). These variations can be quantitatively captured using consensus-based scoring keys based on “wisdom of the crowd” principles (Legree, Psotka, Tremble, & Bourne, 2005; Surowieki, 2004). In consensus based scoring, individuals who have knowledge will tend to converge on similar ratings whereas those without knowledge will tend to diverge (Legree et al., 2005). Thus, aggregating people’s responses should reveal normatively correct answer tendencies that are unbiased by idiosyncratic perceptions. Following the calculation of these normative standards, individual responses can be rescored in terms of their level of agreement with collective wisdom, defined in terms of the percentage of individuals who gave the same rating. This procedure has been successfully applied to assessing people’s knowledge of effective behavior (Krishnakumar et al., 2016; Persich et al., in press), and also to linking individuals’ behavioral tendency responses to norms for effectiveness, helpfulness, and practicality (Persich & Robinson, 2020).

By using variations of this consensus-based scoring procedure, it was possible to compute several ability-based scores. One score (the “classic” interpersonal competence score: Persich & Robinson, 2020) assessed how effective the self’s behavioral responses would tend to be. A person would receive a high score if they indicated that they would be likely to enact behaviors that are considered to be effective, and unlikely to enact behaviors that are considered to be ineffective (Persich & Robinson, 2020), as determined by an external norming sample. This scoring system is illustrated in Table 2. These scores are treated as global assessments of

interpersonal competence that can then be linked to relevant outcomes. The scores in the present study were similar to past research using the same measure and response instructions ($M = .2978$, $SD = .0379$, $\alpha = .66$).

Table 2

Example Scenario, Effectiveness Norms, Self-Likelihood Ratings, and Their Scoring

| Scenario: Jade will get a poor grade on a joint project if her friend, who is also involved in the project, does not start doing something. | | | | | | | |
|--|-------------------------|-----|-----|-----|-----|-----------------|-------|
| Ways of Responding: <i>i.</i> Prioritize the friendship over the project, <i>ii.</i> Prod the friend until he or she does something, <i>iii.</i> Explain the importance of the project, <i>iv.</i> Hope the friend gets started soon | | | | | | | |
| Question: If you were in the situation, how likely would it be that YOU would do the following? 1 = not at all likely, 5 = very likely | | | | | | | |
| Way | Effectiveness Norms (%) | | | | | Self-Likelihood | Score |
| | 1 | 2 | 3 | 4 | 5 | | |
| <i>i.</i> Prioritize | 33% | 37% | 18% | 08% | 04% | 3 | .18 |
| <i>ii.</i> Prod | 06% | 12% | 32% | 32% | 18% | 2 | .12 |
| <i>iii.</i> Explain | 00% | 01% | 08% | 34% | 57% | 5 | .57 |
| <i>iv.</i> Hope | 25% | 31% | 12% | 13% | 19% | 2 | .31 |

Note: The hypothetical participant made self-likelihood ratings of 3, 2, 5, and 2 and would receive a scenario-specific friendship competence score of .2950 (the average of .18, .12, .57, and .31).

Other scores linked behavioral tendency ratings to the new norms collected for hostility, friendliness, dominance, and submission. That is, using the new sample from Study 1, consensus information was gathered on whether a particular response was considered hostile, for instance. These norms were then connected to people’s individual behavioral tendency ratings. So, if a person said that they would be likely to perform behaviors that others consider hostile and unlikely to perform behaviors that others consider not hostile, the subject would receive a high hostile tendency score. These scores represent personality-type tendencies toward interpersonal characteristics. In general, these scores indicated that people were less likely to endorse responses that were considered hostile ($M = .1653$, $SD = .0434$, $\alpha = .62$) or submissive ($M = .1577$, $SD = .0288$, $\alpha = .58$). By contrast, they were more likely to endorse responses that were friendly ($M = .2627$, $SD = .0645$, $\alpha = .71$) and dominant ($M = .2362$, $SD = .0375$, $\alpha = .70$), although these averages were slightly lower than the interpersonal competence score.

Processing Tendencies. In addition to assessing processing abilities, it was also desirable to quantify particular processing tendencies. This was done by calculating the means of a person's ratings for each of the social cognitive judgments. This scoring system produced 12 means – average situation perception (x4 dimensions), average goal activation (x4 dimensions), and average evaluation of the response (x4 dimensions). These scores should provide insights into participants' general processing tendencies.

Descriptive statistics and correlations between processing tendency scores can be found in Table 3. Means tended to fall around the midpoint of the scale or slightly below. There was also variability in these scores suggesting that individuals did vary in their perceptions, goals, and evaluations. Interestingly, the inter-correlations between the scores were mostly positive, which was contrary to what would be expected based on the IPC literature. For example, tendencies to process situations, goals, and responses as dominant should be negatively correlated with tendencies to process situations, goals, and responses as submissive, but these shared positive correlations, which ranged from $r = .02$ to $r = .31$.

Processing Abilities. A key question of the integrated interpersonal competence model is how underlying cognitive abilities are related to interpersonal competence. This was assessed by creating an accuracy score that determined whether participants had the right situational perceptions, appropriate goals, and correct judgments of the responses. This was done using normative scoring procedures described immediately above. For example, the consensus-based technique was used to determine how hostile a situation was normatively perceived to be, and then to quantify the degree to which an individual participant was either aligned or misaligned with the sample's consensus. These scores can be considered in terms of social-cognitive abilities.

Table 3

Descriptive Statistics and Correlations Between Processing Tendency Scores

| Predictor | <i>M</i> | <i>SD</i> | α | 1. | 2. | 3 | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. |
|------------------|----------|-----------|----------|------|-------|------|-------|------|------|------|------|------|------|------|
| Hostile | | | | | | | | | | | | | | |
| 1. Sit. Percep. | 2.57 | .53 | .72 | -- | | | | | | | | | | |
| 2. Goal | 3.01 | .49 | .70 | .35* | -- | | | | | | | | | |
| 3. Resp. Eval. | 2.30 | .41 | .88 | .43* | .44* | -- | | | | | | | | |
| Friendly | | | | | | | | | | | | | | |
| 4. Sit. Percep. | 2.60 | .29 | .29 | -.04 | -.16* | .11 | -- | | | | | | | |
| 5. Goal | 2.63 | .34 | .41 | -.06 | -.10 | .08 | .12 | -- | | | | | | |
| 6. Resp. Eval. | 3.15 | .28 | .70 | .17* | .05 | -.05 | .22* | .03 | -- | | | | | |
| Dominant | | | | | | | | | | | | | | |
| 7. Sit Percep. | 2.97 | .53 | .62 | .48* | .17* | .24* | .06 | -.02 | .24* | -- | | | | |
| 8. Goal | 3.07 | .59 | .67 | .28* | .46* | .38* | -.07 | .00 | .26* | .38 | -- | | | |
| 9. Resp. Eval. | 3.03 | .52 | .88 | .28* | .30* | .45* | .04 | -.01 | .29* | .41* | .57* | -- | | |
| Submissive | | | | | | | | | | | | | | |
| 10. Sit. Percep. | 2.18 | .53 | .64 | .27* | .05 | .22* | .04 | .11 | .18* | .13 | .25* | .29* | -- | |
| 11. Goal | 2.36 | .59 | .62 | .22* | .34* | .39* | -.15* | .09 | .10 | .12 | .34* | .33* | .36* | -- |
| 12. Resp. Eval. | 2.51 | .44 | .84 | .25* | .18* | .34* | .01 | .08 | .23* | .18* | .28* | .23* | .29 | .46* |

Descriptive statistics and correlations between accuracy scores can be found in Table 4. In general, these processing abilities tended to be positively correlated with each other, suggesting that there may be some general form of ability that allows a person to accurately perceive situations, form appropriate goals, and evaluate responses regardless of the interpersonal characteristics involved. One interesting point to highlight is that the averages for hostile and friendly processing tended to be higher than those for dominance and submission. In the context of consensus-based scoring, a higher average means that the norming sample consistently had stronger agreement, whereas a lower average means that the sample consistently disagreed. The higher averages for hostility and friendliness perhaps suggest that these two circumplex dimensions were easier to rate.

Situation-Specific Processing. The previous scoring methods examined tendencies and accuracy by averaging across the situation. However, there is utility in examining the relationships between specific situations, responses, and behavioral tendencies. First, because participants rated the situations and responses along the IPC dimensions, it is possible to characterize the situations and responses by their location in the interpersonal circumplex (Wiggins & Broughton, 1991). This was done by subtracting the hostility rating from the friendliness rating, and submission rating from the dominance rating to produce scores along the x-axis and y-axis, respectively. The angular location within the circumplex was then determined using the formula: $\tan^{-1}(y/x)$ (Wiggins & Broughton, 1991).

Table 4

Descriptive Statistics and Correlations Between Processing Accuracy Scores

| Predictor | <i>M</i> | <i>SD</i> | α | 1. | 2. | 3 | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. |
|------------------|----------|-----------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Hostile | | | | | | | | | | | | | | |
| 1. Sit. Percep. | .36 | .07 | .46 | -- | | | | | | | | | | |
| 2. Goal | .43 | .09 | .54 | .32* | -- | | | | | | | | | |
| 3. Resp. Eval. | .45 | .08 | .87 | .50* | .46* | -- | | | | | | | | |
| Friendly | | | | | | | | | | | | | | |
| 4. Sit. Percep. | .45 | .07 | .31 | .32* | .30* | .28* | -- | | | | | | | |
| 5. Goal | .52 | .10 | .57 | .27* | .50* | .39* | .32* | -- | | | | | | |
| 6. Resp. Eval. | .45 | .05 | .74 | .24* | .33* | .50* | .32* | .42* | -- | | | | | |
| Dominant | | | | | | | | | | | | | | |
| 7. Sit Percep. | .28 | .03 | .13 | .20* | -.01 | .05 | .03 | .05 | .17* | -- | | | | |
| 8. Goal | .28 | .04 | .32 | .10 | .16* | .08 | .07 | .14* | .13 | .23* | -- | | | |
| 9. Resp. Eval. | .29 | .04 | .66 | .15* | .20* | .32* | .10 | .27* | .35* | .26* | .25* | -- | | |
| Submissive | | | | | | | | | | | | | | |
| 10. Sit. Percep. | .30 | .05 | .49 | .32* | .23* | .28* | .09 | .28* | .11 | .16* | .17* | .23* | -- | |
| 11. Goal | .25 | .04 | .54 | .17* | .19* | .34* | .04 | .17* | .09 | .07 | .05 | .04 | .35* | -- |
| 12. Resp. Eval. | .33 | .07 | .86 | .34* | .31* | .56* | .16* | .32* | .32* | .05 | .07 | .56* | .42* | .36* |

Secondly, following Martin-Raugh and Kell (in press), it is likely that the particular perceptions of a situation, goal formed in response to the situation, and evaluation of the potential ways of responding contribute to an individual's likelihood of enacting a behavior. To test these hypotheses, the IICM ratings were converted into a multi-level model structure in which response-level ratings (response evaluations and behavioral tendency ratings) were nested inside scenarios, and scenario-level ratings (situation perceptions and goal formations) were nested inside persons (Nezlek, 2008). To properly evaluate within-person processes, the situation perception and goal formation ratings were person-centered, and the response evaluation ratings were scenario-centered.

IICM Findings

Processing Tendencies. Previous research on aggressive children tends to suggest that a tendency toward perceiving situations as hostile and forming hostile goals contributes to lower competence (Crick & Dodge, 1996). Following such logic, it was hypothesized that mean-level tendencies to process information in certain interpersonal ways would contribute to a person's interpersonal competence score. This hypothesis was not supported. As shown in Table 5, none of the processing tendency scores were significantly correlated with the interpersonal competence score. It is possible that these scores are either not measuring what they are supposed to or are simply failing to capture the unique variance associated with the characteristics of the particular situations and responses. In either case, it appears as if processing tendencies may not be the correct way to examine the social-cognitive processes.

Processing Abilities. It was hypothesized that people's abilities to accurately perceive situations, form appropriate goals, and properly evaluate responses should contribute to their interpersonal competence score (Martin-Raugh & Kell, in press). This hypothesis was partially

supported. As shown in table 5, abilities to accurately assess hostility and friendliness in the situations, goals, and responses were positively correlated with the interpersonal competence score. However, there were no significant relationships with accuracies related to dominance or submission.

Table 5

Correlations Between Processing Tendencies, Abilities, and Interpersonal Competence

| Predictor | <u>Processing Tendencies</u> | | <u>Processing Ability</u> | |
|----------------------|------------------------------|----------|---------------------------|----------|
| | <i>r</i> | <i>p</i> | <i>r</i> | <i>p</i> |
| Hostile | | | | |
| Situation Perception | .08 | .261 | .05 | .444 |
| Goal Formation | .02 | .812 | .14 | .048 |
| Response Evaluation | -.08 | .279 | .22 | .001 |
| Friendly | | | | |
| Situation Perception | -.12 | .080 | .27 | <.001 |
| Goal Formation | .07 | .310 | .10 | .162 |
| Response Evaluation | .05 | .490 | .26 | <.001 |
| Dominant | | | | |
| Situation Perception | .02 | .820 | .02 | .780 |
| Goal Formation | -.00 | .981 | -.01 | .849 |
| Response Evaluation | .11 | .108 | .05 | .479 |
| Submissive | | | | |
| Situation Perception | .05 | .505 | -.06 | .428 |
| Goal Formation | -.01 | .932 | .03 | .702 |
| Response Evaluation | -.09 | .198 | .07 | .327 |

Behavioral Tendencies. According to research on the IPC, friendliness and dominance appear to be most beneficial to relationships, whereas hostility and submission contribute to interpersonal problems (Horowitz et al., 1997). Results supported this notion. Behavioral tendencies toward friendliness and dominance were significantly correlated with the interpersonal competence score at $r = .58, p < .001$, and $r = .35, p < .001$, respectively. Conversely, there were significant negative correlations with both hostility, $r = -.18, p = .008$, and submission, $r = -.19, p = .006$.

Situation Specific Processing. Because participants rated the situations and responses according to their interpersonal characteristics, it was possible to characterize the situations and responses according to their location in the interpersonal circumplex. Figure 3 illustrates the normative location of the scenarios, on the basis of how they were perceived, and in terms of what types of goals they would elicit. The results showed that most of the scenarios were either perceived to be friendly, or as a mix of hostility and dominance. Interestingly, with the exception of the Jack scenario, the goals formed in response to the situation were typically very close to how the situation was perceived. So, if the situation was one that was perceived to contain hostility and dominance, people tended to also form hostile-dominant goals. If the situation was perceived to be a friendly one, people also tended to form friendly goals. These findings are somewhat in line with previous theorizing on how interpersonal complementarity should operate (Orford, 1986).

The normative locations of the response options are described in Table 6. Approximately 37.5% could be described as friendly-dominant, 25% as hostile-dominant, 10% as hostile-submissive, and 27.5% as friendly-submissive. As a further exploration of the relationship between interpersonal characteristics and effectiveness, the average rating of effectiveness (as determined by the norming sample used to score interpersonal competence; *1 = not at all effective; 5 = very effective*) for each of the 40 ways of was compared to the location of the response option in the circumplex. As shown in Table 6, average effectiveness scores tended to be highest for response options that were deemed to be friendly and dominant. The effectiveness scores then fell as the response options become more hostile, and were particularly low when the responses are considered to be hostile and submissive. Finally, the effectiveness scores started to rise again as the response options are rated as become friendlier.

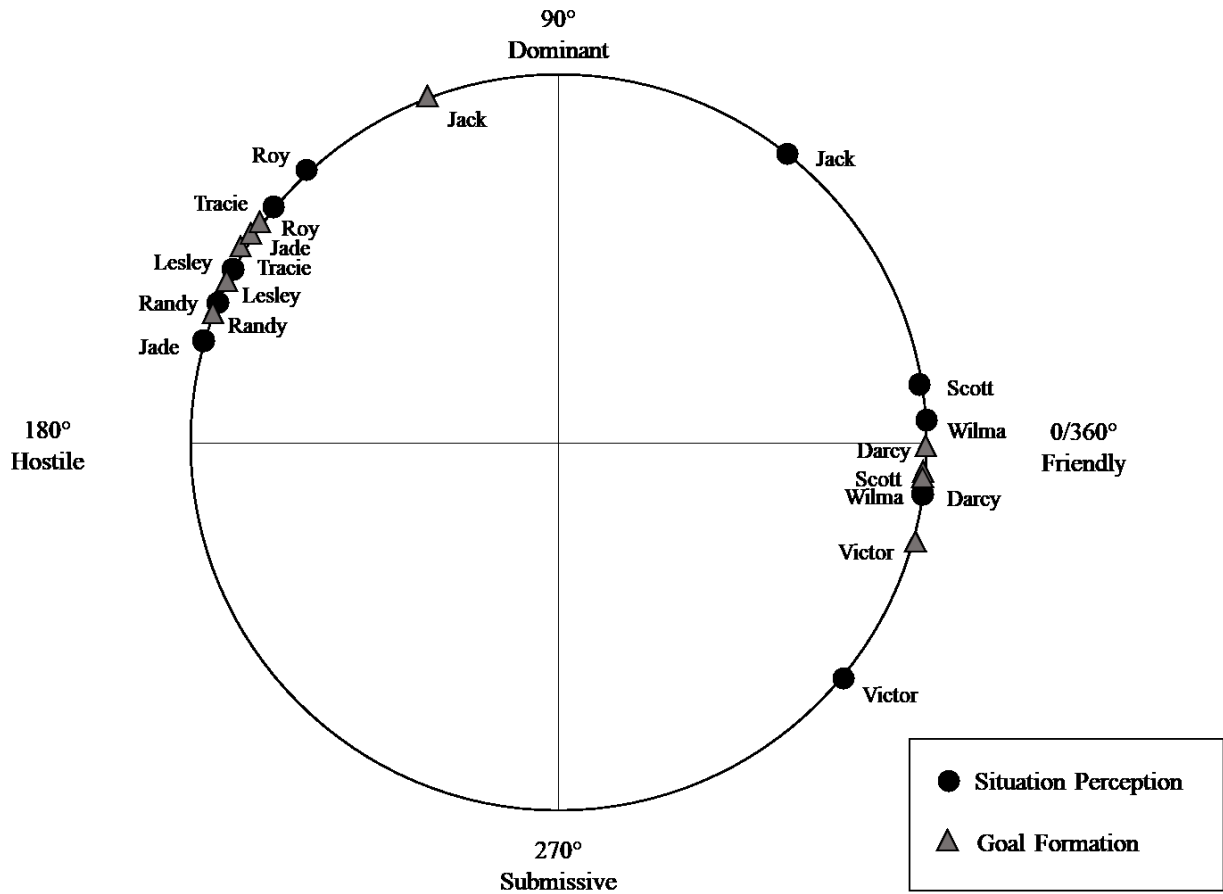


Figure 3. Circumplex location of scenarios as a function of situation perception and goal formation.

Note: Please see appendix A (pg. 111) for full description of scenarios. Black dots and labels on the outside of the circumplex represent locations based on situation perception. Gray triangles and labels on the inside of the circumplex represent locations based on goals.

Table 6

Location of Response Options in the Circumplex and their Average Effectiveness

| Response Label | Description | Circumplex Location | Avg. Eff. |
|---------------------------------|----------------------------|---------------------|-----------|
| Friendly-Dominant (0°-90°) | | | |
| Victor 1 | Offer to do chores | 0.53 | 3.51 |
| Wilma 2 | Buy a gift | 4.59 | 3.01 |
| Scott 4 | Say it's a good idea | 7.36 | 2.50 |
| Wilma 1 | Express gratitude | 8.30 | 4.41 |
| Victor 2 | Pay a visit | 10.63 | 4.38 |
| Darcy 4 | Get excited | 12.87 | 4.15 |
| Scott 2 | Help the friend | 17.32 | 4.28 |
| Darcy 2 | Plan a dinner | 18.19 | 3.84 |
| Jade 3 | Explain importance | 41.99 | 4.47 |
| Jack 3 | Figure out why | 44.23 | 3.40 |
| Scott 1 | Say it's a bad idea | 48.96 | 3.07 |
| Randy 2 | Ask why | 51.32 | 4.06 |
| Roy 2 | Ask friend to stop | 56.12 | 4.41 |
| Roy 3 | Change email | 85.05 | 4.21 |
| Lesley 4 | Tell truth | 85.16 | 3.48 |
| Hostile-Dominant (90°-180°) | | | |
| Tracie 1 | Confront friend | 100.18 | 4.16 |
| Victor 3 | Stay away | 102.59 | 2.57 |
| Randy 1 | Confront friend | 103.03 | 3.95 |
| Lesley 3 | Reprimand friend | 109.72 | 3.29 |
| Darcy 1 | Research friend | 115.02 | 2.81 |
| Jade 2 | Prod friend | 131.67 | 3.44 |
| Roy 4 | Get mad | 140.52 | 2.05 |
| Tracie 3 | Retaliate | 142.80 | 1.62 |
| Lesley 1 | Express anger | 143.22 | 2.22 |
| Randy 3 | Ignore in return | 164.17 | 1.79 |
| Hostile-Submissive (180°-270°) | | | |
| Victor 4 | Act as if nothing's wrong | 183.69 | 2.43 |
| Jack 1 | Withdraw | 193.43 | 1.48 |
| Wilma 3 | Ignore the comment | 215.25 | 1.57 |
| Jack 2 | Mope | 241.04 | 1.47 |
| Friendly-Submissive (270°-360°) | | | |
| Roy 1 | Worry | 279.74 | 2.81 |
| Tracie 4 | Admit to being paranoid | 300.35 | 2.18 |
| Tracie 2 | Try not to act embarrassed | 302.65 | 3.39 |
| Lesley 2 | Accept blame | 304.78 | 2.33 |
| Wilma 4 | Try not to get excited | 309.39 | 2.61 |
| Randy 4 | Convince | 315.22 | 2.46 |
| Jade 1 | Prioritize friendship | 321.77 | 2.11 |
| Jade 4 | Hope | 333.53 | 2.68 |
| Darcy 3 | Remember good times | 342.69 | 4.26 |
| Jack 4 | Volunteer | 354.50 | 4.16 |
| Scott | Loan money | 358.81 | 2.49 |

Note: For full descriptions of the response options, please see Appendix A (pp. 111).

In addition to characterizing situations and responses according to their circumplex location, situation-specific analyses were run in order to examine the relationship between how people process the information in the situations and responses, and their likelihood of endorsing a particular behavior. This was examined using multilevel-modeling. As shown in Table 7, an individual's social cognitions were associated with the likelihood that the individual would enact behaviors. In terms of situation perceptions, individuals were more likely to act, in general, when they perceived a situation as hostile, whereas they were less likely to act in response to a situation they perceived to be friendly or submissive. These findings seem to be in line with the idea that negativity prompts action whereas positivity is less demanding (Fredrickson & Branigan, 2005). Individuals were also more likely to act when they had hostile goals, and less likely to act when they had submissive ones. Finally, the results showed that evaluations of the response options were most strongly linked to likelihood of engaging in behavior. Individuals were much less likely to engage in responses that they considered hostile and submissive, and much more likely to engage in responses that they perceived to be friendly and dominant.

Table 7

Relationships Between Situation-Specific Social Cognition and Likelihood of Enacting Behavior

| Predictor | <i>b</i> | <i>t</i> | <i>p</i> |
|----------------------|----------|----------|----------|
| Hostile | | | |
| Situation Perception | .04 | 3.49 | .001 |
| Goal Formation | .02 | 1.99 | .047 |
| Response Evaluation | -.19 | -16.24 | <.001 |
| Friendly | | | |
| Situation Perception | -.06 | -4.75 | <.001 |
| Goal Formation | -.01 | -.79 | .431 |
| Response Evaluation | .25 | 24.25 | <.001 |
| Dominant | | | |
| Situation Perception | .02 | 1.43 | .154 |
| Goal Formation | .02 | 1.39 | .165 |
| Response Evaluation | .16 | 13.80 | <.001 |
| Submissive | | | |
| Situation Perception | -.03 | -2.22 | .026 |
| Goal Formation | -.03 | -2.40 | .016 |
| Response Evaluation | -.20 | -17.92 | <.001 |

Overall, the findings appear to suggest that the response evaluation is the strongest predictor of behavioral likelihood ratings. However, Martin-Raugh and Kell (in press) suggest that goals should still matter in that individuals should be more likely to enact behaviors when their evaluation of the response match their goals in the situation. Therefore, a series of goal by response evaluation interaction models was tested. In general, there was good support for goal moderation effects. Specifically, there were significant goal x response evaluation interactions for hostility ($t = 12.66, p < .001, \text{Beta} = .11$), friendliness ($t = 9.59, p < .001, \text{Beta} = .07$), and dominance ($t = 4.01, p < .001, \text{Beta} = .04$). The only non-significant interaction was for submission ($t = .13, p = .899, \text{Beta} = .001$). Graphs of the estimated means are displayed in Figures 4-6. There are clearly main effects for response evaluations, but the interaction patterns are consistent – there are cross-over interactions in which individuals are more likely to give a higher behavioral tendency rating when their evaluations align with their goals. For example, Figure 4 shows that in situations where people report having low hostility goals (e.g., this

situation is not one in which I would want to get revenge), they are more likely to do responses that they do not consider hostile (e.g., a helpful action). However, when the situation does elicit a hostile goal (e.g., I would want to get back at the person in this situation), the responses that they had deemed to be hostile appear to be more tempting.

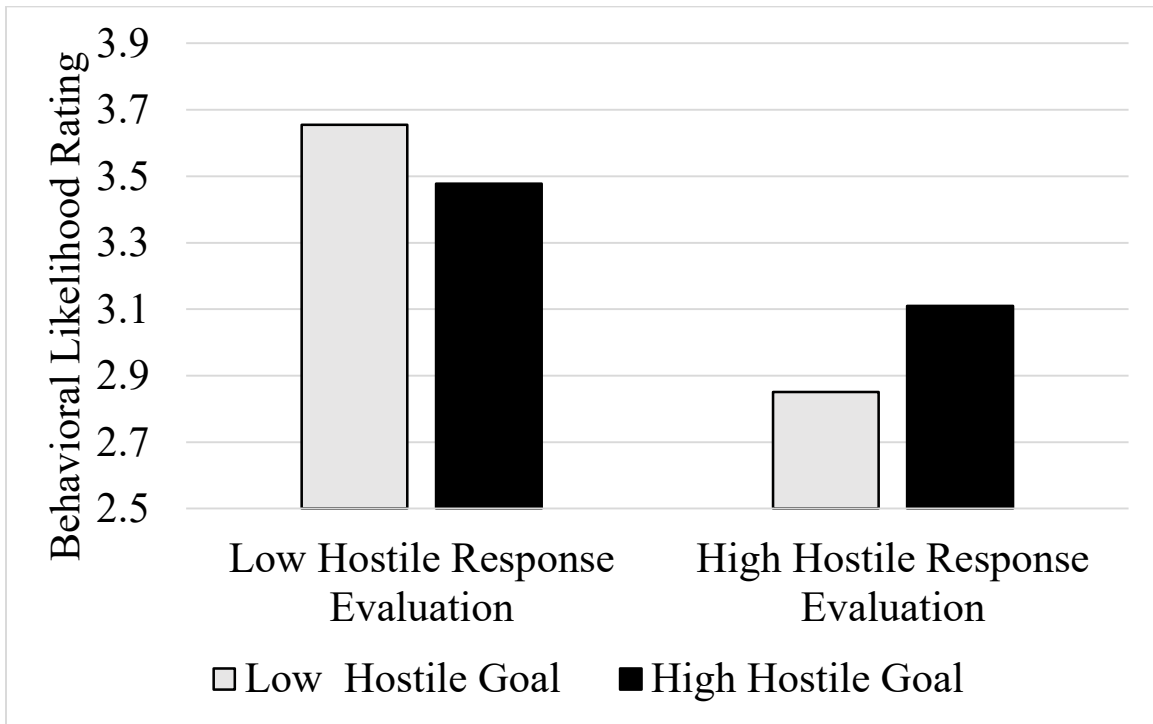


Figure 4. Goal by response evaluation interactions for hostility (Study 1).

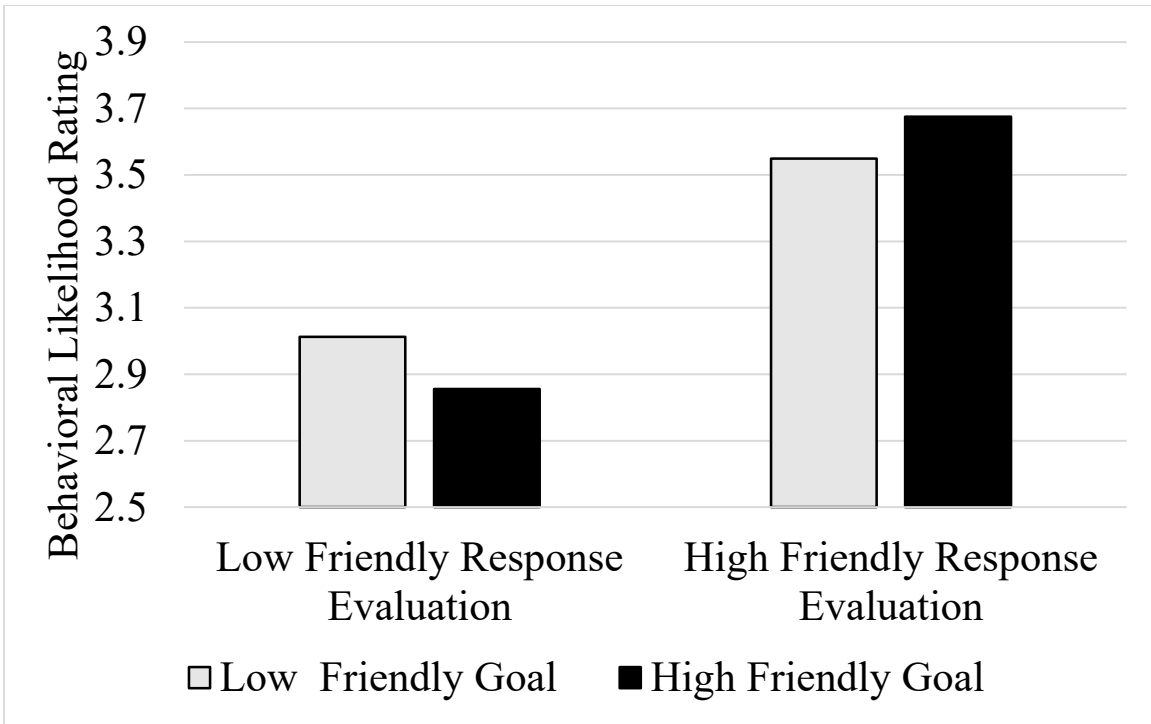


Figure 5. Goal by response evaluation interactions for friendliness (Study 1).

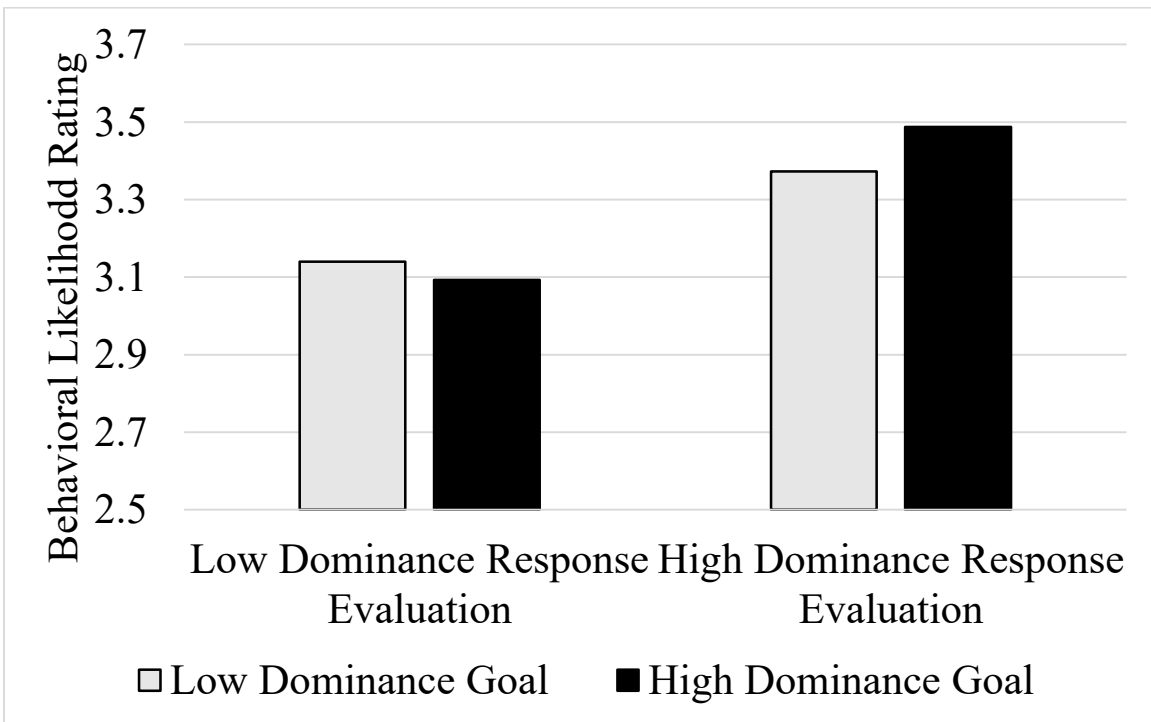


Figure 6. Goal by response evaluation interactions for dominance (Study 1).

Relationships Between Interpersonal Competence and Daily Life Experiences

The second major purpose of Study 1 was to examine the connection between interpersonal competence and daily life outcomes, as well as to explore the relationships between the individual components of the IICM and daily life. Because daily diary data have a nested structure (Nezlek, 2008), the data were analyzed using multilevel modeling (MLM) procedures and the PROC MIXED command in SAS (Singer, 1998). All level 2 predictor variables were standardized and all level 1 predictor variables were person-centered following recommendations (Aiken & West, 1991; Enders & Tofighi, 2007).

Level 2 Main Effects. The associations between interpersonal competence and daily life experiences are shown in Table 8. Individuals with higher interpersonal competence scores tended to experience a greater number of positive social events each day. They also tended to report a higher amount of prosocial feelings and fewer instances of engaging in antisocial and submissive behaviors. Finally, individuals higher in interpersonal competence tended to report higher feelings of daily satisfaction.

Cross Level Interactions. One common source of difficulties in interpersonal relationships is being overly reactive to situations that involve provocation or negativity (Crick & Dodge, 1996). Therefore, it was hypothesized that interpersonal competence would interact with daily events such that highly competent individuals would be less reactive to provocations or negative events because of their tact, skill, and capacity for down-regulating impulsive responses. It is also possible that positive social events could be viewed as more rewarding to highly competent individuals, perhaps due to their skills and higher quality friendships (Demir, Ozdemir, & Weitekamp (2007). This hypothesis was tested using a series of cross level interactions in which interpersonal competence interacted with daily experiences of provocation,

negative events, and positive events to predict feelings, behaviors, and outcomes. Results found no support for reactivity-based hypotheses. Table 9 displays the statistics for the interaction terms. As shown in Table 9, only one of the 21 interactions was significant. The one significant interaction showed that individuals lower in interpersonal competence were more likely to enact submissive behavior on days in which they experienced a higher number of positive events, but this is not necessarily an interaction that would have been expected.

Table 8

Level 2 Main Effects for Interpersonal Competence

| Outcome | <i>b</i> | <i>t</i> | <i>p</i> |
|---------------------------|----------|----------|----------|
| Daily Events | | | |
| Provocation | -.02 | -.98 | .327 |
| Positive Events | .32 | 3.04 | .003 |
| Negative Events | .00 | .04 | .967 |
| Daily Feelings | | | |
| Antisocial Feelings | -.04 | -1.48 | .142 |
| Prosocial Feelings | .14 | 3.31 | .001 |
| Daily Behaviors | | | |
| Hostile Behavior | -.12 | -2.29 | .004 |
| Friendly Behavior | -.01 | -.38 | .701 |
| Dominant Behavior | .00 | .14 | .891 |
| Submissive Behavior | -.08 | -2.96 | .003 |
| Daily Satisfaction | | | |
| With Self | .08 | 1.51 | .134 |
| With Friends | .13 | 2.35 | .020 |
| With Social Interactions | .13 | 2.52 | .013 |
| Total | .13 | 2.35 | .020 |

Table 9

Daily Outcomes as a Function of Interpersonal Competence and Daily Events

| Interaction | Outcome | <i>b</i> | <i>t</i> | <i>p</i> |
|--|---------------------|----------|----------|----------|
| Interpersonal Competence x Provocation | | | | |
| | Antisocial Feelings | -.00 | -.01 | .995 |
| | Prosocial Feelings | -.04 | -.98 | .325 |
| | Friendly Behavior | .05 | 1.86 | .063 |
| | Hostile Behavior | -.02 | -.86 | .392 |
| | Dominant Behavior | .02 | .82 | .413 |
| | Submissive Behavior | -.04 | -1.59 | .113 |
| | Total Satisfaction | -.08 | -1.83 | .068 |
| Interpersonal Competence x Negative Events | | | | |
| | Antisocial Feelings | -.01 | -.42 | .677 |
| | Prosocial Feelings | -.01 | -.30 | .763 |
| | Friendly Behavior | .01 | 1.18 | .240 |
| | Hostile Behavior | -.01 | -.71 | .477 |
| | Dominant Behavior | .01 | .66 | .509 |
| | Submissive Behavior | -.01 | -1.16 | .245 |
| | Total Satisfaction | -.01 | -.68 | .498 |
| Interpersonal Competence x Positive Events | | | | |
| | Antisocial Feelings | .01 | .58 | .565 |
| | Prosocial Feelings | -.01 | 1.20 | .230 |
| | Friendly Behavior | -.00 | -.03 | .974 |
| | Hostile Behavior | -.00 | -.48 | .628 |
| | Dominant Behavior | -.01 | -1.46 | .146 |
| | Submissive Behavior | -.01 | -2.25 | .025 |
| | Total Satisfaction | -.02 | -1.70 | .088 |

Exploratory Analyses

One exploratory question was whether any individual social cognitive component would explain more variance than the others. The situation-specific processing results seemed to suggest that the response evaluations might be the strongest predictor of behavior. Multiple regressions using the processing accuracy scores provided additional support for this notion. All three social cognitive processes were entered as simultaneous predictors of interpersonal competence. For accuracies related to hostility, accurate response evaluation was the only significant predictor, $t = 2.78$, $p = .006$, $\beta = .11$. For accuracies related to friendliness, both

situation perception, $t = 3.13$, $p = .002$, $\beta = .12$, and response evaluation, $t = 2.89$, $p = .004$, $\beta = .15$ were significant predictors. None of the accuracy scores related to dominance or submission were significant.

Turning to relationships between IICM components and daily life experiences, there were questions as to whether the different components may predict different facets of daily life. For example, abilities to accurately form perceptions might be related to reports of daily events whereas behavioral tendencies might be more strongly linked to daily behaviors. To reduce the number of analyses performed, a composite score for each of the three social cognitive abilities was created by averaging the scores for hostility, friendliness, dominance, and submission. Results found that the individual social cognitive abilities were largely unrelated to daily events, feelings, behaviors, or satisfaction. As shown in table 10, the only significant relationships were that abilities to form appropriate goals and abilities to accurately perceive situations were positively associated with prosocial feelings.

The findings concerning behavioral tendencies were more interesting, particularly with respect to tendencies toward hostile and friendly behavior. Individuals with a greater tendency toward hostile behaviors reported more frequent experiences of provocation and instances in which they enacted hostile behaviors. In addition, they tended to experience fewer positive events and lower prosocial feelings. Conversely, individuals with a greater tendency toward friendly behaviors tended to report fewer antisocial feelings and instances of engaging in hostile behavior. These individuals also experienced a greater number of positive events, higher levels of prosocial feelings, and were more satisfied on a daily basis.

Table 10

Daily Outcomes as a Function of Processing Accuracy and Behavioral Tendencies Toward IPC Qualities

| Outcome | SP | G | RE | BT: H | BT: F | BT: D | BT: S |
|---------------------|------|------|------|-------|-------|-------|-------|
| Daily Events | | | | | | | |
| Provocation | -.01 | -.02 | .01 | .07* | -.03 | .05* | -.02 |
| Positive Events | .14 | .01 | .20 | -.37* | .27* | -.04 | -.19 |
| Negative Events | -.04 | -.03 | .04 | .10 | .01 | .10 | -.04 |
| Daily Feelings | | | | | | | |
| Antisocial Feelings | -.02 | .04 | .04 | .05 | -.06* | .00 | -.03 |
| Prosocial Feelings | .02 | .10* | .11* | -.12* | .17* | .02 | -.05 |
| Daily Behaviors | | | | | | | |
| Hostile Behavior | -.01 | -.02 | -.01 | .08* | -.06* | .05* | -.03 |
| Friendly Behavior | .02 | .02 | .01 | .01 | .02 | .03 | -.03 |
| Dominant Behavior | .02 | -.02 | .03 | .02 | -.03 | .03 | -.05* |
| Submissive Behavior | -.02 | -.00 | .00 | .01 | -.05 | -.04 | -.01 |
| Daily Satisfaction | | | | | | | |
| Total | .03 | .09 | .08 | -.06 | .11* | .07 | -.08 |

Note: SP = Situation perception accuracy; G = Goal formation accuracy; RE = Response evaluation accuracy; BT:H = Behavioral tendencies toward hostile behaviors; BT:F = Behavioral tendencies toward friendly behavior; BT:D = Behavioral tendencies toward dominant behavior; BT:S = Behavioral tendencies toward submissive behavior.

Given that behavioral tendency scores had some predictive utility, further analyses were run to examine interactions between tendencies and daily events. These analyses used the same predictor and outcome models that were run for the interpersonal competence x daily events cross-level interactions. Unlike the interpersonal competence interactions, these results did find significant interactions, particularly in the prediction of prosocial feelings and satisfaction. The beta weights for these interactions are displayed in Table 11. An examination of the estimated means produced by these interactions revealed a consistent pattern. Individuals with greater tendencies toward friendliness and submission tended to be more sensitive to their daily experience, such that their prosocial feelings and sense of satisfaction tended to suffer on days marked by provocation and negative events. Conversely, individuals higher in tendencies towards dominance or hostility were less affected by daily events in terms of their feelings and satisfaction. However, these dominant or hostile individuals were more likely to respond to daily events with dominant behavior.

These patterns may potentially help explain why the cross-level interactions with interpersonal competence tended not to be significant. Interpersonal competence appears to be a blend of dominance and friendliness, and friendly tendencies and dominant tendencies seem to pull for contrasting patterns of reactivity (e.g., with respect to satisfaction on days marked by negative social interactions). It is possible that individuals who score high in interpersonal competence care deeply about their interpersonal relationships, but at the same time possess enough interpersonal agency to effectively manage any interpersonal problems that may arise in their daily life (Rose-Krasnor, 1997; Wiggins, 1991). These two competing forces may therefore cancel each other out.

Table 11

Daily Outcomes as a Function of Behavioral Tendencies and Daily Events

| Interaction | Outcome | BT: H | BT:F | BT:D | BT:S |
|----------------------|---------------------|-------|-------|-------|-------|
| BT x Provocation | | | | | |
| | Antisocial Feelings | -.05 | .10 | -.09 | .07 |
| | Prosocial Feelings | .04 | -.14* | .02 | -.07* |
| | Friendly Behavior | -.01 | .02 | .01 | .01 |
| | Hostile Behavior | .04 | -.02 | .01 | -.04 |
| | Dominant Behavior | .04 | -.01 | .06* | -.00 |
| | Submissive Behavior | .01 | -.06* | -.01 | -.02 |
| | Satisfaction | .13* | -.14* | .07 | -.10* |
| BT x Negative Events | | | | | |
| | Antisocial Feelings | -.03 | -.00 | -.02 | -.02 |
| | Prosocial Feelings | .00 | -.04* | .01 | -.04* |
| | Friendly Behavior | -.00 | -.00 | .00 | -.00 |
| | Hostile Behavior | .01 | -.01 | .00 | -.01 |
| | Dominant Behavior | .02* | -.01 | .02* | -.02* |
| | Submissive Behavior | .01 | -.02 | -.00 | -.00 |
| | Satisfaction | .03* | -.04* | .03* | -.04* |
| BT x Positive Events | | | | | |
| | Antisocial Feelings | .00 | .00 | .01 | -.01 |
| | Prosocial Feelings | -.01 | .01 | -.03* | .02* |
| | Friendly Behavior | -.01 | .01* | -.01 | .00 |
| | Hostile Behavior | .01* | -.00 | .00 | .00 |
| | Dominant Behavior | .01* | -.00 | .01 | .00 |
| | Submissive Behavior | .02* | .00 | -.01 | .02* |
| | Satisfaction | -.02* | .01 | -.03* | .01 |

Note: Statistics in the table are beta estimates. BT:H = Behavioral tendencies toward hostile behaviors; BT:F = Behavioral tendencies toward friendly behavior; BT:D = Behavioral tendencies toward dominant behavior; BT:S = Behavioral tendencies toward submissive behavior.

Discriminant Analyses

Table 12 shows correlations between the control variables and the accuracy, tendency, and interpersonal competence variables. Interestingly, the social cognitive processing variables tended to share stronger correlations with general intelligence than the behavioral tendency and interpersonal competence variables. Conversely, the behavioral tendencies and interpersonal

competence variables were more strongly related to self-reported warmth and dominance, although some social cognitive variables were also significantly correlated with these variables as well.

When controlling for general intelligence, warmth, and dominance, the findings related to the internal workings of the IICM tended to remain significant. The only exceptions were two findings that were originally close to $p = .05$ but became marginal when controlling for the other factors (hostile goal accuracy predicting interpersonal competence and hostile goal formation predicting likelihood of enacting behavior). This suggests that there is some utility in examining the social cognitive processes underlying interpersonal competence instead of simply asking people to self-report on their interpersonal characteristics.

The control analyses regarding the relationship between interpersonal competence and daily outcomes told a different story. Here, many of the relationships that were originally significant were no longer significant after controlling for general intelligence, warmth, and dominance. These analyses are potentially interesting, especially when paired with the success of the behavioral tendency scores in predicting daily outcomes.

Table 12

Relationships Between IICM Components and Self-Reported Control Variables

| Predictor | ACT | Warmth | Dominance |
|-------------------------------|------|--------|-----------|
| Situation Perception Accuracy | | | |
| Hostile | .25* | .05 | -.12 |
| Friendly | -.00 | .19* | .01 |
| Dominant | .17* | .01 | -.18* |
| Submissive | .19* | .05 | -.25* |
| Goal Formation Accuracy | | | |
| Hostile | .03 | .15* | .02 |
| Friendly | -.03 | .15* | .01 |
| Dominant | .02 | .01 | -.09 |
| Submissive | .17* | -.03 | -.18* |
| Response Evaluation Accuracy | | | |
| Hostile | .09 | .16* | -.01 |
| Friendly | .09 | .25* | .05 |
| Dominant | .31* | .04 | -.01 |
| Submissive | .26* | .08 | -.05 |
| Behavioral Tendencies | | | |
| Hostile | -.05 | -.32* | .17* |
| Friendly | .03 | .40* | .11 |
| Dominant | -.14 | -.10 | .44* |
| Submissive | .06 | .04 | -.18* |
| Interpersonal Competence | -.04 | .35* | .28* |

Discussion

Study 1 produced some important insights into interpersonal competence, both in terms of how it should be measured and what factors lead individuals to make certain decisions. First, the results suggested that taking an average of the raw scores for situation perception, goal formation, and response evaluations was not the correct method for examining social cognitive processes. A likely reason for this is that the situations included in the IICM were fairly heterogeneous, unlike other situational measures that use similar averaging procedures (e.g., the Ambiguous Intentions Hostility Questionnaire, whose scenarios focus on instances of ambiguous provocation: Penn, Wicher, & Waldheter, 2007). Therefore, averaging across the situations and

responses would lose much of the meaningful variance that comes from the characteristics of the particular situation. The accuracy scores, which can be thought of in terms of ability, or the situation-specific structure, which retains the unique qualities of the situations and responses, are likely to be better estimates of social cognitive processes in action.

Second, the results suggest that the interpersonal competence score reflects a blend of friendliness and dominance. This is in line with previous theorizing on interpersonal competence (Gurtman, 1999; Rose-Krasnor, 1997) that suggests that competence is a combination of satisfying the self's needs while also caring about relationships and the needs of others. The interpersonal competence score was related to more frequent daily experiences of positive events, prosocial feelings, and satisfaction, and lower frequency of hostile and submissive behavior. However, feelings and behaviors were not contingent on daily events, as evidenced by the lack of interactions. Interestingly, the personality-like behavioral tendency scores were also predictive of daily events, feelings, and behaviors. Unlike the interpersonal competence score, however, these behavioral tendencies did interact with daily events to predict feelings and behaviors, such that individuals who tended toward friendly or submissive behaviors were more sensitive to negative daily events. It is possible that these behavioral tendencies scores represent a more unmitigated form of interpersonal characteristics whereas the interpersonal competence score is a more complex blend of characteristics. This notion will be revisited in Study 2.

STUDY 2: INFORMANT PERCEPTIONS OF INTERPERSONAL COMPETENCE

Study 1 provided an initial sense of what processes underlie behavioral responses to friendship-relevant situations and how those processes and responses relate to everyday life. Study 2 aimed to replicate the relationships among the social-cognitive variables, behavioral tendency variables, and interpersonal competence score. In addition, Study 2 focused on how interpersonal competence is perceived by others. In both the personality and developmental traditions, it has been emphasized that external judges such as teachers, peers, and parents may possess knowledge of a person that the person him/herself does not have (Dirks et al., 2007; Vazire & Carlson, 2011). Therefore, Study 2 sought to connect participants' decision making to how they are perceived by knowledgeable others. This was done by collecting informant reports from knowledgeable peers who can report on their friendship with the participant. In addition, reports were given by parents, who could provide an alternative viewpoint of the participant's social behavior and relationships, as well as information about the participant's social history.

Methods

Participants and Procedure

A two-tailed power analysis using G*Power revealed that a sample size of approximately 130 would provide good power ($1-\beta = .95$) to detect medium effect sizes ($r = .30$). Given that there was likely to be attrition through the peer and parent reports, a target sample size of 160 was set. Similar to the first study, an a priori decision was made to exclude anyone who did not fully complete the IICM. A total of 166 participants participated in the initial lab study. Of these participants, 9 individuals did not fully complete the IICM and were excluded from the study, for a total sample size of $n = 157$, $M_{\text{age}} = 18.65$, $SD = .95$, 70.06% female, 89.17% Caucasian.

The initial sample of participants were recruited from NDSU's SONA participant pool. These participants were asked to report to a laboratory where they completed the IICM measure, demographics, and control questionnaires. They were also asked to provide the names and email addresses of 3-4 peers and their parents or legal guardians (whoever raised them). After the laboratory portion was fully completed, the informants were sent an email containing either the peer or parent survey. After a week, informants who had not yet completed their survey were sent a reminder email. After another week had passed, the initial participant was contacted asking them to get in touch with anyone who had not yet completed the survey. The surveys were active for one more week following this last step, after which the study officially ended. The initial pool of participants received a standard amount of research credits for their participation in the initial lab study as well as an additional credit per informant who completed the report. Participants needed to receive at least 2 peer reports to be included in the peer-report analyses, and at least 1 parent report to be included in the parent-report analyses.

Overall, response rates were very good. A total of 546 peers responded to the survey, with an average of 3.48 reports per participant. Of these, 5 participants received no reports and 4 participants only received one report, and were therefore excluded from the peer-report analyses. The peers were mostly of similar age to the participants, $M_{age} = 19.46$, $SD = 5.00$, 67.48% female, and 89.16% Caucasian. Slightly over half reported living in the same geographical area, and the median length of the relationship was 2-4 years, suggesting that these peers were a mix of high school and college friends. The majority described themselves as friends (86%) or family (11%) with a handful describing themselves as coworkers (0.3%) or acquaintances (2%). When asked to rate how well they knew the participant ($1 = not\ at\ all$; $7 = extremely\ well$), these peers tended to report having fairly good knowledge ($M = 5.94$, $SD = 1.20$). In addition, inter-rater

agreement was sufficient for all peer-reported outcomes measures, with the average within-group indexes ranging from $r = .68-.87$ (Lanz, Sorgente, & Tagliabue, 2018).

Parents also had high response rates. A total of 269 parents completed the survey with an average of 1.71 reports per person. Nine participants did not have either parent respond and were excluded from the parent-report analyses. The average parent age was 48.53, $SD = 6.46$, 52.63% female, 90.88% Caucasian. Most described themselves as being a participant's mother or father (95.08%), with the remainder describing themselves as a legal guardian, step-parent, or grandparent. The average inter-rater agreement for all measures (calculated only when an individual had both parent reports) was strong, $r_s = .81-.95$.

Laboratory Measures

Similar to Study 1, participants completed the IICM (described below), reported their ACT scores ($M = 22.75$, $SD = 3.90$), and completed the IAS (Warmth: $M = 1.45$, $SD = .80$; Dominance: $M = 1.14$, $SD = .89$).

Informant Measures

Perceptions of Feelings. Study 1 indicated that interpersonal competence tended to predict prosocial and antisocial feelings in daily life. Therefore, this measure was carried into Study 2 to determine whether these feelings could be perceived by external observers. Both peers and parents were asked to rate the extent to which the participant typically experienced both antisocial (e.g., angry) or prosocial feelings (e.g., caring) on a scale from $1 = not\ at\ all$; $5 = extremely$). Means, standard deviations, alphas, and average inter-rater reliability for both peers and parents can be found in Table 13.

Perceptions of Behaviors. One's behavior is likely to be readily apparent to external sources and should have a direct effect on one's relationships (Dirks et al., 2007). Peers and

parents both provided ratings of the frequency of the participant's positive and negative behaviors (*1 = never; 5 = often*). These behaviors included prosocial actions (e.g., “forgives me when I make mistakes”), communication (e.g., opens up to me”), controlling (e.g., “tells me what to do”) and selfish actions (e.g., “prioritizes his/her own wishes”).

Perceptions of Competence. Peers and parents completed a 9 item questionnaire assessing their perception of the participant's social competence. This questionnaire (Larson, Whitton, Hauser, & Allen, 2007) was designed to capture peer ratings of competence within close relationships (e.g., “behaves in a way that is sympathetic and considerate of others”), and in larger social groups (“appears poised and comfortable in social situations”). These statements were rated on a 9-point scale ranging from *1 = extremely uncharacteristic to 9 = extremely characteristic*.

Relationship Quality. To assess the quality of the relationship with the participant, peers and parents completed a 7-item relationship assessment scale (Hendrick, 1988). The relationship assessment scale was originally designed to measure satisfaction with a romantic relationship. However, the language was altered by changing any references to “partner” or “relationship” to language appropriate for the informant (e.g., “in general, how satisfied are you with your friendship/relationship with your child?”). Exact rating options varied from question to question, but the measure was scored such that *1 = low relationship quality and 7 = high relationship quality*.

Social History. Parents are likely to have some unique insight into their children's social history. Therefore, the parents were asked to provide information about what the participant was like as a child. The parents rated how aggressive, withdrawn, popular, prosocial, and dominant the participant had been throughout their adolescent years (*1 = not at all; 5 = extremely*).

Table 13

Descriptive Statistics for Peer- and Parent-Reported Outcomes

| Outcomes | <u>Peer Outcomes</u> | | | | <u>Parent Outcomes</u> | | | |
|----------------------|----------------------|-----------|----------|----------|------------------------|-----------|----------|----------|
| | <i>M</i> | <i>SD</i> | α | r_{wg} | <i>M</i> | <i>SD</i> | α | r_{wg} |
| Feelings | | | | | | | | |
| Antisocial | 2.10 | .80 | .80 | .72 | 2.30 | .69 | .79 | .85 |
| Prosocial | 4.37 | .68 | .75 | .79 | 4.30 | .69 | .81 | .87 |
| Behavior | | | | | | | | |
| Prosocial | 4.35 | .68 | .84 | .77 | 4.11 | .65 | .87 | .89 |
| Communication | 4.24 | .71 | .83 | .80 | 4.20 | .72 | .83 | .80 |
| Control | 1.51 | .55 | .79 | .86 | 1.49 | .57 | .86 | .89 |
| Selfish | 1.51 | .63 | .85 | .82 | 1.32 | .39 | .74 | .95 |
| Competence | | | | | | | | |
| Close | 7.46 | 1.26 | .79 | .81 | 7.75 | .98 | .75 | .92 |
| Group | 7.45 | 1.46 | .84 | .74 | 7.74 | 1.21 | .82 | .87 |
| Relationship Quality | 5.96 | .91 | .76 | .82 | 6.28 | .73 | .70 | .92 |
| Social History | | | | | | | | |
| Aggressive | -- | -- | -- | -- | 1.73 | .75 | .76 | .83 |
| Withdrawn | -- | -- | -- | -- | 2.23 | .94 | .84 | .81 |
| Popular | -- | -- | -- | -- | 4.05 | .65 | .80 | .89 |
| Prosocial | -- | -- | -- | -- | 4.07 | .64 | .66 | .87 |
| Dominant | -- | -- | -- | -- | 2.98 | .77 | .64 | .84 |

Note: Inter-rater agreement for parents was calculated using only data from individuals with two parent reports ($n = 131$); r_{wg} represents an average of all within-group indexes for subjects with 2+ reports.

Results

IICM Measure

A key purpose of Study 2 was to replicate the IICM findings from Study 1. Methods and scoring procedures were kept exactly the same as Study 1. Again, for reference, Table 1 (pg. 26) provides a quick guide to the key variables and terminology. Means, standard deviations, alphas, and inter-correlations between variables for processing tendencies and processing accuracy can be found in Tables 14 and 15. These descriptive statistics were highly similar between the two

Table 14

Descriptive Statistics and Correlations Between Processing Tendency Scores

| Predictor | <i>M</i> | <i>SD</i> | α | 1. | 2. | 3 | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. |
|------------------|----------|-----------|----------|------|------|------|------|-----|------|------|------|------|------|------|
| Hostile | | | | | | | | | | | | | | |
| 1. Sit. Percep. | 2.51 | .50 | .63 | -- | | | | | | | | | | |
| 2. Goal | 2.96 | .50 | .68 | .36* | -- | | | | | | | | | |
| 3. Resp. Eval. | 2.28 | .38 | .86 | .42* | .44* | -- | | | | | | | | |
| Friendly | | | | | | | | | | | | | | |
| 4. Sit. Percep. | 2.55 | .32 | .32 | -.00 | .00 | .08 | -- | | | | | | | |
| 5. Goal | 2.62 | .41 | .54 | -.07 | -.07 | -.05 | .18* | -- | | | | | | |
| 6. Resp. Eval. | 3.17 | .29 | .72 | .07 | .18* | .01 | .24* | .09 | -- | | | | | |
| Dominant | | | | | | | | | | | | | | |
| 7. Sit Percep. | 2.97 | .53 | .62 | .49* | .24* | .17* | .12 | .03 | .23* | -- | | | | |
| 8. Goal | 3.10 | .56 | .64 | .27* | .45* | .27* | .08 | .00 | .20* | .46* | -- | | | |
| 9. Resp. Eval. | 3.06 | .59 | .88 | .28* | .29* | .43* | .09 | .05 | .19* | .36* | .37* | -- | | |
| Submissive | | | | | | | | | | | | | | |
| 10. Sit. Percep. | 2.15 | .49 | .52 | .20* | .14 | .29* | .31* | .12 | .22* | .07 | .06 | .28* | -- | |
| 11. Goal | 2.32 | .63 | .70 | .14 | .29* | .25* | .12 | .12 | .22* | .32* | .31* | .35* | .47* | -- |
| 12. Resp. Eval. | 2.49 | .43 | .81 | .15 | .30* | .33* | .17* | .02 | .31* | .21* | .22* | .22* | .39 | .51* |

Table 15

Descriptive Statistics and Correlations Between Processing Accuracy Scores

| Predictor | <i>M</i> | <i>SD</i> | α | 1. | 2. | 3 | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. |
|------------------|----------|-----------|----------|------|------|------|------|------|------|------|------|------|------|------|
| Hostile | | | | | | | | | | | | | | |
| 1. Sit. Percep. | .37 | .08 | .54 | -- | | | | | | | | | | |
| 2. Goal | .42 | .08 | .48 | .33* | -- | | | | | | | | | |
| 3. Resp. Eval. | .45 | .08 | .87 | .38* | .42* | -- | | | | | | | | |
| Friendly | | | | | | | | | | | | | | |
| 4. Sit. Percep. | .43 | .07 | .33 | .21* | .15 | .16* | -- | | | | | | | |
| 5. Goal | .53 | .10 | .62 | .22* | .39* | .21* | .24* | -- | | | | | | |
| 6. Resp. Eval. | .45 | .05 | .72 | .06 | .22* | .39* | .21* | .24* | -- | | | | | |
| Dominant | | | | | | | | | | | | | | |
| 7. Sit Percep. | .28 | .03 | .25 | .14 | .15 | .15 | .13 | .15 | .20* | -- | | | | |
| 8. Goal | .28 | .04 | .36 | .10 | .21* | .08 | -.02 | .21* | .19* | .35* | -- | | | |
| 9. Resp. Eval. | .29 | .03 | .66 | .13 | .22* | .48* | .09 | .17* | .47* | .38* | .25* | -- | | |
| Submissive | | | | | | | | | | | | | | |
| 10. Sit. Percep. | .31 | .05 | .40 | .14 | .19* | .30* | .04 | .22* | .10 | .13 | .17* | .18* | -- | |
| 11. Goal | .26 | .05 | .59 | .16* | .18* | .13 | -.06 | .11 | -.07 | -.02 | .23* | .03 | .39* | -- |
| 12. Resp. Eval. | .33 | .07 | .84 | .21* | .36* | .58* | .05 | .19* | .30* | .21* | .20* | .51* | .38* | .35* |

studies. In addition, the scores for both processing tendencies and abilities tended to share positive correlations, suggesting that there may be some general form of ability here. The interpersonal competence score was also very similar to Study 1 ($M = .2990$, $SD = .0379$, $\alpha = .66$). The same was true for behavioral tendencies towards hostility ($M = .1603$, $SD = .0471$, $\alpha = .71$), friendliness ($M = .2763$, $SD = .0667$, $\alpha = .67$), dominance ($M = .2325$, $SD = .0353$, $\alpha = .64$), and submission ($M = .1632$, $SD = .0295$, $\alpha = .57$). Once again, these behavioral tendency scores showed a pattern in which all the scores were lower than the interpersonal competence score, and the hostility and submissive tendencies were lower than the friendly and dominant tendencies.

IICM Results

Processing Tendencies. In Study 1, there was no support for the hypothesis that greater tendencies to process situations and responses according to interpersonal qualities would be related to interpersonal competence. In Study 1, none of the 12 variables were correlated with the interpersonal competence score. In the present study, the results were slightly different. As shown in Table 16, a tendency to form friendly goals was positively correlated with the interpersonal competence score. In addition, a tendency to form submissive goals, and to evaluate responses as hostile or submissive were negatively correlated with interpersonal competence.

Processing Accuracy. Study 1 found significant positive correlations between accuracy and interpersonal competence, particularly in relation to friendliness and hostility. These results were replicated in Study 2, as shown in Table 16. However, Study 2 also found the processing accuracies related to dominance and submission were also positively correlated.

Behavioral Tendencies. Study 1 found that friendliness and dominance were positively related to interpersonal competence whereas hostility and submission were negatively related. These results were replicated as well. Friendliness ($r = .52$, $p < .001$) and dominance ($r = .32$, p

<.001) shared associations with interpersonal competence that were positive and of a similar magnitude as Study 1. Hostility ($r = -.13, p = .090$) and submission ($r = -.13, p = .102$) exhibited negative relationships with interpersonal competence, though these relationships were not significant.

Table 16

Correlations Between Processing Tendencies, Abilities, and Interpersonal Competence

| Predictor | Processing Tendencies | | Processing Ability | |
|--------------|-----------------------|----------|--------------------|----------|
| | <i>r</i> | <i>p</i> | <i>r</i> | <i>p</i> |
| Hostile | | | | |
| Sit. Percep. | -.08 | .316 | .18 | .027 |
| Goal | -.14 | .078 | .22 | .005 |
| Resp. Eval. | -.26 | .001 | .28 | <.001 |
| Friendly | | | | |
| Sit. Percep. | -.02 | .812 | .13 | .103 |
| Goal | .17 | .038 | .01 | .935 |
| Resp. Eval. | .04 | .652 | .29 | <.001 |
| Dominant | | | | |
| Sit Percep. | .00 | .996 | .13 | .112 |
| Goal | -.05 | .556 | .16 | .048 |
| Resp. Eval. | -.05 | .562 | .23 | .004 |
| Submissive | | | | |
| Sit. Percep. | -.11 | .177 | .07 | .398 |
| Goal | -.18 | .024 | .14 | .083 |
| Resp. Eval. | -.18 | .021 | .23 | .003 |

Situation Specific Processing. Study 1 found that an individual's social cognitions were associated with the likelihood that the individual would enact behaviors. Such patterns were partially replicated in Study 2. As shown in Table 17, the Study 1 findings concerning situation perceptions and goals did not replicate. However, the associations between response evaluation processes and behavioral tendencies were quite robust. Similar to Study 1, individuals were more likely to endorse behaviors that they evaluated to be friendly and dominant and they were less likely to endorse behavior that they evaluated to be hostile and submissive. Furthermore, the goal by response evaluation interactions also replicated. Once again, there were significant interactions

between goals and response evaluations for hostility ($t = 10.53, p < .001, b = .11$), friendliness ($t = 7.18, p < .001, b = .06$), and dominance ($t = 3.41, p = .001, b = .04$). As shown in Figures 7-9, there tended to be a cross-over interaction pattern in which people tended to give higher behavioral tendency ratings when their response evaluations (e.g., this response is a hostile one) aligned with their goals (e.g., I would like to get revenge).

Table 17

Relationships Between Situation-Specific Social Cognition and Likelihood of Enacting Behavior

| Predictor | <i>b</i> | <i>t</i> | <i>p</i> |
|----------------------|----------|----------|----------|
| Hostile | | | |
| Situation Perception | .01 | .53 | .595 |
| Goal Formation | .01 | .54 | .587 |
| Response Evaluation | -.20 | -15.47 | <.001 |
| Friendly | | | |
| Situation Perception | -.02 | -1.26 | .207 |
| Goal Formation | .02 | 1.49 | .136 |
| Response Evaluation | .27 | 23.53 | <.001 |
| Dominant | | | |
| Situation Perception | .03 | 1.97 | .050 |
| Goal Formation | .01 | .45 | .652 |
| Response Evaluation | .15 | 11.30 | <.001 |
| Submissive | | | |
| Situation Perception | -.01 | -.46 | .644 |
| Goal Formation | -.03 | -1.83 | .068 |
| Response Evaluation | -.20 | -15.57 | <.001 |

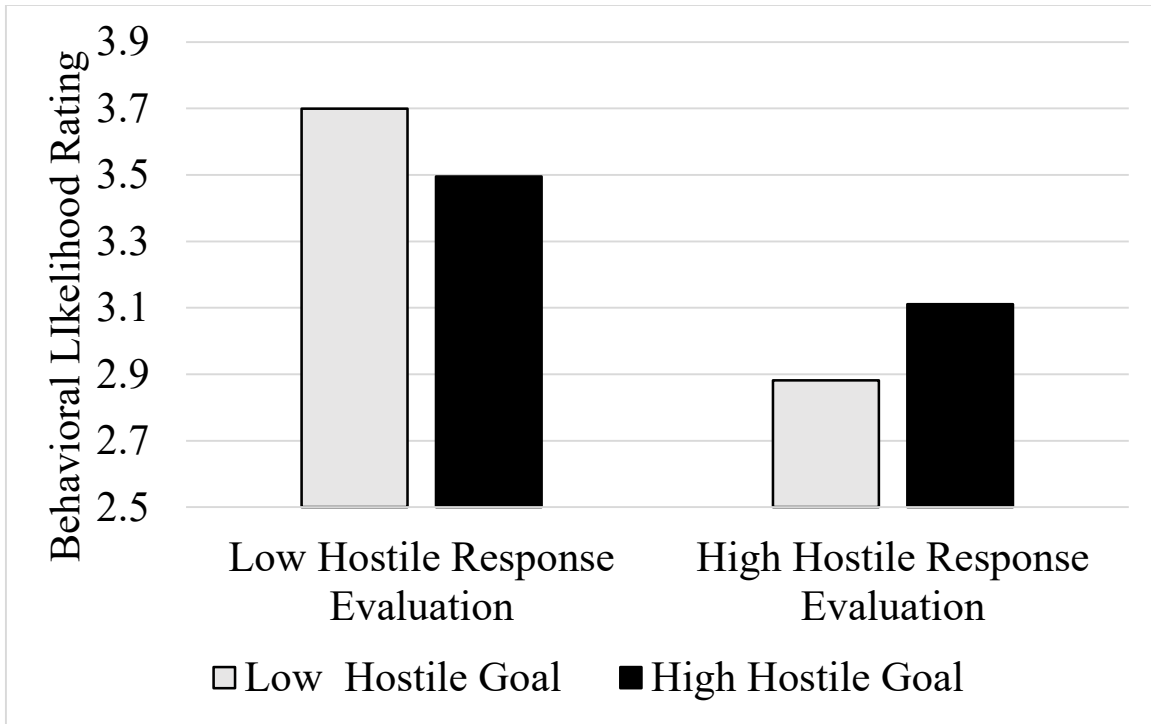


Figure 7. Goal by response evaluation interactions for hostility (study 2).

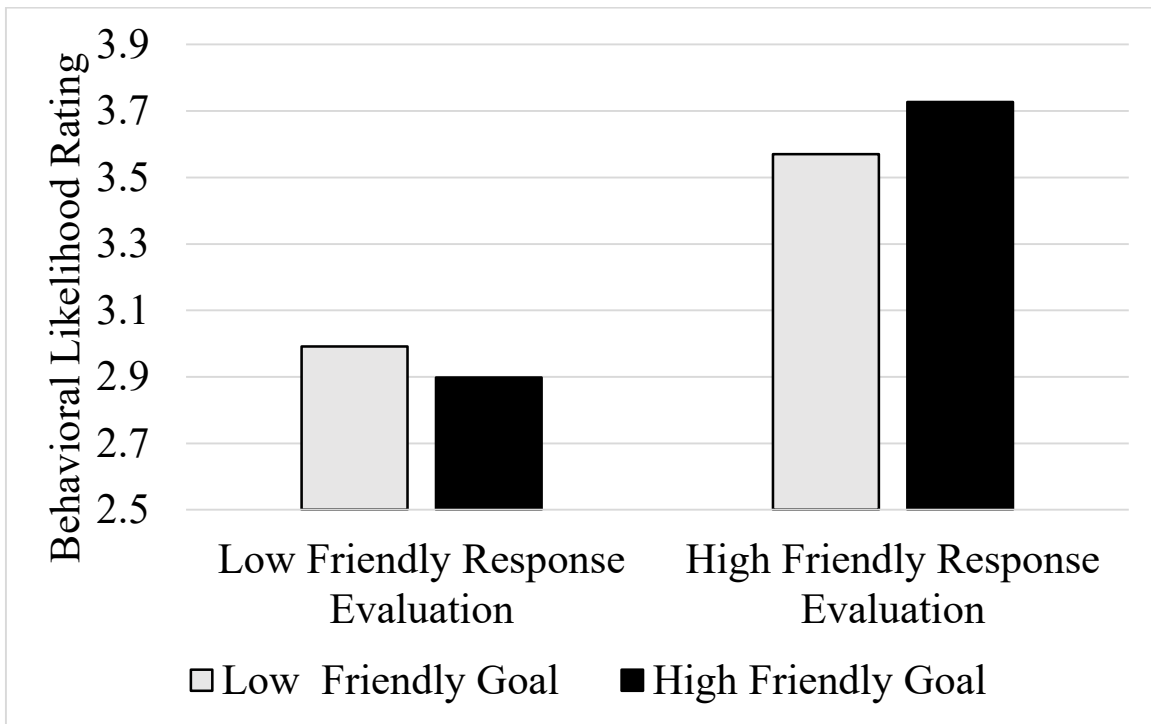


Figure 8. Goal by response evaluation interactions for friendliness (study 2).

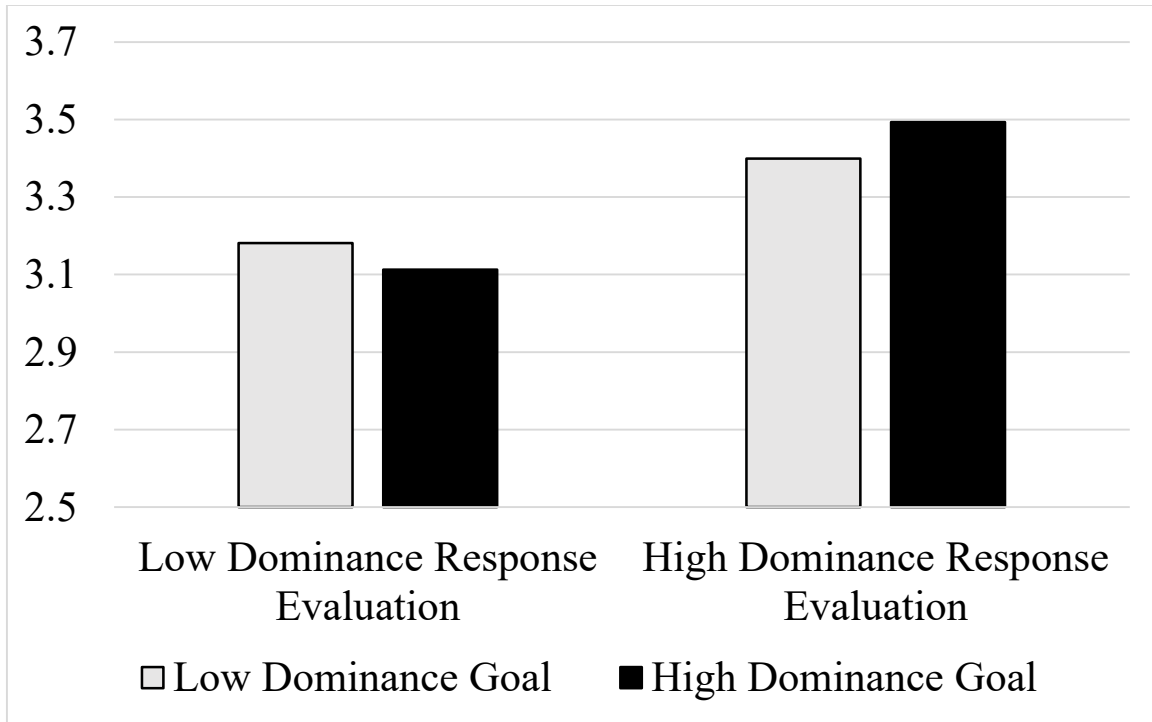


Figure 9. Goal by response evaluation interactions for dominance (study 2).

Informant-Reported Results

Peer Reports. Because all of the outcome measures demonstrated high levels of inter-rater agreement between peers, all of a participant's peer reports were averaged to create a composite score for the participant. These composite scores were then correlated with participants' interpersonal competence scores. These results are displayed in Table 18. As a summary, the results were less robust than expected based on theory and past research (Persich et al., in press). Individuals who received higher interpersonal competence scores had peers who tended to view them as experiencing less antisocial feelings and enacting fewer selfish behavior. There was a marginal tendency for peers to perceive a greater frequency of prosocial behaviors in high interpersonal competence participants. The remainder of the outcomes were non-significant.

Table 18

Correlations Between Interpersonal Competence and Peer-Reported Outcomes

| Outcomes | <i>r</i> | <i>p</i> |
|----------------------|----------|----------|
| Feelings | | |
| Antisocial | -.18 | .027 |
| Prosocial | .14 | .100 |
| Behavior | | |
| Prosocial | .16 | .056 |
| Communication | .06 | .489 |
| Control | -.09 | .274 |
| Selfish | -.19 | .019 |
| Competence | | |
| Close | .08 | .306 |
| Group | .03 | .712 |
| Relationship Quality | .03 | .704 |

Parent Reports. Similar to the peer-reports, both parents tended to demonstrate good agreement when rating the participant. Therefore, if a participant received two parent reports, these were averaged to produce a composite score for the participant. The correlations between these composite scores and the participants' interpersonal competence are reported in Table 19. The parent reports tended to mirror the peer-reports. If their child was higher in interpersonal competence, parents also perceived their child as experiencing less antisocial feelings and enacting fewer selfish behaviors. In addition, parents tended to report having higher quality relationships when the child was higher in interpersonal competence. There were also marginal tendencies to view participants higher in interpersonal competence as experiencing greater prosocial feelings and communicating more frequently. There was some tendency to recall the highly competent participants as being less aggressive, and more prosocial and popular as a child, but overall, none of the social history variables were significant.

Table 19

Correlations Between Interpersonal Competence and Parent-Reported Outcomes

| Outcomes | <i>r</i> | <i>p</i> |
|----------------------|----------|----------|
| Feelings | | |
| Antisocial | -.19 | .020 |
| Prosocial | .15 | .077 |
| Behavior | | |
| Prosocial | .07 | .407 |
| Communication | .15 | .064 |
| Control | -.08 | .363 |
| Selfish | -.21 | .011 |
| Competence | | |
| Close | .16 | .060 |
| Group | .09 | .263 |
| Relationship Quality | .17 | .038 |
| Social History | | |
| Aggressive | -.11 | .193 |
| Withdrawn | .01 | .902 |
| Popular | .11 | .188 |
| Prosocial | .10 | .219 |
| Dominant | -.07 | .429 |

Exploratory Analyses

There was some support for the hypothesis that a person's interpersonal competence would be apparent to external observers, although these findings were less robust than expected. However, it is interesting to examine whether the individual components of the IICM would also be related to these external perceptions of interpersonal functioning. Therefore, follow-up analyses were conducted in which the accuracy and behavioral tendency scores were correlated with the peer and parent outcomes. Similar to Study 1, the accuracy scores were a composite of the hostile, friendly, dominant, and submissive ratings for each of the three social-cognitive processing steps.

The relationships between the components and peer-reports are displayed in Table 20 and the relationships with parent-reports are displayed in Table 21. The results mirrored what was found in Study 1. Overall, the individual social-cognitive processing abilities tended to not be

significantly correlated with informant-reported outcomes. This makes some sense, as the individual processes that underlie a person's behavior may not be meaningful as separate entities or may not be readily apparent to others (Dodge, 1985). However, the behavioral tendencies, and particularly the tendencies toward friendliness and hostility, were related. In fact, these relationships were stronger and more consistent than the interpersonal competence effects, perhaps suggesting that the purer, more personality-like tendency variables are either more impactful or more apparent to external observers.

Table 20

Correlations Between IICM Components and Peer-Reported Outcomes

| Outcomes | SP | G | RE | BT:H | BT:F | BT:D | BT:S |
|----------------------|------|------|------|-------|-------|-------|------|
| Feelings | | | | | | | |
| Antisocial | -.02 | -.04 | .03 | .10 | -.16* | .03 | -.07 |
| Prosocial | .08 | -.07 | .09 | -.25* | .28* | -.19* | .08 |
| Behavior | | | | | | | |
| Prosocial | .02 | -.07 | -.01 | -.14 | .30* | -.11 | .15 |
| Communication | -.04 | -.10 | .01 | .02 | .25* | .04 | .09 |
| Control | -.03 | -.14 | -.03 | .19* | -.24* | .15 | -.12 |
| Selfish | -.07 | -.09 | -.10 | .14 | -.22* | .02 | -.06 |
| Competence | | | | | | | |
| Close | .05 | -.02 | .09 | -.12 | .19* | -.07 | .08 |
| Group | -.03 | -.09 | .06 | .00 | .10 | .07 | -.02 |
| Relationship Quality | -.13 | -.12 | .06 | -.18* | .10 | .02 | -.07 |

Note: SP = Situation perception accuracy; G = Goal formation accuracy; RE = Response evaluation accuracy; BT:H = Behavioral tendencies toward hostile behaviors; BT:F = Behavioral tendencies toward friendly behavior; BT:D = Behavioral tendencies toward dominant behavior; BT:S = Behavioral tendencies toward submissive behavior.

Table 21

Correlations Between IICM components and Parent-Reports

| Outcomes | SP | G | RE | BT:H | BT:F | BT:D | BT:S |
|-----------------------|-------|-------|------|-------|-------|------|------|
| Feelings | | | | | | | |
| Antisocial | -.06 | -.10 | .07 | .21* | -.09 | .06 | .07 |
| Prosocial | .10 | -.01 | .02 | -.26* | .12 | -.10 | -.10 |
| Behavior | | | | | | | |
| Prosocial | .21* | .12 | .12 | -.04 | .04 | .08 | -.14 |
| Communication | .05 | -.01 | .11 | .00 | .06 | .08 | -.10 |
| Control | -.02 | -.14 | -.07 | .02 | -.09 | -.06 | .08 |
| Selfish | -.21* | -.25* | -.13 | .19* | -.14 | -.05 | .18* |
| Competence | | | | | | | |
| Close | .14 | .05 | .07 | -.17* | .18* | -.06 | -.06 |
| Group | -.01 | -.09 | -.01 | -.07 | .19* | -.03 | .11 |
| Relationship Quality | -.18* | .06 | .11 | -.18* | .10 | .02 | -.07 |
| Social History | | | | | | | |
| Aggressive | -.09 | -.10 | -.14 | .21* | -.17* | .12 | .01 |
| Withdrawn | -.02 | .08 | -.05 | -.03 | .00 | -.08 | -.03 |
| Popular | .06 | .17* | .11 | -.02 | .11 | -.13 | -.13 |
| Prosocial | .14 | .08 | .14 | -.29* | .11 | -.13 | -.14 |
| Dominant | -.09 | -.14 | -.05 | .04 | -.06 | .01 | .09 |

Note: SP = Situation perception accuracy; G = Goal formation accuracy; RE = Response evaluation accuracy; BT:H = Behavioral tendencies toward hostile behaviors; BT:F = Behavioral tendencies toward friendly behavior; BT:D = Behavioral tendencies toward dominant behavior; BT:S = Behavioral tendencies toward submissive behavior.

Discriminant Validity

When controlling for general intelligence and self-reported personality, the majority of the social-cognitive processing scores remained significant, with the exception of two of the processing tendency scores (friendly goals, $p = .150$, and submissive response evaluations, $p = .136$), and the dominance/submissive accuracy scores, $ps > .190$. For the peer and parent-reported outcomes, all significant findings remained significant except for the correlation between parent-reported relationship quality and interpersonal competence, $p = .106$.

Discussion

Study 2 served as a replication and extension of Study 1, focused on examining how interpersonal competence is perceived by knowledgeable others. This study found some interesting results. First, the Study 1 findings related to the IICM largely replicated in Study 2. Abilities to accurately process social information were related to one's likelihood of receiving a high interpersonal competence score. Within the social cognitive processes, response evaluations seemed to play the biggest role in determining whether or not a person would enact the response. Finally, interpersonal competence appeared to be composed of a blend of interpersonal warmth and dominance.

The findings related to peer- and parent-reported outcomes were somewhat more confusing. Despite the fact that previous research has found associations between interpersonal competence and positive peer perceptions (Persich et al., in press), the findings in the present study were fairly weak. Rather, it was the behavioral tendency scores that were more strongly related to peer and parent reported outcomes. Although future research may be warranted, it may be possible that external observers may be better able to recognize unmitigated personality traits than more complex blends of warmth and dominance.

GENERAL DISCUSSION

Having satisfying interpersonal relationships is an important part of life and is associated with numerous benefits (Campbell et al., 2010). However, despite that fact that most people desire close interpersonal relationships (Baumeister & Leary, 1995), many people struggle with forming or maintaining these relationships. As a result, a large, multidisciplinary body of research has focused on how people's competencies (or incompetencies) contribute to their likelihood of relationship success (Crick & Dodge, 1994; Ladd 1999). This body of literature has been successful at uncovering a wide assortment of traits, skills, cognitions, and behaviors thought to contribute to successful interpersonal relationships (Crick & Dodge, 1994; Farmer & Chapman, 2016). Unfortunately, the size of this literature also has a downside, in that it often suffers from a lack of integration (Spitzberg & Cupach, 1989).

The present research aimed to address the lack of integration by focusing on five approaches to understanding competence in interpersonal relationships – the global trait approach, the interpersonal circumplex approach, the social-cognitive approach, the social-information processing approach, and the situational judgment test approach. Comparing and contrasting these approaches revealed key considerations related to whether interpersonal competence should be measured at the global or situational level, whether interpersonal competence should focus on overt behavior or underlying cognitive processes, whether interpersonal competence should be assessed in terms of tendencies or effectiveness, and how to organize situations, responses, and behaviors. These considerations led to the creation of a model, termed the integrated interpersonal competence model (IICM).

The IICM was empirically tested in two studies. A major goal of the research was to understand why people endorse certain response options and whether particular cognitive processes

explain why people received high versus low interpersonal competence scores (Studies 1 & 2). In Study 1, it was found that tendencies to process information in hostile, friendly, dominant, or submissive ways were unrelated to one's interpersonal competence score. However, accuracy scores, which reflect abilities to accurately and appropriately process information, did predict the likelihood of receiving a higher interpersonal competence score. Behavioral tendencies toward doing friendly and dominant behaviors were also strong predictors of competence. Finally, situation-level analyses revealed that the response evaluation component was the strongest predictor of which behavior a person would be most likely to enact. Essentially, people were not doing behaviors that they viewed to be hostile or submissive and were much more likely to do behaviors that they deemed to be friendly and dominant. These response evaluations did tend to interact with goals, however, such that individuals were somewhat more willing to engage in a behavior if it aligned with the goal they had formed in response to the situation (Martin-Raugh & Kell, in press). These findings largely replicated in Study 2.

The research also desired to link the components of the IICM to external outcomes including daily experiences, feelings, and behavior (Study 1) and peer/parent perceptions (Study 2). In Study 1, interpersonal competence was associated with more frequent experiences of positive events, prosocial feelings, and satisfaction. It was also associated with fewer instances of engaging in hostile and submissive behaviors. These outcomes did not appear to be contingent on daily events, such that individuals high in interpersonal competence seemed to be consistently better adjusted than low competence individuals. Interestingly, accurate social-cognitive processing did not predict the daily outcomes. However, the behavior tendencies toward hostility, friendliness, dominance, and submission did tend to predict outcomes, both as main effects and when moderated by daily events.

Study 2 examined whether the components of the IICM would be apparent to knowledgeable others. Both peers and parents rated individuals higher in interpersonal competence as being less selfish and displaying fewer antisocial feelings. Parents also reported having better quality relationships with higher competence children. Similar to study 1, the accuracy scores were not good predictors of the peer- and parent-reported outcomes. However, the behavioral tendencies toward hostility and friendliness actually tended to be better predictors of the outcomes than the interpersonal competence score.

Interpreting the IICM Components

Previous research using the situational judgment test approach to assess interpersonal competence has only focused on one's overall interpersonal competence score (Persich et al., in press; Persich & Robinson, 2020). The IICM is an expansion of Persich and colleagues' SJT that incorporates elements of the global trait approach, the interpersonal circumplex, social cognition, and social information processing. The empirical test of this integration provides some potential insights into the individual components of the model.

Processing Tendencies

The processing tendency scores reflected how people tended to process the information in the situations and responses, on average. For instance, a high hostile situation perception score would mean that the person was more likely to view the situations as hostile ones relative to a low scorer. Overall, these scores were not highly informative. There could be a number of reasons why this is the case (e.g., response styles: Van Herk, Poortinga, & Verhallen, 2004). However, a likely explanation is that the scenarios used are fairly heterogeneous, as illustrated by their location in the interpersonal circumplex. There are some situations where the friend engages in a highly problematic behavior (a friend violating the person's privacy), some that are more ambiguous in

regards to what the friend is doing (a friend not doing their work on a group project), and some that could be relationship enhancing (a friend giving a nice compliment). Thus, averaging across such heterogeneous scenarios may remove meaningful differences in these scenarios. In addition, some of the scenarios were actually somewhat hostile, and it is uncertain that always having rose-colored glasses in relationships would be associated with competence (McNulty, 2008; although see Nelson & Crick, 1999). Therefore, the resulting scores may be a confounding mix of processing accuracy and processing bias. In summary, the main take-away is that in order for the processing tendencies to be used a predictor, it is probably necessary to focus on a homogenous set of meaningful scenarios or responses (e.g., Tangney et al., 1996).

Processing Accuracies

The processing accuracy scores reflect a consistent ability to accurately perceive situations, form appropriate goals, and properly evaluate response options, as determined by a norm-based scoring key. These accuracy scores were often significant predictors of the interpersonal competence score, suggesting that it is important to consider the social cognitive processing that occurs prior to making a judgment about how to respond. This is especially insightful for the SJT literature, as situational judgment researchers have discussed a “black box” of situational judgment where it is uncertain what happens between reading the situation and making judgments in SJTs (Ployhart, 2006; Rockstuhl et al., 2015; Whetzel & McDaniel, 2009). The social-cognitive and social information processing approaches may provide good insights into what is occurring.

Behavioral Tendencies

The behavioral tendency scores provided good insights into interpersonal competence and related outcomes. As hypothesized, behavior tendencies toward friendliness ($r = .58$ in Study 1; $r = .52$ in Study 2) and dominance ($r = .35$; $r = .32$) were robust predictors of the interpersonal

competence score (Gurtman, 1999; Rose-Krasnor, 1997). However, a close examination of the responses revealed that the friendly or dominant responses were not necessarily always competent ones. For example, one scenario involved a friend who had just lost a job and was struggling to afford rent. One possible way of responding was to help the friend find a new job. This response was seen as very friendly (average friendliness rating = 4.86) and as an effective way of dealing with the situation (average effectiveness rating = 4.29). However, another response was to loan the friend the rent money. This response was viewed as being a very friendly (average friendliness rating = 4.77), but moderately ineffective one (average effectiveness rating = 2.49). Most of the responses that were friendly but not effective were similar in that they involved actions that were highly agreeable, but also potentially costly to the self without necessarily resolving the situation. Therefore, the behavioral tendency scores seemed to reflect purer, unmitigated assessments of interpersonal traits (Hegleson & Fritz, 1999; Motowidlo, Hooper, & Jackson, 2006) than the interpersonal competence score, which reflected a blend of traits (Gurtman, 1999).

Situation-Specific Processing

Examining social cognitive processing at the situation-specific level was also revealing. Multilevel modeling showed that response evaluations tended to be the strongest predictor of an individual's likelihood of endorsing a particular response option. This could simply be because the response evaluation is the most proximate processing step to making a response (Crick & Dodge, 1994). But this finding is also in line with previous research. For example, Krumm and colleagues (Krumm et al., 2015) were able to demonstrate that people could often effectively respond to situation judgment tests where the situation had been removed. It appears that people may be able to gather information from the response options and make judgments based on the qualities (moral value, agreeableness, etc.) present in the responses (Motowidlo & Lievens, 2016). Other research

looking at executive functioning and social information processing found that it was a lack of inhibitory control during the response evaluation and selection steps was that most strongly related to the likelihood of endorsing a socially incompetent response option (Van Nieuwenhuijzen et al, 2017).

Despite the fact that response evaluations were the strongest predictor, there was some evidence that the situational elements mattered as well. Situation perceptions predicted people's likelihood of endorsing a behavior in Study 1. Additionally, both Studies 1 and 2 found that response evaluations interacted with the goals an individual had formed such that the person would be more likely to endorse a response if the evaluation of the response (e.g., this response is friendly) aligned with the person's goal (I would like to maintain this friendship). Therefore, it would probably be incorrect to completely ignore the situational contexts that are associated with the response options (Rockstuhl et al., 2015).

Key Issues and Considerations Revisited

The IICM arose from a comparison of five different approaches to understanding interpersonal competence. In evaluating and comparing these approaches, four key issues and considerations were revealed. Specially, there were questions related to whether interpersonal competence should be assessed at the general or situation-specific level, whether the focus should be on overt behavior or underlying processes, whether researchers should explicitly define effectiveness or simply characterize tendencies, and whether it is possible to provide an organizing framework for the study of interpersonal competence. The present research may provide some insight into how to answer these important questions.

Global Characteristics or Situation-Specific Responses?

The first key issue that was raised was whether interpersonal competence should be assessed in terms of global characteristics or as a person's specific response to a specific situation (Cervone et al., 2001; McCrae & Costa, 1999). The IICM took a combined approach that used specific situations that were then aggregated to maximize both the accuracy of situation specific approaches and the broad generalizability of the global approaches. This method appeared useful for understanding interpersonal competence. First, specific situations did differ, in that they varied in their interpersonal qualities. For instance, some situations did actually contain hostile components and were more likely to activate hostile goals. Importantly, in these situations that activated hostile goals, individuals were somewhat more likely to endorse hostile response options. In addition, using situational contexts helped illustrate that interpersonal competence is a blend of friendliness and dominance, rather than just pure friendliness or pure dominance (Rose-Krasnor, 1997).

Overt Behavior or Underlying Processes?

A second key question was whether interpersonal competence measurement should focus on the overt behaviors an individual enacts or on the processes that underlie the behavior (Cervone et al. 2001; Fleeson & Jayawickreme, 2009). The present research suggests that both seem useful for understanding interpersonal competence, but perhaps for different purposes. In both Studies 1 and 2, the underlying process scores tended to be poor predictors of external outcomes. Rather, their utility was largely in explaining why individuals received higher or lower interpersonal competence scores. The variables that captured the behavioral tendencies – for both interpersonal characteristics and effectiveness – were more strongly related to the daily outcomes and informant-reported outcomes.

There are possible explanations for these findings. One explanation is that interpersonal competence is the result of a collection of social cognitions (Crick & Dodge, 1994). Isolating individual processes may be useful in explaining the process by which a person makes a decision about how to respond to a particular situation. However, breaking down the underlying social cognitions into unique steps may reduce the underlying social cognition into small, potentially limited variance that would be difficult to connect to large-scale outcomes such as relationship quality (Dodge, 1985). Another explanation is that the overt behavior is simply more proximate to many of the outcomes that were assessed. This is especially true in the case of Study 2, where the internal, underlying processes that lead to behavior may simply not be as apparent to external evaluators as the actual enacted behavior (Vazire, 2010). Taken together, these findings may suggest that focusing on the underlying processes is primarily useful in explaining why people behave the way they do (Cervone et al., 2001). But if the ultimate interest is in more external outcomes, such as daily life experiences or relationships with others, researchers may want to consider focusing on predictors that are more behavioral in nature.

Tendencies or Effectiveness?

The third key question focused on whether interpersonal competence should focus on tendencies towards behaviors that are typically effective (e.g., agreeable behavior) or on behavior that is explicitly defined as being an effective response to a situation (Dirks et al., 2007; Jensen-Campbell et al., 2010). These findings were complicated because both the interpersonal competence score (i.e., tendencies toward behaviors that are situationally-defined as effective) and behavioral tendency scores (i.e., tendencies toward behaviors that are typically good/bad) were related to daily outcomes, and peer- and parent-reported outcomes. However, a comparison of the findings revealed some interesting insights.

First, the behavioral tendency scores in Study 1 tended to interact with daily events to predict daily outcomes, particularly with regards to satisfaction and prosocial feelings. Interaction patterns revealed that individuals with higher tendencies toward friendliness and submission tended to be more sensitive to their daily experiences whereas individuals with higher tendencies toward hostility and dominance were less sensitive. These patterns make sense. Highly friendly individuals care very deeply about their relationships and would likely be affected by possible disruptions and threats to their relational value (Leary, Tambor, Terdal, & Downs, 1995). Submissive individuals are also highly sensitive to threats and may not possess the self-efficacy needed to respond (Moskowitz & Zuroff, 2004). Conversely, hostile individuals may not be as affected by relational threats and dominant individuals may have the agency needed to effectively manage any event that arises in their lives (Smith et al., 2000). However, when examining interactions between interpersonal competence and daily events, only one of the twenty-one models tested was significant. Because interpersonal competence represents a blend of friendliness and dominance (Gurtman, 1999), it may be the case that interpersonally competent individuals care about their relationships, but feel like they can handle challenges. On the other side, individuals low in interpersonal competence may feel unable to handle interpersonal challenges, but do not care as highly. Future research may want to specifically focus on disentangling these effects.

In Study 2, the behavioral tendency scores for hostility and friendliness tended to be better predictors of peer- and parent-reported outcomes than the interpersonal competence score. This was somewhat surprising, given that previous research has found significant associations between interpersonal competence and positive peer perceptions (Persich et al., in press). However, it is also possible that the purer metrics of hostility and friendliness are simply more apparent to external observers than the more nuanced blend of friendliness and dominance that makes up interpersonal

competence. Additionally, many of the instances in which ratings of friendliness and competence did not align were ones in which the response option was nice, but costly to the self. It is also possible that friends and family members may benefit more from an unmitigated form of friendliness (Helgeson & Fritz, 1999) and evaluate such behavior more positively (Dirks et al., 2007). For example, a person who is dealing with a situation in which a friend lost his job might decide to help the friend find a new job, but not to loan the friend rent money. Despite the fact that the person is actually handling the situation in a fairly competent manner (according to the consensus-based norms used in the present study), the friend may still view the person as a “bad friend” for being unwilling to provide the financial assistance.

In summary, it is uncertain whether behavioral tendencies or effectiveness-based interpersonal competence scores are best for understanding outcomes related to daily life and relationships with friends and family. Future research may want to examine these two types of scores more deeply to explore how they overlap and differ from each other. For instance, one could compare self- and peer-reported perceptions of the friendship or focus specifically on scenarios involving unmitigated friendliness.

The Need for Organization

One difficulty in integrating perspectives on interpersonal competence is that there is a lack of organization. Many different types of situations, goals, and response options exist (Cantor, Mischel, & Schwartz, 1982; Leary, Raimi, Jongman-Sereno, & Diebels, 2015). These are often characterized nominally (Shoda et al., 1994) or in theoretically unconnected terms (e.g., aggressive, withdrawn). The interpersonal circumplex provides the ability to place all the situations and ways of responding within the circumplex in a manner that allows for easy comparison (Wiggins & Broughton, 1991; Wiggins et al., 1988). For example, the circumplex analysis done in Study 1 was

able to demonstrate differences in how situations were perceived. For instance, the friend who had been selected for a leadership position tended to be perceived as friendly and dominant, whereas the friend who was slacking on the group project was perceived to be hostile. The same was true for response options. For instance, buying a gift (4.59°) and expressing gratitude (8.30°) were both considered to be friendly responses. However, ignoring a comment (215.25°) and trying not to get excited about a comment (309.39°) were viewed as very different types of submission. Being able to characterize and compare the situations and responses in such a manner seems like a useful tool for understanding and organizing interpersonal behavior.

The interpersonal circumplex organization also provided some insights in to the method used in the present research. The friendship SJT that was expanded into the IICM was developed prior to the current research (Persich et al., in press). The SJT was developed following typical guidelines for SJT creation (Weekley et al., 2006) and focused on heterogeneous friendship situations rather than deliberately isolating specific features or characteristics (Dodge, McClaskey, & Feldman, 1985). Perhaps as a result, the scenarios tended to be characterized as either friendly or hostile-dominant, with a noticeable lack of scenarios characterized by submission. The response options similarly tended to neglect the hostile-submissive quadrant of the circumplex. It may be useful in the future to more explicitly target each quadrant of the circumplex. It also may be useful to explore whether the relative lack of submissive scenarios is a limitation of Persich and colleague's SJT or a feature of social situations. For instance, it may be the case that the types of situations that are common or particularly problematic in friendships naturally tend to align with friendliness and hostile-dominance (Blieszner, 2014; Horowitz et al., 1997).

Additional Considerations and Future Directions

The present research provided some interesting insights into interpersonal competence but there are some additional questions that future research may want to investigate. The present research focused on friendship due the fact that it is one of the most voluntary forms of interpersonal relationships and is uncomplicated by legal, economic, or societal commitments (Wzrus et al., 2017). This domain was chosen specifically because it should more simple than other forms of interpersonal relationships and perhaps allow for the understanding of basic processes. It seems as if some of the findings (e.g., that people were more likely to endorse friendly response options than hostile ones) would generalize to other sorts of relationships, but more testing would be necessary. For example, romantic relationships are often more central than other relationships (Reis, Lin, Bennett, & Nezlek, 1993), are marked by greater levels of passion and commitment (Connolly, Craig, Goldberg, & Pepler, 1999), and individuals may have higher expectations for their romantic partners (Sprecher & Regan, 2002). Therefore, it could be possible that processes such as situation perceptions (e.g., my partner is acting hostile towards me) and goals (e.g., I want maintain this relationship) would be more consequential than they were in the friendship domain (Overall, Fletcher, Simpson, & Fillo, 2015; Rusbult, Olsen, Davis, & Hannon, 2001).

In addition, the present research mainly focused on relationship maintenance scenarios. That is, the protagonists in the scenarios were always dealing with issues involving a current friendship. However, processes may function differently at different stages of an interpersonal relationship, such as the formation of a relationship (Harris & Vazire, 2016). Therefore, it may be interesting for future research to examine different types of critical events that can occur within an interpersonal relationship (Dodge et al., 1985) and whether these events would be differentially related to one's interpersonal competence.

The IICM may still be a useful framework for understanding and organizing these different classes of situations and resulting behaviors. For example, inhibited individuals sometimes struggle to form relationships because they perceive such situations to be threatening (Asendorpf, Denissen, & Van Aken, 2008). Once a relationship is formed, however, it appears that the success of the relationship largely hinges on whether or not a person enacts hostile, antisocial, or norm-violating behaviors (Argyle & Henderson, 1984; Blieszner, 2014). Therefore, it could be useful to unpack whether particular characteristics (e.g., submission versus hostility) or processing steps (e.g., situation perceptions versus response evaluations) are more consequential for the different types of critical situations.

As a final point, the present research used the interpersonal circumplex as an organizing framework (Wiggins et al., 1988). This approach was useful and provided some good insights into how people perceive and respond to friendship situations. However, there could be alternative ways to characterize situations, goals, and responses. For instance, other research has focused on intrapsychic (Leary et al., 2015) and emotional components (Rockstuhl et al., 2015) of social cognition rather than strictly interpersonal processes. Some researchers (e.g., Martin-Raugh & Kell, in press, Rockstuhl et al., 2015) have also advocated qualitative methods in which people are asked to “think aloud” as they take a situational judgment test. This “think aloud” procedure is thought to closely capture whatever people are considering as they make situational judgments. As such, the IICM and the current findings demonstrate that the interpersonal characteristics of situations and responses should be considered when attempting to understand the social behaviors people decide to enact. However, as research on the IICM progresses further, it will remain open to the idea that other elements, such as emotions and intrapsychic processes, could be relevant.

Conclusion

Despite the benefits associated with interpersonal relationships, some people are not as successful as others at forming and maintaining high-quality relationships (Wrzus et al., 2017). A likely explanation is that people tend to differ in their levels of interpersonal competence – their ability to consistently enact behaviors that are effective, socially appropriate, and satisfying to others (Rose-Krasnor, 1997; Spitzberg, 2003). The present research proposed and tested an integrated model of interpersonal competence aimed at understanding why people chose to enact certain behaviors and how competence was related to successful interpersonal functioning. Overall, the integrated model produced insights into interpersonal competence and can provide a useful guide for future investigations and assessments of interpersonal competence.

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APPENDIX A. INTEGRATED INTERPERSONAL COMPETENCE MODEL (IICM)

Situation Perception

Instructions: We will describe a situation involving a named character (the protagonist) and a friend. Please read the following scenarios and indicate the extent to which the protagonist's friend is being hostile, dominant, friendly, and submissive.

It might help to IMAGINE THAT YOU ARE THE NAMED CHARACTER when you make these ratings.

In some cases, it may seem like you may not have enough information, but just do your best and go with your intuitions.

It may be helpful to first provide you with some definitions before you begin. A HOSTILE person is someone who is mean, antagonistic, coldhearted. A FRIENDLY person is someone who is kind, sympathetic, helpful. A DOMINANT person is someone who is assertive, controlling, a leader. A SUBMISSIVE person is someone who is timid, shy, unauthoritative

Hostile: 1 = not at all hostile; 5 = very hostile

Friendly: 1 = not at all friendly; 5 = very friendly

Dominant: 1 = not at all dominant; 5 = very dominant

Submissive: 1 = not at all submissive; 5 = very submissive

1. Recently, Tracie told her friend a very personal secret that she had never told anyone else. Tracie was attending a party and she found out that now everyone appears to know this secret.
 - a. How hostile is Tracie's friend?
 - b. How friendly is Tracie's friend?
 - c. How dominant is Tracie's friend?
 - d. How submissive is Tracie's friend?

2. Victor's friend seems very sick.
 - a. How hostile is Victor's friend?
 - b. How friendly is Victor's friend?
 - c. How dominant is Victor's friend?
 - d. How submissive is Victor's friend?

3. Darcy is about to meet a friend after a gap of several years.
 - a. How hostile is Darcy's friend?
 - b. How friendly is Darcy's friend?
 - c. How dominant is Darcy's friend?
 - d. How submissive is Darcy's friend?

4. Wilma's friend says something unexpectedly nice and touching.
 - a. How hostile is Wilma's friend?
 - b. How friendly is Wilma's friend?
 - c. How dominant is Wilma's friend?
 - d. How submissive is Wilma's friend?
5. Jack's friend was selected over him for a student leadership role.
 - a. How hostile is Jack's friend?
 - b. How friendly is Jack's friend?
 - c. How dominant is Jack's friend?
 - d. How submissive is Jack's friend?
6. Scott's friend lost his job and cannot afford rent. This friend asks Scott if he can stay with him.
 - a. How hostile is Scott's friend?
 - b. How friendly is Scott's friend?
 - c. How dominant is Scott's friend?
 - d. How submissive is Scott's friend?
7. Randy notices that his friend seems to be ignoring him.
 - a. How hostile is Randy's friend?
 - b. How friendly is Randy's friend?
 - c. How dominant is Randy's friend?
 - d. How submissive is Randy's friend?
8. Lesley's friend did a stupid thing but Lesley was blamed for it.
 - a. How hostile is Lesley's friend?
 - b. How friendly is Lesley's friend?
 - c. How dominant is Lesley's friend?
 - d. How submissive is Lesley's friend?
9. Roy found out that his friend has been reading his personal emails.
 - a. How hostile is Roy's friend?
 - b. How friendly is Roy's friend?
 - c. How dominant is Roy's friend?
 - d. How submissive is Roy's friend?
10. Jade will get a poor grade on a joint project if her friend, who is also involved in the project, does not start doing something.
 - a. How hostile is Jade's friend?
 - b. How friendly is Jade's friend?
 - c. How dominant is Jade's friend?
 - d. How submissive is Jade's friend?

Goal Formation

We will describe a situation involving a named character (the protagonist) and a friend. Please read the following scenarios and indicate the extent to which the situation would trigger goals for the protagonist that are hostile, dominant, friendly, and submissive.

It might help to imagine that you are the named character when you make these ratings.

In some cases, it may seem like you may not have enough information, but just do your best and go with your intuitions.

It may be helpful for us to provide you with definitions before you begin. Hostile Goals: a desire for revenge, a desire to hurt the other person. Friendly Goals: a desire to help the other person, a desire to maintain the friendship. Dominant Goals: to assert oneself, to put the other person in their place. Submissive Goals: to give in to the other person, to avoid any confrontations.

Rating: 1 = not at all; 5 = very much so

1. Recently, Tracie told her friend a very personal secret that she had never told anyone else. Tracie was attending a party and she found out that now everyone appears to know this secret.
 - a. To what extent would this situation trigger a hostile goal?
 - b. To what extent would this situation trigger a friendly goal?
 - c. To what extent would this situation trigger a dominant goal?
 - d. To what extent would this situation trigger a submissive goal?
2. Victor's friend seems very sick.
 - a. To what extent would this situation trigger a hostile goal?
 - b. To what extent would this situation trigger a friendly goal?
 - c. To what extent would this situation trigger a dominant goal?
 - d. To what extent would this situation trigger a submissive goal?
3. Darcy is about to meet a friend after a gap of several years.
 - a. To what extent would this situation trigger a hostile goal?
 - b. To what extent would this situation trigger a friendly goal?
 - c. To what extent would this situation trigger a dominant goal?
 - d. To what extent would this situation trigger a submissive goal?
4. Wilma's friend says something unexpectedly nice and touching.
 - a. To what extent would this situation trigger a hostile goal?
 - b. To what extent would this situation trigger a friendly goal?
 - c. To what extent would this situation trigger a dominant goal?
 - d. To what extent would this situation trigger a submissive goal?

5. Jack's friend was selected over him for a student leadership role.
 - a. To what extent would this situation trigger a hostile goal?
 - b. To what extent would this situation trigger a friendly goal?
 - c. To what extent would this situation trigger a dominant goal?
 - d. To what extent would this situation trigger a submissive goal?

6. Scott's friend lost his job and cannot afford rent. This friend asks Scott if he can stay with him.
 - a. To what extent would this situation trigger a hostile goal?
 - b. To what extent would this situation trigger a friendly goal?
 - c. To what extent would this situation trigger a dominant goal?
 - d. To what extent would this situation trigger a submissive goal?

7. Randy notices that his friend seems to be ignoring him.
 - a. To what extent would this situation trigger a hostile goal?
 - b. To what extent would this situation trigger a friendly goal?
 - c. To what extent would this situation trigger a dominant goal?
 - d. To what extent would this situation trigger a submissive goal?

8. Lesley's friend did a stupid thing but Lesley was blamed for it.
 - a. To what extent would this situation trigger a hostile goal?
 - b. To what extent would this situation trigger a friendly goal?
 - c. To what extent would this situation trigger a dominant goal?
 - d. To what extent would this situation trigger a submissive goal?

9. Roy found out that his friend has been reading his personal emails.
 - a. To what extent would this situation trigger a hostile goal?
 - b. To what extent would this situation trigger a friendly goal?
 - c. To what extent would this situation trigger a dominant goal?
 - d. To what extent would this situation trigger a submissive goal?

10. Jade will get a poor grade on a joint project if her friend, who is also involved in the project, does not start doing something.
 - a. To what extent would this situation trigger a hostile goal?
 - b. To what extent would this situation trigger a friendly goal?
 - c. To what extent would this situation trigger a dominant goal?
 - d. To what extent would this situation trigger a submissive goal?

Response Evaluation

Instructions: We will describe a series of behaviors that a person could enact in response to a situation. Please indicate the extent to which these responses are hostile, friendly, dominant, and submissive.

In some cases, it may seem like you may not have enough information, but just do your best and go with your intuitions.

Hostile: 1 = not at all hostile; 5 = very hostile

Friendly: 1 = not at all friendly; 5 = very friendly

Dominant: 1 = not at all dominant; 5 = very dominant

Submissive: 1 = not at all submissive; 5 = very submissive

1. Confront the friend
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

2. Try not to act embarrassed
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

3. Reveal a personal secret about the friend in return
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

4. Admit to herself that she is just being paranoid about the friend revealing the secret
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

5. Call the friend and offer to do chores
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

6. Pay a visit to the friend
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

7. Stay away in case the illness is infectious
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

8. Act as if the friend were healthy
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

9. Do research on the friend and what she has been up to
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

10. Plan a special dinner date
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

11. Remember the good times they had in the past
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

12. Get very excited about the situation
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

13. Express gratitude in return
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

14. Buy the friend a nice gift
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

15. Act as if nothing special was said
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

16. Try not to be too elated
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

17. Withdraw from the student organization for not being selected
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

18. Mope about the situation
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

19. Try to figure out what occurred
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

20. Volunteer to serve the friend in his new position
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

21. Explain why this is not a good idea
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

22. Help the friend find another job
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

23. Loan the friend rent money
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

24. Say something along the lines of “how great this will be”
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

25. Confront the friend
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

26. Ask his friend why he is being ignored
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

27. Ignore the friend in return
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

28. Convince himself that the friend is not ignoring him on purpose
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

29. Express lots of anger about the situation
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

30. Just accept blame for the sake of the relationship
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

31. Tell the friend not to do stupid things
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

32. Tell everyone involved what actually happened
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

33. Worry about what personal information was learned
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

34. Ask the friend to stop reading his personal emails
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

35. Change his email address
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

36. Get really angry
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

37. Prioritize the friendship over the project
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

38. Prod the friend until he/she does something
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

39. Explain the importance of the project
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

40. Hope the friend gets started soon
 - a. How hostile is this way of responding?
 - b. How friendly is this way of responding?
 - c. How dominant is this way of responding?
 - d. How submissive is this way of responding?

Behavioral Tendency

Behavioral Tendency Instructions: We will describe a situation involving a named character (the protagonist) and a friend. You should read the situation, think about how the protagonist should deal with the situation, and then rate the likelihood that YOU would respond in that manner if YOU were in the situation. Each situation will be paired with 4 consecutive ways that the protagonist could deal with it.

Scenario: If you were (character) and you were in this situation, how likely would it be that you would do the following?:"

1 = not at all likely; 5 = very likely

1. Recently, Tracie told her friend a very personal secret that she had never told anyone else. Tracie was attending a party and she found out that now everyone appears to know this secret.
 - a. Confront the friend
 - b. Try not to act embarrassed
 - c. Reveal a personal secret about the friend in return
 - d. Admit to herself that she is just being paranoid about the friend revealing the secret
2. Victor's friend seems very sick.
 - a. Call the friend and offer to do chores
 - b. Pay a visit to the friend
 - c. Stay away in case the illness is infectious
 - d. Act as if the friend were healthy
3. Darcy is about to meet a friend after a gap of several years.
 - a. Do research on the friend and what she has been up to
 - b. Plan a special dinner date
 - c. Remember the good times they had in the past
 - d. Get very excited about the situation
4. Wilma's friend says something unexpectedly nice and touching.
 - a. Express gratitude in return
 - b. Buy the friend a nice gift
 - c. Act as if nothing special was said
 - d. Try not to be too elated
5. Jack's friend was selected over him for a student leadership role.
 - a. Withdraw from the student organization for not being selected
 - b. Mope about the situation
 - c. Try to figure out what occurred
 - d. Volunteer to serve the friend in his new position
6. Scott's friend lost his job and cannot afford rent. This friend asks Scott if he can stay with him.

- a. Explain why this is not a good idea
 - b. Help the friend find another job
 - c. Loan the friend rent money
 - d. Say something along the lines of “how great this will be”
7. Randy notices that his friend seems to be ignoring him.
 - a. Confront the friend
 - b. Ask his friend why he is being ignored
 - c. Ignore the friend in return
 - d. Convince himself that the friend is not ignoring him on purpose
8. Lesley's friend did a stupid thing but Lesley was blamed for it.
 - a. Express lots of anger about the situation
 - b. Just accept blame for the sake of the relationship
 - c. Tell the friend not to do stupid things
 - d. Tell everyone involved what actually happened
9. Roy found out that his friend has been reading his personal emails.
 - a. Worry about what personal information was learned
 - b. Ask the friend to stop reading his personal emails
 - c. Change his email address
 - d. Get really angry
10. Jade will get a poor grade on a joint project if her friend, who is also involved in the project, does not start doing something.
 - a. Prioritize the friendship over the project
 - b. Prod the friend until he/she does something
 - c. Explain the importance of the project
 - d. Hope the friend gets started soon

APPENDIX B. DAILY DIARY SURVEY

How many times did the following things happen to you today? Use the following scale:

0 = not a single time, 1 = one time, 2 = two times, 3 = more than two times

1. Someone criticized me today
2. Someone treated me unfairly.
3. Someone argued with me today

How many times did you do the following behaviors today? Use the scale provided:

0 = not a single time; 1 = 1-2 times; 2 = 3-5 times; 3 = more than 5 times (i.e., often)

1. Helped someone
2. Forgave someone
3. Comforted someone
4. Argued with someone
5. Insulted someone
6. Criticized someone
7. Told someone what to do
8. Took the lead in a group situation
9. Expressed an opinion
10. Went along with others
11. Let others make decisions for me
12. Gave in to others

To what extent did you feel each of the following today? Use the scale below:

1 = Not at all; 5 = Extremely

1. Irritated
2. Angry
3. Caring
4. Friendly
5. Satisfied with yourself
6. Satisfied with your friends
7. Satisfied with your social interactions

Check all of the following events that happened to you today

1. I ate lunch/dinner with someone
2. I celebrated a special occasion with someone
3. I had a 15 minute (or longer) conversation with someone
4. I was praised
5. I met someone new
6. I played a game (board, video, etc.) or sport with someone
7. Someone did me a favor spontaneously
8. Someone hugged me affectionately

9. Someone shared pictures of us together
10. Someone volunteered their time to help me
11. I talked to a person sitting next to me in class
12. I texted someone or received a text
13. I was complimented by someone
14. I was given a gift
15. I went to a social event
16. I did not have any of these events occur today

Check all of the following events that happened to you today

1. A friend did not return a call or text
2. Someone ignored you
3. Someone insulted you
4. Someone left a hostile post or message on your social media
5. Someone lied to you
6. Someone made a mean gesture
7. Someone refused to help you
8. Someone tried to hurt your feelings
9. You overheard gossip about yourself
10. You were blamed for something
11. You were called a bad or obscene name
12. You were criticized by someone
13. You were rejected by someone
14. You were teased or ridiculed
15. You were yelled at
16. I did not have any of these events occur today

APPENDIX C. INFORMANT REPORT SURVEY

Behavior (Peers & Parents)

To what extent does your (friend/child/roommate) engage in the following behaviors in your relationship?

1 = never; 5 = often

1. Forgives me when I make mistakes
2. Apologies to me
3. Acknowledges when he/she is wrong
4. Is grateful to me
5. Is patient with me
6. Does not care about my needs
7. Is selfish
8. Prioritizes his/her own wishes
9. Is greedy
10. Is self-centered
11. Talks to me
12. Communicates with me
13. Opens up to me
14. Confides in me
15. Is honest with me
16. Tells me what to do
17. Bosses me
18. Controls me
19. Restricts me
20. Dominates me

Social Competence (Peers & Parents; Larson et al., 2007)

Please indicate to what extent are the following characteristic of the person you are rating

1 = extremely uncharacteristic, 10 = extremely characteristic

Close Relationship Competence

1. Behaves in a way that is sympathetic or considerate of others
2. Is warm; has the capacity for close relationships; compassionate
3. Is liked and accepted by most people
4. Is turned to or sought out for advice and reassurance
5. Is basically distrustful of people and, in general, their motives

Social Group Competence

1. Is playful and humorous in social situations
2. Appears poised and comfortable in social situations
3. Is sociable; enjoys and makes a point of being with others
4. Is personally charming

Antisocial and Prosocial Feelings (Peers & Parents)

To what extent does the person you are rating typically experience the following feelings?

1 = Not at all; 5 = Extremely

1. Irritated
2. Angry
3. Caring
4. Pleasant

Relationship Assessment Scale (Peers; modified from Hendrick, 1988)

Please read the following questions about your friendship with the person you are rating and respond using the options provided.

1. How well does your friend meet your needs? 1 = not very well; 7 = very well
2. In general, how satisfied are you with your friendship? 1 = extremely satisfied; 7 = extremely dissatisfied
3. How good is your friendship compared to most? 1 = not good at all; 7 = very good
4. How often do you wish you hadn't gotten into this friendship? 1 = never; 7 = very often
5. To what extent has your friendship met your original expectations? 1 = not at all; 7 = very much so
6. How much do you like for friend? 1 = a great deal; 7 = not at all
7. How many problems are there in your friendship? 1 = very few problems; 7 = very many problems

Relationship Assessment Scale (Parents modified from Hendrick, 1988)

Please read the following questions about your friendship with the person you are rating and respond using the options provided.

1. In general, how satisfied do you typically feel with your relationship with your child? 1 = extremely satisfied; 7 = extremely dissatisfied
2. How good is your relationship with your child compared to the relationships that other parents have with their children? 1 = not good at all; 7 = very good
3. To what extent has your relationship with your child typically meet your original expectations? 1 = not at all; 7 = very much so
4. How much do you typically love your child? 1 = a great deal; 7 = not at all
5. How many problems typically occur in your relationship with your child? 1 = very few problems; 7 = very many problems

Social History (Parents)

Please answer the following questions about what the person you are rating was like when he/she was growing up.

1 = not at all; 5 = extremely

1. How aggressive was he/she?
2. How angry was he/she?
3. How hostile was he/she?
4. How shy was he/she?
5. How avoidant was he/she?
6. How inhibited was he/she?
7. How popular was he/she?
8. How well-liked was he/she?
9. How admired was he/she?
10. How altruistic was he/she?
11. How kind was he/she?
12. How compassionate was he/she?
13. How dominant was he/she?
14. How assertive was he/she?
15. How decisive was he/she?