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The Accuracy of Initial Trust Judgments

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THE ACCURACY OF INITIAL TRUST JUDGMENTS

By

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Abstract

This dissertation is dedicated to answer the questions: are we able to achieve accuracy in our initial trust perceptions (study 1) and what mechanism may account for this accuracy (study 2)? The first study conducted was field based, using temporary student teams. I used the social relations model (SRM) to determine how trust perceptions shift over time relative to individual and team perceptions. I found that individuals' perceptions remain moderately consistent over time and calibrated with their teams' perception only in terms of integrity perceptions. Further, individuals were able to achieve meta-accuracy ("I know how much you trust me") at both the generalized and dyadic levels. The second study was conducted in an experimental laboratory, examining trust at the dyadic level within a negotiation context. The perceivers' (trustors) trust perceptions were manipulated based on false feedback regarding their partners' (targets or trustees) response to a survey examining their perspective on the use of ethical negotiation tactics. I found that individuals' initial perceptions were correlated with their post-negotiation trust perceptions, partially mediated by the perceivers trusting behaviors and the targets' trustworthy behavior. The initial trust manipulation, however, did not have an influence on the negotiated outcomes nor the second stage game. The results of study two support the notion that trust is a self-fulfilling prophecy.

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Table of Contents

INTRODUCTION TO DISSERTATION STUDIES:

The Accuracy of Initial Trust Judgments

Trust is necessary for social and organizational relationships to occur (Bachmann & Zaheer, 2006) as it allows individuals to become vulnerable and accept the risks inherent in these interactions (Mayer, Davis & Schoorman, 1995). Because of its importance in interpersonal relationships, trust has been the focus of much empirical and theoretical work, demonstrating how it provides benefits by enhancing functions such as risk taking behaviors (Colquitt et al, 2007; Mayer et al, 1995), communication (Jarvenpaa & Leidner, 1999), perceptions of fairness (Cummings & Bromiley, 1996) cooperation (Williams, 2007; McAllister, 1995), and performance (Dirks, 1999; 2000). These benefits are accrued over time as relationships develop and individuals are able to confidently discern who they can trust and who they cannot. However, during the relationship development processes and inherent in the decision to trust is the possibility that this judgment may change, when individuals no longer have "good reasons" to trust. That is, even though trustors may confidently believe that their initial decision to trust was appropriate, they may later discover that they were in fact mistaken; that their initial trust judgment was inaccurate (i.e., a discrepancy between initial and later trust judgments). Reassessing their initial trust judgments may prevent such benefits from occurring in the future.

Despite the importance of trust in social and organizational interactions the decision for a trustor to change their initial trust judgment – or the accuracy of their initial judgment - has received little theoretical or empirical attention. Even in the reviews of the trust literature, or meta-analyses supporting models of trust, accuracy of trust

judgments is hardly mentioned. Mayer et al (1995) allude to accuracy by stating the perception of accurate trust perceptions affects risk taking behaviors. Similarly, Dirks and Ferrin (2002) propose that perceptions of accuracy influence behaviors by showing that the information a leader provides is perceived as being more accurate when the leader is trusted. On the other hand, management researchers have also alluded to the potential of inaccuracy in the trust decision making process. For example, in their initial model of trust McKnight et al (1998) propose that individuals develop a trusting stance to predict the trustee's future trustworthy behavior, implying that the trustee can be either trustworthy or untrustworthy. Similarly, Meyerson, Weick and Kramer (1996) suggest that individuals initially decide to trust, yet are cautious and skeptical about opportunities of being betrayed, both aiding to reduce uncertainty. Overall, the little work that has incorporated the notion or possibility of inaccuracy suggests that individuals are faced with a trust dilemma in new relationships, where they decide to trust hoping to engage in a beneficial relationship while understanding that there is always the possibility of exploitation (Kramer, 2006). Further, how accurate they believe their initial perception to be influences interaction and outcome behaviors.

Examining this phenomenon – the accuracy of initial trust judgments – is important in both advancing theory as well as practical purposes, as the consequences of being inaccurate can be great. If individuals see others as trustworthy and they are not, they may be taken advantage of. On the other hand, if individuals do not trust someone who is later found to be trustworthy they may forego the possibility of a meaningful relationship. In either scenario, the trustor may suffer personal or professional costs that may affect their current or future relationships. The individuals who trusted Bernie

Madoff are an example of how consequential inaccurate trust judgments can be. For decades, Madoff was accepting money from investors and although they believed he was honestly investing their funds he was stealing them. His "elaborate financial ruse" or "wide-ranging financial charade" was shocking to his friends, family and investors who all entrusted him with their money. He defrauded his investors of roughly $50 billion, affecting individuals and organizations; some charities closed their doors and some individuals lost everything they had.

In the Madoff scenario, individuals first trusted Madoff later to find they were inaccurate, that Madoff was untrustworthy. Although it is not as commonly presented in the media, individuals may also be inaccurate where they initially distrust the trustee later to find that he or she is trustworthy. An example of this could be seen in the context of a negotiation. Trust is essential in negotiations because it increases the value created by the negotiators; it allows the information exchanged to appear legitimate and provides personal security in believing that the trustee will not act deceitfully. Lacking trust results in more impasses or inefficient negotiated agreements. A potentially beneficial relationship may be dissolved because of the lack of initial trust between parties when both parties were good intentioned.

The inherent possibility of inaccuracy in all relationships begs an answer to the question: what is responsible for individuals' inaccuracy? Trust can be thought of as choice based on a process where we "discriminate among persons and institutions that are trustworthy, distrusted, and unknown. [Where] we cognitively choose who we will trust in which respects and under which circumstances" (Lewis & Weigert, 1985, p. 970). This quote represents the cognitive reasoning processes that lead individuals to

confidently form their initial trust judgment. Therefore, this initial reasoning process is likely to be responsible for individual's accuracy or inaccuracy. Brunswik's lens model can be use to describe how this reasoning process can lead to inaccuracy. In this model, the behavioral indicators presented by the trustee may be misinterpreted by the trustor leading to inaccurate initial judgments. Thus, the cues were not valid enough to appropriately represent the trustees' true intentions and motivations.

Misreading or interpreting the trustee's encoded cues produces a domino effect in that it reinforces misperceptions and misattributions of current and future information. For example, the individuals who trusted Madoff may have initially trusted him because his client base was composed of close friends and family, or perhaps his dedication to charity and his church. This initial judgment guided all future trust assessments and despite the indications of Madoff's untrustworthiness (i.e., his continued investigations by the SEC), individuals continued to invest money showing their trust in him and his firm. This misinterpretation (or the possible lack of available cues to some investors) created an anchoring and adjustment affect where individuals' initial judgment guided all future judgment and the salience of Madoff's present of cues (Petty & Cacioppo, 1986). This anchoring heuristic is also similar to cognitive mechanisms such as the self-fulfilling prophecy where individuals treat their counterparts consistent with their initial judgment, using the trustee's behavior to reinforce and confirm (or disconfirm) their trust.

In summary, individuals may be accurate or inaccurate in their initial trust perceptions and their cognitive reasoning processes may contribute to their accuracy. In light of this, this dissertation is dedicated to answer the questions: are we able to achieve accuracy in our initial trust perceptions (study 1) and what mechanism may account for

this accuracy (study 2)? The first study conducted was field based, using temporary student teams where trustworthiness and trust were very relevant to successfully executing tasks as well as to their performance. I used the social relations model (SRM) to examine my research questions and to determine how trust perceptions shift over time relative to individual and team perceptions. The second study was conducted in an experimental laboratory, examining trust at the dyadic level within a negotiation context. The perceivers' (trustors) trust perceptions were manipulated based on false feedback regarding their partners' (targets or trustees) response to a survey examining their perspective on the use of ethical negotiation tactics (SINS scale).

STUDY 1

The first study of my dissertation examines whether individuals are able to achieve accuracy of their initial trust and trustworthiness perceptions. I longitudinally examine whether initial trust perceptions among first year MBA teams remain consistent and calibrated after meaningful acquaintance. In this paper, I define and measure accuracy as the (a) the calibration of an individual's initial perception compared to their later trust perception (linear accuracy), (b) the consistency of an individuals' initial perception compared to their team's consensus after maximum acquaintance (consensus accuracy), and (c) whether individuals are able to accurately determine if their teammates trust them (meta-accuracy). I propose that individuals' accuracy of their initial perceptions (trustworthiness being defined by perceptions of ability, benevolence and integrity) will vary in strength across the factors of trustworthiness, types of accuracy and after meaningful interactions. I measure perceptions at minimal acquaintance (time 1),

moderate acquaintance (time 2) and close acquaintance (time 3), with approximately 6 weeks between data collection points. Meta-accuracy, however, was measured only at times 2 and 3.

In assessing linear accuracy, I find that individuals' perceptions remain calibrated over time, with the exception of ability. Individuals were least accurate in achieving consensus accuracy; individuals' perceptions of benevolence, ability and trust intentions diverged, but converged with perceptions of integrity. Overall, these results show that individuals were inconsistent in their initial judgments and only moderately calibrated over time in their perceptions of trustworthiness.

The third measure of accuracy – meta-accuracy – is unlike the first two in that there is an objective standard in which to measure perceptions. There are two types of meta-accuracy; generalized meta-accuracy refers to whether individuals are accurate in perceiving how others view them in general—do I know whether the group as a whole trusts me? By contrast, dyadic meta-accuracy refers, to whether individuals can distinguish the extent to which particular people trust them—do I know who trusts me more versus less? Contrary to most studies, I find that after meaningful interactions, individuals are exceptional at understanding who trusts them both in general and in particular.

STUDY 2

While researchers have made important (if relatively few) contributions identifying indicators that predict accurate initial trust judgments, such as facial features,

there are still many indicators that have not been investigated. These other mechanisms address the broader question of *how* individuals are able to achieve accuracy in their initial trust judgment. In the absence of information, individuals may arrive at accuracy by using cognitive mechanisms (McKnight, Cummings, & Chervany, 1998; Meyerson, 1996; Williams, 2001). Porter and ten Brinke (2009) suggest that individuals use cognitive mechanism such as stereotypes to form an initial trust judgment. Using these mechanisms may distort their evaluation of all information gathered from the interaction to be consistent, or positively associated with, their initial trust judgment. This process underscores the idea of the self-fulfilling prophecy (SFP), or erroneous initial expectations that are seen as certain through the evaluation of verbal and nonverbal cues, and maintained after the interaction has ended (Judice & Neuberg, 1998). For example, initial impressions of high trust would cause perceivers to evaluate information and behave as if their interaction partners are trustworthy, possibly by asking questions to support his view (Snyder & Stukas, 1999), and acting more positively towards the target during the interaction (Harris, 1989; Neuberg et al., 1993). This behavior reinforces the perceivers' initial impression, causing them to maintain it regardless of its veracity (Beckstead, 2003).

In my second dissertation study I examine the effects of the SFP on forming and evaluating initial trust judgments and the accuracy of these judgments. Research shows that there are two different models through which the SFP can lead to accuracy. The first involves the behavior of the target (i.e., behavioral confirmation) (Snyder, 1992; Snyder et al., 1977). In this model, the target's behaviors support the perceiver's initial trust perceptions and expectations of the target's intentions. The second model does not take

the target's behavior into account and instead focuses on the perceiver's perceptual biases based on self-perception theory. According to this model, regardless of the behaviors communicated by the target, the perceiver believes his or her initial impression to hold true. The perceiver uses his or her own internal state (i.e., trusting) to assess how he or she should perceive the target (i.e., trustworthy) without using the target's behaviors to reinforce or negate his or her initial perspective (i.e., perceptional confirmation) (Bem, 1972; Jussim, 1989; Miller & Turnbull, 1986; Snyder, 1992).

In light of the results from study 1, I take a linear accuracy approach and examine how the self-fulfilling prophecy affects behaviors, decisions and the accuracy of initial trust judgments. I examined these effects in the context of a negotiation and manipulated the perceivers' initial perception of trust using false feedback regarding the ethicality of their partners' negotiation tactics (only the perceiver received the manipulation). I used two measures of accuracy – a subjective and objective measure. Subjectively, the perceivers' accuracy is measured by the significance of the relationship between their initial judgment and a post-interaction judgment. Objectively, the perceivers' accuracy is measured by the significance of the relationship between their initial trust judgment and whether they were able to achieve behavioral confirmation from the target.

The results showed support for the perceptual confirmation model in that individuals' initial trust perceptions are significantly correlated with their post-negotiation perceptions despite the behaviors by both parties during the negotiation (supporting the subjective accuracy measure). Akin the anchoring and adjustment bias, the perceivers' initial trust judgment acted as an anchor, moderately influencing their behaviors during the negotiation but did not significantly alter their initial judgment.

Although this remains true, the perceivers' initial trust perception affected their trusting behaviors and the targets' trustworthy behaviors (supporting an objective accuracy measure). While the reciprocity of trust behaviors between the targets and perceivers were very strong (r=.85, p<.001), these effects did not fully mediate the relationship between initial and post-negotiation trust perceptions together (i.e., double mediation), but acted as partial mediators when considered separately.

In summary, this study indicates that initial trust perceptions act as a self-fulfilling prophecy and influence individuals' achievement of accuracy through two possible mechanisms. The first mechanism is behavioral confirmation where the perceivers' initial trust perception and subsequent trusting behavior caused the target to reciprocate similar trustworthy behaviors. This influenced the accuracy of the perceivers' initial judgment, but only partially. On the other hand, the perceptual confirmation mechanism had a strong impact on the perceiver's accuracy. Using this model, perceivers relied on their internal state (trusting) to make assessments of the targets' behavior (trustworthy), leaving their post-negotiation trust perception highly correlated with their initial perception.

STUDY 1

Experience is a great teacher; our past experiences with trusting others allow us to form predictions in conditions of uncertainly to make situations with a new acquaintance seem less risky. We can do this is by developing swift trust perceptions which aid in decreasing the uncertainty to facilitate the interaction. These past experiences with similar individuals give us the confidence to believe that this initial trust judgment is

correct (Meyerson, et al 1995). But what makes experience such a great teacher are the mistakes we make in these judgments – when we are inaccurate. We tend to remember instances where we were inaccurate because of the consequences they bared; if we first trusted someone only to learn they were untrustworthy we may suffer emotional costs or costs in terms of resources and relationships lost. On the other hand, if we did not trust someone who later we found to be trustworthy we may suffer social costs of embarrassment perhaps, but also forego the possibility of a meaningful future relationship.

Even with the "50-50 chance a person will take advantage of our trust" (Meyerson, et al 1995) and the potential consequences of being inaccurate, we still form these initial trust perceptions. Indeed, the costs can be great in being wrong, but trust provides benefits to individuals in approaching and accomplishing assigned work tasks. Higher trust decreases uncertainty and allows the trustor (perceiver) to become vulnerable and accept potential risks that may be present within the relationship (Mayer, Davis, & Schoorman, 1995; Meyerson et al, 1995). Further, by forming a positive trust judgment, individuals are more likely to share information (Butler, 1999; Ferrin & Dirks, 2003), cooperate (McAllister, 1995), and exchange resources (Bouty, 2000).

Yet with the importance of trust and the potential of misplacing it half the time, very little work has examined whether our initial trust perceptions are indeed accurate. To date, researchers have found that subjects are accurate to some degree in identifying trusting others (Porter et al, 2008), and do so based on nonverbal cues such as eye gaze (Bayliss & Tipper, 2009) and facial width (Stirrat & Perrett, 2010). Research in related areas, however, as examined accuracy more closely and has found that individuals are

accurate in their perception of strangers (Kenny, 1994; Kenny & DePaulo, 1993), examining traits such as personality (Borkenau & Liebler, 1993; Kenny, et al 1994; Kenrick & Funder, 1988), sexual orientation (Ambady et al, 1999), and liking (Neuberg et al, 1993; Snyder et al, 1977), and that accuracy does not increase with acquaintance but remains stable over time (Ambady, Hallahan & Rosenthal, 1995; Kenny, Albright, Malloy & Kashy, 1994).

Much work has been devoted to studying accuracy at zero acquaintance or with only thin slices of information, but examining the accuracy of trustworthiness can be difficult to assess in real situations. Traits that are less observable and less visible do not provide the diagnostic cues necessary to be well judged (Brunswik, 1956), notably those less outwardly expressive in nature, or more self-perceptive or analytical (Albright, Forest, & Reiseter, 2000; Costa & McCrae, 1995; Kenny, 1994). These criteria are likely the case for trust. Further, highly evaluative traits are difficult to observe because targets manage their self-presentation of cues (Funder, 1999). Taken together, there are reasons to believe that individuals can discern which partners will be trustworthy, but also reasons they are not able to do so.

This paper address whether individuals are accurate in their initial trust judgments – is their first impression at minimal acquaintance lasting, or does it change as acquaintance increases? This paper makes four contributions to the literature. First, I examine the accuracy of trustworthiness and trusting intentions involving both perceiver and target using the Social Relations Model (SRM). The Social Relations Model (SRM; Kenny, 1994) allows us to examine trust perceptions at the dyadic level to see how individuals tend to trust others in general initially, and how that may change over time

(perceiver effect). SRM also is beneficial in understanding whether individuals agree on who is (un)trustworthy(target effects) and, as well as isolate unique dyadic trusting relationships (relationship effect). Second, where most accuracy studies – especially those measuring trust – occur in a laboratory, this study is conducted within a field context, which allows for the measurement and observation of trustworthiness over time to access accuracy using three different benchmarks. Third, not only does this study contributing to the literature by demonstrating whether people are accurate, but it also tests whether the factors of trustworthiness develop similarly into accurate perceptions or if individuals are accurate with a subset of them.

Finally, this paper also assesses the meta-accuracy of trust and trustworthiness perceptions. To the extent that trust solves a fundamental interpersonal tension—the ability to facilitate group efforts despite the risk they may entail —it is important for accuracy to flow in both directions, where individuals understand how others perceive them and vice-versa. Meta-perception involves an understanding of how one is judged by other people (Laing, Phillipson, & Lee, 1966). In the case of trust, meta-accuracy is important in that it allows you to know who will support you but who will not, and who will be willing to provide valuable resources but who will not.

THEORETICAL FRAMEWORK

Consistent with past research, I define trust as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another" (p. 395). Mayer et al (1995) propose that judgments of trustworthiness precede trust beliefs or intentions. Thus, evaluations of trustworthiness

are central to conceptualization of trust. Trustworthiness is defined by three factors– competence, benevolence and integrity (Mayer et al., 1995). Competence is defined as beliefs about the skills and abilities of the trusted party. Benevolence is the belief that the trusted party's actions are with good intention and not for some other underlying motive or profit. Integrity is the belief that the trusted party adheres to accepted rules of conduct, such as honesty and credibility.

Trust is built between individuals by an exchange of information over time, where each person communicates their intentions both verbally and nonverbally. Through this repeated exchange individuals can infer the cause of their partner's behavior based on the information acquired during these interactions (Rusbult & Van Lange, 2003). Although models of trust are based on the assumption of this shared history between the trustor and trustee (i.e. Mayer et al, 1995; McAllister et al, 1995), scholars have noted that trust can develop between unacquainted individuals (McKnight et al, 1998; Meyerson et al, 1996). The attribution models that assume prior acquaintance propose that individuals develop expectations of future behavior based on their experiences with the target and the interpretation of the observation of their behaviors (Korsgaard et al, 2002; Rusbult & Van Lange, 2003). However, without the assumption of prior acquaintance, attributions of trust or trustworthiness cannot be formed using this same logic. Instead, they are formed based on the observable information present, where individuals use proxies as mechanisms to infer trust. In particular, an individuals' use of biases - based on visual or contextual cues - heavily influences their social perceptions, allowing them to draw assumptions automatically (Fiske & Taylor, 1991).

These social perceptions between strangers are formed from surface level information such as group membership or stereotypes (McKnight, Cummings & Chervany, 1998; Meyerson, Weick & Kramer, 1996; Williams, 2001), or can be based on a sense of similarity, where individuals form higher or lower levels of trust based on perceived similarity or familiarity with their interaction partner (Levin et al, 2006; Child & Mollering, 2003; etc.). For example, and interaction partner's gender may be correlated with other features of trustworthiness (competence, integrity, benevolence) (Jones & McGillis, 1976). Because of this, individuals tend to over-attribute these characteristics as indicators of trustworthiness and interpret all behavior accordingly. This over-attribution of traits is referred to as the fundamental attribution error.

While the fundamental attribution error is used to infer attributions of an unknown individual, perceivers also use other cognitive mechanisms to form initial trust judgments when information is ambiguous or unavailable (Kelley, 1972). Within the context of trust perceptions, because strangers do not have a shared history they must pull knowledge from past experiences from similar individuals whom they trusted in the past. Therefore, they may employ a *trust schema* informing them how to construe information, form attributions of trustworthiness, and respond to behavior. Other cognitive mechanisms may be used to interpret trustworthy behaviors. Self-based theories (Kenny & DePaulo, 1993), for example, involve how perceptions of the self influence person perceptions. These include mechanisms such as the self-fulfilling prophecy (SFP) (Swann, 1984), self-perception (Bem, 1972) and self-presentation. These biases influence the attention paid and interpretation of the nonverbal cues displayed (Brunswik, 1954).

Because the information we use to make initial and subsequent trust judgments may be based on cognitive biases, there are reasons to believe that individuals may not be able to achieve accuracy. Biases distort our social perceptions and create cognitive errors in processing information (Kunda, 1990; Higgins & Bargh, 1987; Kahneman, Slovic & Tversky, 1982; Kahneman & Tversky, 1979). Therefore, these biases can knowingly or unknowingly be used to influence how others perceive us and how we perceive others. Examples of perceptual biases are the self-perception, the self-fulfilling prophecy and self-presentation. Self-perception (Bem, 1972) influences one's self-view by coming "to 'know' their own attitudes, emotions, and other internal states partially by inferring them from observations of their own overt behavior and/or the circumstances in which this behavior occurs (Bem, 1972, p. 2). This means that individuals understand their own attitudes from how they behave. This influences both how they perceive others (consistent with their internal state) and how others see them (as they see themselves). The self-fulfilling prophecy (SFP) also distorts perceptions. The SFP is the erroneous initial expectations that are seen as certain through the evaluation of verbal and nonverbal cues. For example, initial impressions of low trust would cause perceivers to evaluate information and behave as if their interaction partners were untrustworthy, maintaining this perception regardless of its veracity (Beckstead, 2003). Finally, self-presentation involves impression management strategies used to appear a particular way to another person, either to conceal true traits or intentions from others (i.e., hide emotions or deceptive intentions) or to manipulate interpersonal behavior (Albright et al, 2001). Self-presentation is a bias because it distorts how others can view you and if the target is adopting these strategies, how you view them.

In summary, there are reasons to believe that individuals may be accurate or inaccurate in their initial perceptions. Accuracy may depend on the extent to which the attributions individuals make are correct, or based upon cognitive biases leading to the application of the fundamental attribution error. Accuracy may also depend on how it is conceptualized and measured, and whether it allows for the inclusion of this biased information.

ACCURACY

If an individual perceives a stranger is trustworthy, how do we assess whether he or she is (in)accurate in this initial perception? The study of accuracy of social judgments has been largely debated within the interpersonal perception and social psychological literatures. The core of the debate stems from the measurement of accuracy and whether examining accuracy from an objective versus a subjective standard is acceptable and accurate in its own right. Three different schools of thought have emerged and each conceptualizes accuracy differently: Realist, pragmatic and constructivist. The realist uses an objective measure to access accuracy, while the pragmatic and constructivist views use a subjective measure. Each are discussed below, and outlined in Table 1.

Objective Measures – The Realist View

Jussim (2005) argues that an objective standard must exist in order for someone to be accurate or inaccurate in their perception. Several theorists agree with Jussim and believe that studying accuracy requires an objective criterion where social judgments are

either true or false (Funder, 1987). This means that advocates of the objective standard believe that accuracy does not differ by degree, but by whether an individual is accurate or not. Accuracy is then measured by the extent to which an individual's judgment deviates from this objective standard. Further, the realism perspective requires that objective measures should not be determined by individual's preconceived notions of others or of their behavior. This approach is appropriate when a criterion variable can be clearly and narrowly defined (Funder, Kolar, & Blackman, 1995; Jost & Kruglanski, 2002) by whether the target engages in a specific behavior in a given context. For trust, the best example is how individuals respond in a 'trust game' (Fetchenhauer & Dunning, 2010).

The strength of the realist view is that the concrete criteria help to eliminate measurement errors – the standards are clearly defined and measureable. Objective measures have definitive boundaries. If, for example, individuals were engaged in a debate where the result would be a winner and a loser, the objective perspective would delineate who would win and who would lose (Goodwin & Darley, 2008). While this is a strength, it is also a weakness. According to the realist view, objective measures do not allow for individuals perceptions to vary or for gradations of accuracy. Although this may be the case, it should be noted that the methods of studying variables such as trust "objectively" result in individuals being more or less accurate depending on the coefficient or correlated relationship, rather than being either accurate or not. Further, sometimes the boundaries drawn are too rigid and therefore may not encompass everyone's perceptions. Finally, the objective perspective is usually tested based on one-shot games which are typically void of a relational context. Therefore, generalizing

results beyond these games in a meaningful way is difficult for interpersonal concepts such as trust.

Subjective Measures – The Pragmatic and Constructivist Views

The subjective approach differs from the objective in the criterion set and the latitude given to the conceptualization of the outcome variables. The subjective standard instead allows the individual to determine how they arrive at their perceptions instead of the realist view where the experimenter determines this in advance. Where the objective standard is black and white (accurate or inaccurate), the subjective view includes the shades of gray (accuracy exists on a continuum), so individuals may vary on accuracy based on their unique perceptions. From the realist view, an individual is either accurate or not. For example, an initial trust perception may be rated as a "5" on a 7-point scale, and may decrease to a "3" over the course of six months. For the realist, this deviation from their original perspective indicates inaccuracy. For the subjectivist, they would see this deviation as being "less accurate".

There are also deviations in how researchers conceptualize and measure subjective criterion. This can be seen in comparing the pragmatic and constructivist perspectives.

Constructivist view

The constructivist view conceptualizes accuracy by the degree to which an individual's social perception is related to social reality (Jussim, 1991). This view

advocates that individuals create their social worlds through their different experiences, and examines the processes by which people come to describe these social worlds (Gergen, 1985). Central to the constructivists view is the construction of knowledge often based on the use of cognitive mechanisms that help the perceiver navigate through social interactions.

In the constructivist view, the standard of what it means to be accurate is subjective, therefore set by the individual. The achievement of an accurate perception is judged by the correspondence between the perceiver's perception and the subjective standard they set. Because of the extent to which social beliefs will vary across individuals, this view reflects the idea that individuals have effectively projected an idea of who is trustworthy and who is not based on these beliefs, coupled with their experience over time (Goffman, 1959). Thus, the individual's perception is the focus of accuracy, measured by the extent to which their initial perspective of trustworthiness coincides with their later judgments. Accuracy would reflect the consistency in judgments over time, where inaccuracy would reveal a discrepancy between initial and later judgments.

There are benefits and drawbacks of using the constructivist view to assess accuracy. A strength of this approach is that it allows for individuals to establish their own criterion to assess the outcome variable (i.e., trust), recognizing that individuals portray others and situations differently. Therefore, accuracy can vary across individuals based on their own expectations, experiences or view points.

While the strengths boast individuality and subjective evaluation of reality, this can also be seen as a weakness. Constructivists "rules" for determining "what counts" are ambiguous and vary across the individuals who use them (Gergen, 1985). Consequently, it is difficult to apply the criterion with any consistency because it is arbitrary and relative to the individual and context (Jost & Kruglanski, 2002). Moreover, the criterion carries many assumptions that make it conceptually challenging to interpret the results (Jussim, 2005).

Another weakness of the constructivist approach to accuracy is the measurement standards. The constructivist view does not advocate experimental methodology to arrive at a conclusion of human behavior and cognition. As Jost and Kruglanski (2002) state: "Constructivists reject the idea of using objective methods to separate fact from fiction and to develop accurate theories of the causes and effects of social behavior" since it's impossible to "devise a mirror of nature" (p. 172). Instead to arrive at the "truth" scholars may choose to use the "duck test": if it looks like a duck and acts like a duck, it must be a duck (Jussim, 2005).

Pragmatic view

Gill and Swann (2004) propose that understanding the person perception process requires having an understanding of goals and motivations of the exchange. The pragmatic view does this. It conceptualizes accuracy by whether individual's goals or motivations were accomplished as a result of the interaction, not whether "they are accurate in an ultimate sense" (Swann, 1984, p. 461). Accordingly, this view looks at individuals' judgments as fulfilling a practical, social need, as Fiske (1992) states, "social

thinking is for social doing" (p. 877). The central idea of this approach is that people construct their understanding of others and social situations in terms of whatever their goals are (Fiske, 1992), and use cues and strategies in interactions in order to be able to get what they want from them. Therefore, the pragmatic approach is less concerned with the accuracy of these perceptions, but more so how individuals construe their social environment in terms of their interaction goals.

In general, social psychologists have noted that part of an individual's social behavior is to understand how to navigate through their social worlds by setting and accomplishing goals (Fiske, 1992). The concept of goals can be construed differently. For example, personality psychology considers traits and goals to be dispositional, and serve similar functions. Both provide individuals with information about person and situation. Traits provide the perceiver with summary information about the target so that they are able to predict the target's future behavior, where goals provide structure for particular interactions. Therefore, individuals can use traits to make attributions of behaviors, utilizing them to achieve their goals. Social attributions are also pragmatic in that they inform the perceiver what to do by allowing them to predict individual behavior and understand why it may be occurring (Fiske, 1992).

Like the constructivist view, individuals' perceptions vary in the criterion the use to determine whether they are accurate. The difference between the views is that the constructivist view emphasizes using social perceptions to create social reality, where the pragmatic view emphasizes that the goals and motivations of the perceiver cause them to view information consistent with that, and evaluate accuracy accordingly. Along with the constructivist view, the pragmatic view posits that individuals may or may not be

accurate. Fiske (1992) argues that individuals are "good-enough" perceivers in that accuracy is only important in terms of that person's outcome goals.

According to the pragmatic view, individuals use cues and strategies to attain accuracy – they use the target's traits, and perception of these traits can vary across contexts. Swann (1984) devised two types of accuracy that reflect this – global and circumscribed. Achieving global accuracy means that individuals are able to predict target behaviors across all situations and contexts. Circumscribed accuracy means instead that individuals can predict target behaviors within certain situations. Interaction goals will determine the type of accuracy they will use, whether they want to predict target behavior under all conditions, or only those relevant to their goals. Swann (1984) posited that circumscribed accuracy is higher than globalized since it's easier to predict how individuals will behave in a subset of all possible situations, rather than across all situations. Because perceivers typically only need to know limited aspects of the target, they only need to achieve circumscribed accuracy by understanding how individuals behave in particular contexts.

The contextual variations are important to pragmatic accuracy and should be taken into account when understanding person perception (Swann, 1984). Individuals may trust one person in a particular context (i.e. social settings) but not others (i.e. at work). To this end, Gill and Swann (2004) examined the contextual variations of pragmatic accuracy (i.e. circumscribed) using fraternity members and their nuclear family members. In this study, fraternity members were asked to predict the behavior of their brothers within the fraternity, and within their nuclear family. Likewise, their nuclear families were asked to predict their behavior within the family setting and within the

fraternity setting. Supporting circumscribed accuracy, they found that fraternity brothers were more accurate in predicting their brothers' behavior within the fraternity but inaccurate in the family setting. Similarly, family members were accurate in predicting their relative's behavior within the family setting, but not within the fraternity. These findings demonstrate that individuals are able to accurately understand others in some contexts but not in others.

The strength of the pragmatic view is similar to the constructivists in that it allows for individuals' goals and preferences to establish their own criteria for accuracy. Here, the standard for accuracy is set by individuals instead of by the experimenter. This view acknowledges that interaction goals vary across individuals and therefore cannot be generalized to assume that everyone has these same goals. The weakness of this approach is gathering the information related to goals and preferences within an interaction, while allowing for substantial variation in the nature of goals (Gill & Swann, 2004). Researchers have attempted to satisfy this weakness by using consensus as an indicator of agreement in the behavior of a target within a particular setting.

The idea behind consensus is that if everyone can agree on the same trait (i.e., trustworthiness) then they all have similar, predictable interaction goals. Kenny's (1994) PERSON model theoretically examines consensus in social perceptions by considering the categorical and behavioral information perceivers use to make them. As acquaintance increases, this model assumes that individuals focus less on categorical information (i.e. stereotypes) and more on the consistency of behaviors (i.e. norms, opinions, personality, error). Kenny advises the use of consensus to arrive at a judgment of a target when meeting certain criteria. If individuals are exposed to similar information over time, then

there is sufficient overlap in what they've experienced. This overlap allows for the use of consensus to measure accuracy subjectively.

Accuracy of initial trust: Objective or Subjective?

The subjective approach to studying accuracy is effective in situations where the construct itself is based upon the perception of the individual in that context or when the researcher's intention is to examine these perceptions without a pre-determined set of criterion for what may be a "correct" judgment. The purpose of a subjective evaluation is to understand how an individual's beliefs contribute to or prevent a set of behaviors or consequences (Gill & Swann, 2004). Because individuals engage in behaviors that may vary across their interactions with others and contexts (Swann, Bosson & Pelham, 2002), attempting to measure one aspect of their behavior by using an objective evaluation (such as a one-shot game) and generalizing it to their entire repertoire of behaviors is not necessarily representative of the "ground truth". Further, as Kenny and Acitelli (2001) state, social perceptions are comprised of accuracy plus error, therefore, treating social perceptions as either entirely accurate or inaccurate (or, "objectively accurate") is inappropriate.

The "Trust Game" is an example of a commonly used objective criterion for studying trust. It produces a numerical value for the extent to which individuals in a laboratory setting make themselves vulnerable to others with the expectation of a reward if the partner reciprocates (Berg,1995). While the "Trust Game" is useful in measuring trusts in some experimental designs, generalizing the results of these one-shot games to

ongoing face-to-face interpersonal relationships can be problematic. Further, such one-shot games cannot test the three factors of trustworthiness relevant to the current study—competence, integrity, and benevolence. Taken together, objective criteria do not fit the research question about the extent to which individuals achieve accuracy at forecasting the future trustworthiness of peers.

In the case of trust and trustworthiness perceptions, the subjective approach is superior because it fits the criteria noted above – examining individuals' own perceptions of what it means to be trustworthy without experimenter intervention. By conceptualizing trust according to Mayer et al. (1995) who specifically focus on *perceived* ability, benevolence, and integrity, we can examine how the perceiver experiences the construct and reacts to it, upholding the conceptualization that trustworthiness is partly "in the eye of the beholder". In terms of measurement, the subjective approach is also most appropriate as this study involves individuals interacting within a real group context. Within these groups, the goal was to determine whether individual's initial trust perceptions remained consistent over time given their own diagnostic criterion of specific behaviors – and their relative importance - relevant to group behavior. Following prior research, I examine two forms of subjective benchmarks that are based on whether individuals are ultimately perceived to prove themselves to be trustworthy.

While the subjective approach is the most appropriate perspective to use when examining trust perceptions, the objective approach serves a purpose as well. I use an objective approach to assess the accuracy of meta-perceptions, or the accuracy of knowing how much your teammate trusts you. This approach is classified as objective

because there is a true right answer. In examining meta-perceptions, individuals rate how much they trust their teammates and how much they believe their teammates trust them. Accuracy is measured by the degree to which the perceiver's view ("how much I think you trust me") is positively correlated with their teammate's responses ("this is how much I do trust you").

Measurement of subjective accuracy

This study compares individuals' early perceptions with their perceptions after they have had significant opportunities to interact—that is, using the perceiver herself as her own benchmark. This is sometimes called linear accuracy (Fessel, Epstude, & Roese, 2009). The advantage of this approach is that an index of linear accuracy represents what people know at a point in time with experience that they might wish they had known sooner. Buehler and McFarland (2001) also refer to this approach as "calibration" and can be thought of as the consistency of individuals' behaviors over time. Linear accuracy uses the constructivist approach to examine how each individual creates their social reality and whether or not it is accurate to them.

The limitation of linear accuracy is that—in the absence of learning new diagnostic information—it can simply allow for personal biases that accrue over time. For this reason, I also assess accuracy by combining others' perspectives for a benchmark to measure perceptions of trustworthiness. Ideally this approach can allow idiosyncratic biases to cancel each other, yielding a consensus-based assessment that can be considered better than any one person's judgment. This approach is commonly used in studies assessing the consensus of judgments across individuals (Gill & Swann, 2004; Kenny,

2004), or the extent to which an individual's initial judgment is in agreement with their team's consensus as to who is (un) trustworthy. Consensus accuracy uses the pragmatic approach to examine whether individuals are able to achieve their motivations and goals through the interaction. Referring back to Kenny (1991, 2004) and Fiske (1992) consensus is used as an indicator of what is accurate to correct for individual biases but more so to validate and measure individual goals. A high degree of consensus within a team alludes to the fact that the individuals have similar goals and are approaching them in similar ways. However, it should be noted that while consensus is used as an indicator of accuracy, it does not present an "objective" measure of accuracy.

Measurement of objective accuracy

For examining the accuracy of being trusted—that is, meta-accuracy—I use a realist perspective. For this direction, the target's stated judgment can be considered an authoritative perspective on his or her level of trust for the perceiver.

ACCURACY OF INITIAL TRUST JUDGMENTS

Factors influencing the accuracy of initial trust judgments

Accuracy can be affected by either the target's display of the cues or the perceiver's interpretation of them. The interplay of these factors can be described using Brunswick's Lens Model. Within Figure 1, each circle represents variables, while the lines between each variable represent relationships (adopted from Hammond et al, 1964). The criterion variable is the target's trait, while the prediction is the perceiver's judgment

of this criterion. Accuracy is achieved when there is a high correlation between the cues manifested by the target and the appropriate understanding of these cues by the perceiver. Being accurate requires that the cues given off by the target are valid (validity of cues) and used by the perceiver in order to understand the target's behavior (cue utilization). The cues are valid if they are available and visible, as well as if they are interpreted by the perceiver in the way the target intended. Traits that are easier for the perceiver to judge (i.e. more visible) should be more accurate than relatively invisible traits (Funder & Colvin, 1988; Funder & Dobroth, 1987; Kenrick & Stringfield, 1980). Funder and Colvin (1988) also found that traits that were more visible were rated more positively. For example, those rated more positively were associated with extroversion, meaning that these cues are more available to be judged by the perceiver.

However, the target's intentional or unintentional distortion of these cues prevents the perceiver from accurately interpreting them. In establishing a good first impression, individuals will tend to display themselves in a way to make this more likely by being highly socially desirable so that they are trusted. Social desirability is an unconscious tendency to put forth a positive self-concept and the expectation that certain characteristics will be positively evaluated (Paulhus, 2003). This concept is closely related to impression management (Paulhus, 1984), an individual's conscious effort to present a false front in order to be seen more positively (Zerbe & Delroy, 1987). The problem with social desirability is that while individuals are trying to present themselves in the best possible manner, they are distorting the information presented to others, so the validity of the cues given off is low. Therefore, initial trust perceptions will be less accurate since they would be based on biased cues or false positioning.

The perceiver's interpretation of the cues can also prevent them from being accurate. As described above, mechanism such as the self fulfilling prophecy and self-presentation may distort the information decoded by the perceiver. These mechanisms operate by shaping the perceiver's attitudes and behaviors and the process they use to gather information from the target, as well as the way they express information.

Thus, in the initial interactions, individuals do not have meaningful behavioral information; therefore they would use visible cues and their cognitive mechanisms to assess the target. There is reason to believe that these cues can be accurately interpreted with minimal information but also reason to believe that they will not be. Inaccuracy will result from the distortion of cues presented by the target then falsely interpreted by the perceiver, or from the perceiver's biases.

As the relationship progresses and develops, perceivers are able to use the information personally acquired through interaction with the target to make informed perceptions. They will either dismiss their initial impressions as being inaccurate if the information they receive through acquaintance conflicts with their initial perception. Perceptions may change because the perceiver misinterpreted the non-verbal cues or behaviors or perhaps they appropriate cues were not visible to the perceiver at the time of the judgment. Another scenario is that the perceiver may not change their initial perception as they become acquainted with the target. Accuracy here could be due to being proficient at decoding others or perhaps due to biases such as the self-fulfilling prophecy.

Accuracy of trustworthiness perceptions

There are reasons to believe that we may be accurate or inaccurate with regard to our initial trust impressions. What complicates the accuracy or inaccuracy are the evaluations of trustworthiness – accuracy is likely to vary across the three factors, ability, benevolence and integrity.

A key difference that may influence the accuracy of perceptions involves how individuals make judgments about ability and integrity versus benevolence. Research suggests that individuals tend to see ability and integrity as dispositional factors that may be discerned by relevant cues. For instance, following the schematic model of dispositional attribution (Jones, 1986), Kim and colleagues (2004; 2006) examined how individuals draw dispositional attributions of integrity and ability. As they discuss, trustors focus on positive information to make judgments about the level of ability or competence (e.g., knowledge and skill in accounting) possessed by a trustor. Alternatively, they suggest that trustors will draw dispositional judgments about integrity based on negative information – e.g., if trustor observes a trustee stealing from another person, they will tend assume that the trustee lacks integrity and has the potential to engage in the behavior when they interact with them.

Benevolence – the perception that one genuinely has care and concern for the well-being of the trustor – differs from these two in that it is something which may differ across relationships. This notion is reflected in earlier discussions of the concept. For example, Mayer et al. (1995: 718) observed that "Benevolence suggests that the trustee has some specific attachment to the trustor." Likewise, McAllister (1995: 25) discusses the closely-related construct of affect-based trust, as "being grounded in reciprocated interpersonal care and concern." Dirks and Ferrin (2002: 616) observed that affective

forms of trust "reflect a special relationship with the referent that may cause the referent to demonstrate care and concern about one's welfare." These depictions emphasize that the fundamental nature of benevolence is largely associated with a given relationship. Extending this idea, we might expect that individuals may be seen to be differentially benevolent or caring across relationships, even within a work group (i.e., having close interpersonal relationships with some individuals but not others). Thus, observing a teammate express care and concern in one relationship may be seen as diagnostic of that trustee to some degree, it is not likely to be taken as a sign of how the individual will behave in all relationships within the team.

Accuracy across trustworthiness factors over time

From minimal acquaintance to close acquaintance individuals will use different factors or cues to access trustworthiness. As the above analysis indicates, the use of non-verbal cues will operate heavily at minimal acquaintance when the perceiver lacks any other diagnostic information to base his/her judgments. As time increases, both verbal and nonverbal cues will become representative of actual behaviors based on observation and experience rather than assumption. Other factors that will also influence accuracy are the cognitive biases held by the perceiver. For example, theories of initial trust formation argue that stereotypes inform the perceiver's interpretation of cues, possibly distorting their judgment (McKnight et al, 1998; Meyerson et al, 1995). These attributions may remain constant over time due to the perceiver's perceptual biases, which heavily influence all future evaluations of the target.

Cognitive biases in particular may influence accuracy. One perceptual bias that may be operating is anchoring and adjustment, where individuals' judgments may remain consistent over time because they have anchored on their initial judgment. The self-fulfilling prophecy may also account of accuracy across time where individuals create their own accuracy through eliciting behaviors from the target consistent with their expectations (i.e., behavioral confirmation). To capture the consistency of the perceiver's judgments that may take into account these perceptual biases, we measure accuracy of individual's judgment, referring to it as linear accuracy (Fessel, Epstude, & Roese, 2009) or *calibration* (Buehler & McFarland, 2001). Linear accuracy assesses individual's perceptions across time comparing their first judgment to their later judgment. This measurement of the constructivist view will show how individuals create their own social realities, and whether their perceptions are accurate in navigating them through it.

Because the strength of these biases directly influences individual perception we measure accuracy in another way that minimizes the affect of these biases. Kenny (2004) proposes that individuals who observe the same targets over time acquire similar interpersonal information therefore use the same cues to make judgments. This is also a reflection of the pragmatic approach to accuracy, where consensus is used to determine individuals' motivations within a context; a higher degree of consensus means that individuals have agreement on their goals. Therefore, the consensus of these judgments is an appropriate indicator of an individual's trustworthiness. This *consensus* approach is common when using social consensus as the definition of accuracy (Gill & Swann, 2004; Kenny, 2004)—with the idea that idiosyncratic biases and perspectives cancel each other, yielding a consensus-based assessment better than any one person's judgment. We

would expect this view of accuracy to be appropriate when effects of the target are critical, that individuals would need to agree on whether targets possess the trustworthiness factor or not.

Accuracy at Zero-Acquaintance

Given the arguments above, are individuals able to achieve accuracy at zero acquaintance? As discussed earlier, at zero acquaintance, trustworthiness judgments are largely grounded in the perceiver's own views. Because of this, we would not expect it to be possible for individuals to achieve accuracy based on consensus, as that requires a shared view. Because individual's biases may differ, their interpretation and evaluation of each target may also vary. Comparing an individual's judgment to their team's mean judgment will show a greater disparity than comparing an individual's own judgment across time.

However, individuals may be able to achieve linear accuracy. As discussed earlier, individuals' earlier views may calibrate to some degree with their views at the end of the relationship. This may be due to various mechanisms previously mentioned, such as the self-fulfilling prophecy, the possibility that individuals anchor on their initial perceptions and fail to adjust over time, among other mechanisms, such as intuitive predictions (Buehler & McFarland, 2001; Kahneman & Tversky, 1996). These mechanisms aid in the calibration of judgments over time, where they will not vary significantly. Kahneman and Tversky (1996) state that people form expectation of future behavior based on certain features of the target and situation. These are then weighted and applied to how the target's behaviors and attitudes are construed. While there are

several mechanisms that may explain that individuals are likely to achieve linear accuracy, they are related The common theme among these mechanisms is the perceiver focuses on salient information consistent with their preconceived notions that influence how they evaluate all incoming and future information.

Hypothesis 1. At zero acquaintance individuals may achieve linear accuracy.

Accuracy after meaningful interactions

After individuals have had the chance to engage in meaningful interaction, their perception of their team members may remain consistent (linear accuracy) or coincide more closely with the average perception of their team (consensus accuracy). Kenny (2000) suggests that individuals become more accurate over time and as acquaintance increases.

For linear accuracy, individuals would have more time to interact with the targets and observe their behaviors (Kenny & Acitelli, 2001). However, accuracy may not be achieved for all three factors of trustworthiness, but for benevolence as it is based strongly upon interaction and reciprocal behaviors more evident at the dyad level. For benevolence, team members will also be able to observe relevant trustworthy behavior of trustees. As discussed earlier, however, we expect this concept to reside largely within relationships, as individuals use the information to determine whether the trustee possesses care and concern for that specific trustor. As a consequence, individuals may be more likely to achieve linear accuracy, as opposed to consensus accuracy.

Kenny (1994) found that acquaintance does not increase the accuracy of consensus judgments. One of the reasons cited for this was the individuals were consistently exposed to the same incoming information during further interactions. Individuals who observe the same behaviors over time tend to form similar perceptions of them because of the "overlap" in what they perceive (Kenny, 2000), increasing accuracy after meaningful interactions (Funder & Colvin, 1988). With regards to trustworthiness perceptions in teams, individuals do have the benefit of interacting and observing behaviors – of having sufficient overlap to form similar impressions. Therefore, we predict that acquaintance will increase accuracy but only for particular factors of trustworthiness. Specifically, for integrity and ability, we predict that individuals will be able to achieve consensus accuracy as team members are able to observe relevant trustworthy behavior of trustees and process it to make dispositional judgments[1].

Hypothesis 2a. After meaningful interaction, individuals will be able to achieve consensus-based accuracy for ability and integrity.

Hypothesis 2b. After meaningful interaction, individuals will be able to achieve linear accuracy for benevolence.

ACCURACY IN META-PERCEPTIONS OF TRUST

The process of person perception - understanding and predicting the behavior of others - also requires that individuals also understand how they are viewed by others.

[1] I assume that not only will meaningful interactions within the group allow relevant trustworthiness to be revealed, but also norms will have developed to provide a common interpretation of the behavior.

This process of meta-perception (Laing, Phillipson & Lee, 1966) determines how these perceivers believe others view them. Often times, individuals are motivated to behave in a particular way for self-presentation purposes (Albright et al, 2001) or impression management (Schlenker, 1980), perhaps to deceive others (Zuckerman, DePaulo & Rosenthal, 1981) or hide their emotions (Ekman & O'Sullivan, 1991). For these purposes, it is important to know how others perceive them. But more so, it's important to know when they're wrong – when they thought they achieved meta-accuracy but instead were mistaken. Individuals who have an accurate view of how others perceive them knows who has their back – who they can trust and who trusts them.

Think of the consequences of getting this wrong. When you believe someone trusts you and they really don't, the result could be a wasted investment. For example, you enter into a negotiation where you believe your negotiation partner trusts you. Meanwhile, your negotiation partner is dismissing what you say and ultimately plans on securing a deal with another person. This is a wasted investment in terms of the preparation and negotiation time, and also potential for a future relationship. Alternatively, you can be inaccurate in believing someone doesn't trust you when they really do. An example of this can be seen between a subordinate and their boss, where the subordinate believes their boss doesn't trust them. The subordinate, in an effort to earn the boss's trust, may make several attempts to convince the boss that they are trustworthy. This may cause the boss to either become suspicious of the subordinate's attempts or lead to frustration both of which can strain or sever the relationship.

Meta-accuracy is measured by the strength of the association between the subordinate's perception of the boss's trust in them, and the boss's reported trust in them.

Because there is an objective measure of accuracy here (i.e., the boss' actual perception), meta-accuracy examines accuracy from the realist view. There are two different ways individuals can achieve meta-accuracy: generalized and dyadic (DePaulo, Kenny, Hoover, Webb, & Oliver, 1987; Kenny & DePaulo, 1993). A generalized view of meta-accuracy means that others have an accurate understanding of how people view them in general. Kenny found the average correlation to be roughly .51 between how people believe others perceive them, and how others actually perceive them (Kenny, 2001). Dyadic meta-accuracy then examines how individuals believe particular people view them. Dyadic meta-accuracy is usually non-significant, meaning that while people can distinguish how others view them in general, they are not very good at judging who in particular may view them favorably or unfavorably (Kenny & DePaulo, 1993).

Factors influencing the accuracy of meta-perceptions

How do people determine how others see them? Sources of inaccuracy or accuracy in person perceptions can result from how nonverbal cues are interpreted by the meta-perceiver, and the strength of the biases used by both perceiver (to decode) and target (to encode) (Brunswik, 1954). However, research has concluded that the observation of behavioral information plays a role in developing meta-perceptions, they are based mainly on biases such as self-perception; that individuals typically believe others see them as they see themselves (Kenny & DePaulo, 1993; Levesque, 1997; Malloy et al, 1997). Even when given the chance to obtain feedback, self perception still explains more variance in meta-perceptions (Shectman & Kenny, 1994).

Kenny and DePaulo (1993) outlined four models that focus on the intrapersonal and interpersonal dimensions of meta-perceptions: self-theory, self-judgment, and direct observation. The self-theory and self-judgment models are intrapersonal and based on self-perception. The self-theory model proposes that individuals have strong self views and therefore believe that their traits are readily apparent to others. Because of their strong self view, they may disregard the target's behaviors in developing their meta-perceptions, but may dismiss their own behaviors as well. The self-judgment model argues that individuals take their own behavior into account within a particular situation then use their self-perception to derive a meta-perception. Direct observation is an interpersonal model that focuses less on how individuals see themselves, but rather how their behavior causes others to react. Direct observation refers to how the person believes their behavior influences others, based on the reactions they receive. But they may not take this to reflect their self view; only that it elicits a certain reaction. Therefore, in developing meta-perceptions, individuals will either disregard the target's behaviors (self-theory), will use the perception they have of themselves to interpret them (self-judgment), or will use the target's behavioral cues to assess how they view the meta-perceiver (direct observation).

While self-perception is an important mechanism to consider in meta-perceptions, the self-presentation bias also influences meta-accuracy (Albright et al, 2001). Self-presentation is more consciously applied that the self-perception bias. These tactics are impression management strategies used to portray a certain image to the observer. Targets can use this mechanism to bias the way the meta-perceiver believes they view them. For example, the target may distort their verbal and nonverbal behaviors to

withhold negative information from the meta-perceiver, leading the meta-perceiver to believe the target thinks of them more positively then they actually do (Fletcher & Boyes, 2004).

Accuracy of Meta-Perceptions of trustworthiness after meaningful interactions

Goffman (1963) stated that an increase in acquaintance means that "two individuals can personally identify the other by knowledge that distinguishes this other from everyone else, and when each acknowledges to the other that this state of mutual information exists" (p.112, cited in Malloy & Albright, 1990). As this quote implies, acquaintance should allow others to achieve a higher degree of meta-accuracy as individuals become more familiar with each other. However, despite this assumption, the results are mixed. Few studies have documented that meta-accuracy is higher between those who are closely acquainted (Levesque, 1997; Vazire & Mehl (2008).

The majority of the results find the opposite, that meta-accuracy does not increase with acquaintance. In their review of studies on meta-accuracy, Kenny and DePaulo (1993) found that individuals' meta-perceptions do not vary with acquaintance; they found evidence of very little partner variance (believing others see them differently) and relationship variance (believing particular people have a unique view of them). Also supporting this, Malloy, Albright, Kenny, Agatstein and Winquist (1997) found that highly acquainted individuals were only moderately accurate in understanding how their partners perceive them, and Carlson et al (2010) found that individuals were able to

confidently and accurately identify which traits new acquaintances find characteristic of them (i.e., calibration).

Despite the prior research that shows support for meta-accuracy not increasing with acquaintance, we expect that the accuracy of trustworthiness and trust meta-perceptions will increase as the relationship develops. Obtaining an accurate perception of how you much you believe others trust you without having the benefit of being acquainted is difficult to do. Because trustworthiness is a complex, multifaceted concept we would expect that meta-perceptions would take more time to unfold. Further, the cues associated with the meta-perceptions of trust with only minimal acquaintance may not be readily available and easily interpreted. Therefore, it takes a meaningful interaction to accurately know assess much you believe others trust you.

The dyadic and generalized meta-accuracy of trustworthiness perceptions

The level of meta-perceptions and the nature of the factors measured also influence individuals' met-accuracy. Most people are able to achieve generalized meta-accuracy (r=.51 on average) and are either inaccurate or much less accurate with dyadic meta-accuracy (r=.13 on average). The discrepancy in the accuracy ratings is influenced by the type of variable being measured. While meta-accuracy can be achieved for both trait (i.e. personality, intelligence) and affect (i.e. liking) variables, individuals are more likely to be accurate in general with traits and dyadically with affect (Elfenbein, Eisenkraft & Ding, 2009; Kenny & DePaulo, 1993; Levesque, 1997).

The visibility of the nonverbal cues also contributes to the difference in accuracy levels. Traits such as extroversion are more accurately judged in general because of the

expressiveness of the nonverbal cues associated with this trait (Albright & Malloy, 1999; Malloy & Janowski, 1992). That is, Jack's engagement within a group will increase the observability of his personality trait and lead others to see him as being equally extroverted. Further, if Jack considers himself an extrovert, he will assume everyone sees him that way as well (self-perception bias).

Other, less visible factors may not be as accurately judged in general, but are more accurate at the dyadic level. These factors are more relational and therefore unique to the meta-perceiver and target. In these cases, when nonverbal cues are absent, a factor that may contribute to dyadic meta-accuracy is motivation (Albright & Malloy, 1999). For example, Jack may view himself as being highly likeable but because the indicators of liking are not observable he is not able to discern whether everyone truly likes him. Further, his teammates may be concealing their dislike of Jack (self-presentation bias) to preserve social graces and team cohesion. In the closer relationships Jack may have with a few of his teammates Jack would be better able to judge the extent to which these individuals like him. Individuals who like each other more will interact more often, and the meta-perceiver will pay more attention to the cues to confirm this (Ohtsubo et al, 2009).

Like with traits and affective factors, similarly, ability, benevolence and integrity will be accurate at different levels and increase after meaningful interactions. As with the previous hypotheses, ability and integrity are dispositional qualities and thus considered as traits. Therefore, they are not expected to vary considerably across interaction partners (Kim et al 2004, 2006). Alternatively, and also consistent with hypothesis 2, benevolence is considered as an affective factor developed within a particular

relationship. Unless operating under a self-theory or self-judgment model, after meaningful interactions individuals will come to understand how others perceive these factors based on the exchange of behavioral information within the relationship. For example, prior research shows that individuals are able to accurately perceive their status within a group based on how much they are valued (Anderson et al, 2009). Similar to status perceptions, individuals may be able to assess how competent others perceive them based on the verbal and written feedback within the team and given to the team by the supervisor. They may also assess others' perception of their competence by how often others approach them to ask for feedback or assistance in approaching and completing tasks. Further, the perception that others see the observer as having an expertise may increase their actual or perceived status within the group.

Individuals do have an accurate perception of their social standing within a group based in part on how much they are respected (Anderson et al, 2009). Individuals who are honest and credible are respected because they are operating with integrity, therefore will be able to determine how respected they are within the group. These perceptions may become clear to the meta-perceiver because of how their team members treat them in general. If the meta-perceiver were caught being dishonest, team members may confront them about this violation. Therefore, both the meta-perceiver and his or her teammates will be aware of the integrity offense. If team members prefer to avoid this meta-perceiver, the meta-perceiver would use this avoidance as an indication of how others may be judging their character. In addition, because integrity can also mean individuals tendency to follow through with actions they commit to (Mayer et al, 1995; Seers, …) teammates are likely to keep track of when the meta-perceiver lacks follow-through.

Likewise, the meta-perceiver is also aware of their actions and likely to believe this perception is salient within the teams' perceptions. Meta-perceptions may be based upon the extent to which the perceiver believes the team is disturbed or impacted by this behavior for example, as evident of additional attempts to monitor his or her actions.

Where perceptions of integrity and ability are expected to lead the perceiver to achieve generalized meta-accuracy, benevolence has a different effect. McAllister (1995) states that affect-based trust "demonstrates interpersonal care and concern", highlighting the conceptualization of benevolence provided by Mayer et al (1995). Perceptions of benevolence therefore are grounded within the relationship between two people are interpreted based on the motivation of the parties involved to understand how they are perceived (Kenny & DePaulo, 1993; McAllister, 1995). Further, dyadic meta-accuracy may also be achieved because of reciprocity or the notion that "I treat you benevolently because you treat me the same way" (Kenny, 1994). With benevolence, care and concern are reciprocated based on the extent to which the target extends these same sentiments.

Hypothesis 3a. After a meaningful interaction, individuals will be able to achieve generalized meta-accuracy for integrity and ability.

Hypothesis 3b. After a meaningful interaction, individuals will be able to achieve dyadic meta-accuracy for benevolence.

METHODS

Participants

Participants were 36 teams of four first year MBA students at a private mid-western university (136 students). They completed this study as a fulfillment of course requirement. The average age was 26 and 37% were female. Students – previously unacquainted – were grouped together into temporary teams. These teams worked intensively together on several projects throughout the semester in which the data was collected.

Characteristics of Team Formation and Tasks

The first year MBA teams were developed by the MBA program office. The team creation process began by sorting students into four groups: domestic males, domestic females, international males and international females. Within each broad group, these individuals were sorted by their GMAT scores. The MBA program administrator then created each team by first placing all females within each team, randomly, where no two domestic females can be on any one team (one domestic and one international female student is permitted, however). The next step was to sort individuals by background and work experience, with the goal of creating each team with a mix of work experience (those with none paired with those with a lot) and varying backgrounds (i.e. engineering and accounting). Finally, the person creating the teams desired to place those with low GMAT scores in teams with others who scored higher on their GMATs. These teams were established for first semester only and were disband after this time.

Throughout the course of the semester, students had three broad tasks consisting of two independent projects (one occurring at the beginning of the semester, and the second after midterms) that were completed individually. The final project is a team-based case and referred to as "ICE week". During this time teams work with actual business in coming up with solutions to their actual problems, and then presenting their solutions to the organization's executive(s).

Along with these major projects, each professor requires that teams complete other course-specific projects. The MBA curriculum requires that each person take four courses, in addition to two shorter courses offered during their orientation period (referred to as "GO! Week"). The MBA program describes GO! Week a time where the "faculty introduces many of the key models and tools needed to frame and analyze the fundamental issues of management."[2] During the semester courses, students work within their teams to complete several projects. Figure 2 displays the timeline of the team projects assigned in conjunction with the three rounds of data collection.

The intense workload throughout the semester made it possible to reveal trustworthiness on the different factors. For example, students worked collectively on a rigorous team case analysis that had the potential to create perceptions of competence and integrity (i.e. team members successfully followed through with their parts). Team interactions throughout the semester as well as during these intensive interactive events would have allowed individuals to identify benevolence and integrity (i.e. morals and values) among their team members. Overall, information sharing, cooperation and interdependence were critical in completing their tasks.

[2] Available: http://www.olin.wustl.edu/academicprograms/MBA/Curriculum/Pages/default.aspx

Thus, trust among team members had the potential of playing a huge role in their ability to work together effectively.

Measures

Participants responded to Mayer and Davis' (1999) 14-item scale measuring perceptions of trustworthiness (integrity, benevolence and competence) and trusting intentions. Participants responded to each item on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). In keeping with past research on meta-perception (i.e. Albright & Malloy, 1999; Boyes & Fletcher, 2007; Kenny & DePaulo, 1993; Kenny & Acitelli, 2001), this same measure of trustworthiness was also utilized to capture meta-perceptions. Participants rated how they believed they were themselves rated by each teammate on each question.

Procedure

Because the predictions addressed the accuracy of initial trust judgments, data was collected 3 waves of data starting at the beginning of the first semester (Time 1), during the mid-semester point (Time 2), with the last wave being at the end of their first semester (Time 3). During the first wave of data collection, individuals were minimally acquainted, that is, they were introduced to their team members 24-hours prior to data collection. Each team was composed of four MBA students who worked together on multiple projects and class assignments for the duration of their first semester. The second wave of data was collected mid-semester, when students were acquainted with each member of their team. Finally, the third wave of data – well acquainted – was conducted at the end of the semester, roughly 5 months after the first wave. I collected

perceptions of trustworthiness and trusting intentions over the three time points, but collected perceptions of meta-perceptions during time two and three only.

Design and Analysis

In this study, I used a round robin design in which all members of each team rated each other. This design provided data regarding perceptions of trustworthiness of each individual on the team, as well as how each individual on the team is perceived. The measures obtained in this research were dyadic scores, which were partitioned into their component sources. According to Kenny's (1994) Social Relations Model (SRM), the scores consisted of three components: the perceiver effect, the target effect, and the relationship effect. The perceiver effect reflects how individuals see others in general, or the tendency to see others as either trustworthy or untrustworthy. A high perceiver variance indicates that some perceivers trust some individuals but do not trust others, where a lower variance signifies the perceiver trusts (or distrusts) each team member equally. The target effect shows how all team members view each individual, where a larger target variance indicates a greater degree of consensus among team members. In other words, high target variance shows that individuals on the team share the same view of particular team members in being trustworthy or untrustworthy. Lastly, the relationship effect demonstrates the unique relationship some team members may have within the group. Variance in the relationship effect indicates that a particular dyad uniquely trusts each other more or less than others within the team. This component shows whether individuals have unique trust judgments of their team members.

There are three components to the social relations model – actor, partner, and relationship effects. Unlike the target, perceiver and relationship effects above, these sources are at the dyadic or individual level and show how each person is perceived by their group (partner effect), how they perceive others within their group (actor effect), and the unique relationship that may exist between dyads (relationship effect). Variance in the partner effect refers to the behaviors people tend to elicit from others. Variation of this component shows that people are seen similarly by others in their group

The analyses were conducted using a version of SOREMO developed for use in the R Statistical Software Program (Eisenhardt, 2009). This program partitions variance in the data from the round robin design into the component sources previously described. Because I was interested in understanding accuracy of initial trust judgments according to the pragmatic and constructivist viewpoints using both linear and consensus accuracy and would be able to do this using SRM by obtaining individual actor and partner effects, meta-perception effects (i.e., using the realist view) and overall variance of trust perceptions over time. Estimating meta-accuracy is achieved by correlating the perceiver effect in meta-perception (how Jack believes Jill views him) with the target effect in trait judgments (how Jack is actually judged by Jill). Meta-accuracy was computed at the dyadic level as well as a generalized view (how accurate are people in understanding how others view them in general).

RESULTS

Descriptive statistics for the three waves of trust data appear in Table 2, including mean ratings of trustworthiness perceptions, standard deviations of these ratings, and

reliability coefficients. As expected, perceptions of trustworthiness (integrity, benevolence and competence) and trust intentions rose monotonically across the three time periods for all four factors. To examine the difference in means across the three time periods, we computed $r_{alerting}$ by examining the correlation between the mean ratings at each time period and their contrast weights. The $r_{alerting}$ of .96 for integrity, .99 for benevolence, .99 for competence and .93 for trusting intentions indicates that the linear trend of these variables consistently increased across time periods. The contrast representing the fit of the variables was computed using the $r_{alerting}$ scores and the analysis of variance for each variable. The $r_{contrast}$ representing perceptions of integrity over time indicates the mean ratings at each time period were significantly different from each other $F(2, 300) = 25.98$, $p < .01$, $r_{contrast} = .24$. These contrasts also prove true for perceptions of benevolence ($F(2, 313) = 56.88$, $p < .01$, $r_{contrast} = .35$), competence ($F(2, 313) = 33.37$, $p < .01$, $r_{contrast} = .27$) and trust intentions ($F(2, 305) = 319.37$, $p < .01$, $r_{contrast} = .66$) (Rosenthal & Rosnow, 1991).

As discussed above, I used a round robin design in this study where all members of each team rated each other. This design provided the data regarding perceptions of how trustworthy each individual on the team is perceived (perceptions), and individuals' perceptions of how trustworthy others on their team believe them to be (meta-perceptions). This design also allowed the use of the Social Relations Model (Kenny, 1994), a modified version of the ANOVA that accommodates dyadic interdependence, to distinguish the source of these dyadic ratings into four exhaustive and mutually exclusive components: how *trusting* the rater is across all judgments (called *perceiver* effects), how *trustworthy* the target is judged across all judges (called *target* effects), the unique

relationship between the judge and target (called *relationship* or *dyadic* effects), and measurement error. The advantage of partialling the variance using the SRM is that it shows how individual judgments may differ initially and converge over time. If individual judgments converge over time, it also supports the use of the consensus measure as an indicator of subjective accuracy.

Table 3 summarizes the results of these SRM analyses, using Kenny's (1994) algorithms to calculate SRM coefficients and Lashley and Bond's (1997) formulas to calculate significance levels. The percentages in this table can be interpreted similarly to the coefficient of determination (R^2) used to summarize the total explanatory power of a regression model. That is, similar to the R^2, these models reveal the existence of individual differences in terms of their predictive power, but do not explain the specific effects.

Examining these variance components indicated that there were substantial perceiver effects within the first round of data collection, conducted at minimal acquaintance. Indeed, perceiver effects accounted for 56% of variance in perceptions of integrity, 54% in perceptions of benevolence, 52% in perceptions of competence, and 55% in perceptions of trust intentions. This suggested that the ratings largely reflected individual differences in the degree of trusting with which each rater approached the judgment task. Of the remaining variance, the majority resulted from the relationship effect, with no apparent systematic target effects that would signify consensus among teammates about who on the team could be trusted.

Over the course of the next two months, perceptions of trust appeared to change substantially in their composition. Moving from Time 1 to Time 2, perceiver effects decreased to about one-third of their original values, suggesting a decrease in the influence on ratings of individual differences in raters' level of general trust towards others. By contrast, agreement about targets' level of trustworthiness appeared to solidify during this same time, moving from negligible values at minimal acquaintance to substantial and significant values at moderate acquaintance. Just as raters appeared better able to distinguish across targets, there was also an increase in dyadic relationship effects, which are presented in Table 4. By the final set of measurements two months after this, there were further decreases in the size of perceiver effects, but target effects remained approximately stable. At Time 3, with close acquaintance among teammates, the majority of variance in ratings resulted from relationship effects, but still with substantial consensus about the trustworthiness of individual targets.

In addition to recording their perceptions of trust, participants recorded their meta-perceptions of how much they believed each teammate trusted them. Table 4 displays the relative variance partitioning for these meta-perception judgments. Large perceiver effects suggest that people are relatively consistent in the amount of trust they think that each teammate sees in them. That is, perceivers tend to think that everyone else shares the same opinion of them. However, significant target effects also suggest that teammates tend to agree about whom on the team is the most vs. least trusting. The presence of substantial relationship effects suggests that perceivers did see some individuation in the degree to which each teammate trusted them, after controlling for

perceiver and target effects. A substantial relationship effect indicates that Jack believes one other individual on his team (perhaps Jill) views him as especially trustworthy.

The Accuracy of Initial Trust Judgments

The results discussed above focus on the antecedents of trust judgments in terms of perceiver, target and relationship variance. Turning the attention to the question of accuracy: To what extent were these judgments accurate?

I took three different approaches in measuring accuracy, with each approach using a different measurement to determine "accuracy." Grounded in the subjective perspective on accuracy were analyses using *linear accuracy* (a comparison of individual's earlier perceptions with their later perceptions after meaningful interactions) and *consensus accuracy* (a comparison of individual's earlier perceptions with their team's consensus after meaningful interactions). Finally, using a realist perspective, I examine the *meta-accuracy* in terms of the correspondence between meta-judgments and the actual perceptions reported by teammates.

Linear accuracy. Starting with a linear accuracy approach, I used each participant's later beliefs after greater acquaintance in order to assess the accuracy (i.e. consistency) of their earlier beliefs. To measure the accuracy of initial trust judgments, I correlated the raw dyadic scores each partner received / gave during each time data was collected. Table 5 reports correlation coefficients indicating how calibrated participants were between their earlier judgments and later judgments of the same targets.

Consensus accuracy. Continuing with a consensus-based accuracy approach, I used the collective perception of acquainted observers (i.e., team members) in order to

assess the accuracy of individuals' earlier beliefs – is there agreement between individual's initial beliefs and their group's consensus. This answers the question: are individual's initial trust judgments calibrated with the team's judgments after a meaningful interaction? I measured consensus accuracy by determining the correlation between the dyadic scores (how the perceiver believed the target viewed him/her) and each individual's partner score (the variance surrounding the average rating received from the target's team members). In other words, I examined the relationship between how each person views a given team member and how that team member is viewed by the other members of their team (partner score). Table 6 reports correlation coefficients indicating the degree of consensus between participants' earlier judgments and their team's average rating of the same targets at time 3.

To evaluate **hypothesis 1**, that individuals would be able to achieve linear accuracy but not consensus accuracy, I examined the correlations of time 1 and 3 for both linear and consensus accuracy. Examining the strength of the correlations between initial trustworthiness (time 1) and post-acquaintance reveals significant linear accuracy, for all factors except ability (r=.08). That is, individuals' perceptions of integrity (r=.20, p<.01), benevolence (r=.19, p<.01) and trusting intentions (r=.19, p<.01) were calibrated over time, or did not vary significantly as acquaintance increased, were as perceptions of ability were not calibrated. Linear accuracy for judgments comparing T2 and T3 were quite high, suggesting a crystallization of judgments by the time of moderate acquaintance that persisted through close acquaintance.

Overall, individuals were more accurate for linear accuracy than consensus. In comparing T1 and T3 integrity was the only significant correlation for consensus

accuracy, and the strength of this finding was weak (r=.13, p<.05). Consensus accuracy for benevolence (r=.05), ability (r=.04) and trusting intentions (r=.05) were not significant. In further analysis, a comparison of T1 and T2 resulted in no significant relationships. That is, peers' judgments of each others' ability at T1 were essentially uncorrelated with their judgments by T2 and T3. However, a comparison between T2 and T3 shows that individuals were not able to achieve consensus accuracy until moderate acquaintance. In comparison, individuals achieved linear accuracy across all factors (when comparing T1 and T3), with the exception of ability, and the relationships were stronger. Therefore, these results support hypothesis 1.

Hypothesis 2a and 2b predicted that individuals would be able to achieve linear accuracy for benevolence (**hypothesis 2a**), and consensus accuracy for integrity and ability (**hypothesis 2b**). The results examining hypothesis 2a show that individuals are most (albeit moderately) consistent in their integrity perceptions (r=.20, p<.01), and equally consistent with trust intentions and benevolence (r=.19, p<.01). Overall, individuals integrity perceptions were highly calibrated overtime (r=.67, p<.01), followed by a strong, significant effect for benevolence (r=.57, p<.01) and ability (r=.58, p<.01). The results for trusting intentions were also strong (r=.66, p<.01). Because individuals were most linearly accurate with integrity perceptions, hypothesis 2a was partially supported. Benevolence perceptions remained strong and significant but the effect was smaller.

Examining hypothesis 2b shows that individual's benevolence and ability ratings and their team's consensus at time 3 diverged with all factors, with the exception of integrity, indicating that people were able to agree on who had integrity early on. Initial

perceptions of competence were not calibrated, as evident by the non-significant relationship of the time 1 and time 3 judgments (r=.08). Accuracy increased from time 2 to time three, showing that integrity (r=.48, p<.01) and ability (r=.42, p<.01) perceptions were stronger than benevolence (r=.31, p<.01).

Meta-Accuracy

The third approach to accuracy applies to the meta-judgments that participants recorded about how they believed each teammate perceived them in terms of trustworthiness and trusting intentions. Meta-accuracy is represented by the correlation between these meta-judgments and the target's judgments recorded at the same period in time. Table 7 presents the coefficients for both generalized and dyadic meta-accuracy at Times 2 and 3.

To obtain generalized meta-accuracy, we correlated the perceiver scores for meta-perception (how I think others view me) with the individual-level target scores (how others view me). Meta-accuracy at time 2 revealed that individuals were generally accurate in understanding how others viewed them in terms of integrity (r=.44, p<.01), benevolence (r=.68, p<.01), ability (r=.25, p<.01) and trusting intentions (r=.34, p<.01)By time 3, meta-accuracy was enhanced for integrity (r=.72, p<.01)benevolence (r=.78, p<.01), ability (r=.55, p<.01) and trusting intentions (r=.60, p<.01). The increase in accuracy indicates that individuals are highly accurate at judging who views them as trustworthy in general. To determine dyadic accuracy, I correlated the perceiver effect of meta-perceptions (Tom's view of Tina's trust towards him) with the target effect (whether Tina trusts Tom) at the dyadic level. These results show a high degree of

dyadic meta-accuracy – or having an accurate view of how particular individuals perceive their ability, benevolence, integrity and trust intentions. While generalized meta-accuracy increased from T2 to T3, as a reflection of the stronger correlations at close acquaintance, dyadic meta-accuracy did not vary significantly from T2 to T3.

To evaluate **hypotheses 3a** and **3b**, I examined the accuracy of meta-perceptions by assessing the correspondence between perceivers' beliefs about the target's trust for them and the judgments reported by the targets. Hypothesis 3a predicted that individuals would be able to achieve meta-accuracy for ability and integrity. The results show that individuals were least accurate in understanding how others perceive their abilities both at T2 (r=.25, p<.01) and T3 (r=.55, p<.01) relative to the other factors. Perceptions of benevolence (T2: r=.68, p<.01; T3: r=.78, p<.01) and integrity (T2: r=.44, p<.01; T3: r=.72, p<.01) had the highest degree of generalized meta-accuracy at both data collection points. Whereas judgments of how others viewed their abilities and trust intentions were also accurate, the correlations were much lower, indicating that it was more difficult for them to understand whether their team members viewed them as competent and trusting though easier for them to determine who saw them as having integrity or competence. Therefore, because hypothesis 3a predicted individuals would achieve generalized meta-accuracy with ability and integrity perceptions, it is only partially supported.

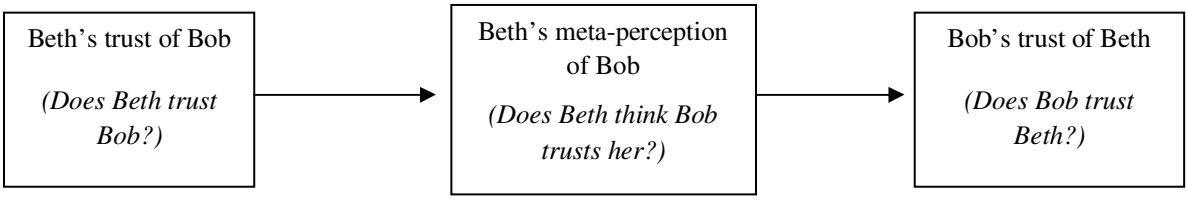
In examining dyadic meta-accuracy, the results reveal that individuals are able to discern who trusts them in particular in terms of their ability, integrity and trusting intentions. Although there was not much variation between the trustworthiness factors and trusting intentions, the data show that individuals were able most able to achieve the highest level of dyadic meta-accuracy with integrity (T2: r=.31, p<.01; T3: r=.33, p<.01)

and ability (T2: r=.29, p<.01; T3: r=.32, p<.01) perceptions and least accurate with benevolence (T2: r=.27, p<.01; T3: r=.28, p<.01). While individuals were able to achieve dyadic accuracy for benevolence, as predicted in hypothesis 3b, they were least successful in perceive how others view them with this trait, lending partial support to the hypothesis.

Supplemental Analyses

Kenny (1994) specifies that individuals may have an accurate understanding of how others view them (meta-accuracy) because they assume there is reciprocity in their judgment. For example, Beth may trust Bob because Beth thinks Bob trusts her. This is not necessarily a reflection of how accurate Beth perceives Bob, but rather accuracy is achieved due to reciprocity. Because of the highly significant dyadic meta-accuracy values, I conducted a post-hoc analysis to determine whether reciprocity is a mechanism that can explain why people may achieve meta-accuracy.

To evaluate whether meta-accuracy is a function of assumed reciprocity, I conducted a mediation analysis testing whether meta-perceptions (Beth's perception of Bob's trust for her) mediate the relationship between whether Beth trusts Bob and the extent to which Bob does trust Beth. Because of the unique findings regarding accuracy of ability (lower accuracy) and benevolence (higher accuracy) perceptions, I was especially interested in understanding what made these relationships distinguishable. I examined these relationships within Time 2 and Time 3. Below is an example of the mediation model:



I tested the proposed mediation using the four step sequence recommended by Baron and Kenny (1986), examining perceptions of trustworthiness. Benevolence and competence perceptions at Time 3 were unique findings. In all other cases, the proposed mediators (meta-perceptions) only partially mediated the models, as they failed to support the final step of the mediation test. Below we report the findings for these two unique models.

Table 8 and 9 displays the results of the mediation analyses, showing full mediation of meta-perceptions of benevolence (Table 8) and ability (Table 9) at Time3. First I examined the influence of meta-perceptions of benevolence. In analyzing the merits of this mediator at Time 3, step one of the mediation test established the significant relationship between the independent variable, the perceiver's benevolence perception (Time 2) (Beth's perception of Bob's benevolence) and the predictor variable (Bob's perception of Beth's benevolence) (β=.23, $p<.001$). In establishing step two, I examined whether the initial variable – Beth's perception of Bob's benevolence – predicted the mediator, the perceiver's meta-perception of benevolence (Beth's judgment of Bob's perception of her benevolence). This relationship was significant (β=.83, $p<.001$). Step three of the mediation test determined that the perceiver's meta-perceptions of benevolence predicted the dependent variable, Bob's perception of Beth's benevolence (β=.28, $p<.001$). The final step of the mediation analysis included both the

independent variable (Beth's perception of Bob's benevolence) and the mediator – Beth's meta-perception – into the analysis to predict the accuracy of Beth's judgment. This final step was supported, as evident by the non-significant relationship between the independent variable (perceiver's perception of benevolence) and the dependent variable (actual perception). Thus, Beth's meta-perception of benevolence fully mediates the relationship between how she view's Bob's benevolence, and how benevolent Bob believes Beth to be. [3]

DISCUSSION

Scholars have developed extensive research literatures on trust, and articulated its many benefits for group living. Ultimately trust is a social judgment—which may be accurate or inaccurate—the focus of the present paper. Despite the importance of trust in social interactions, the accuracy of trust judgments have been little examined. Although it is common for people to believe they are indeed accurate in their first impressions of others, our data suggests otherwise when it comes to trustworthiness, that the strength of accuracy varies across measurements of accuracy as well as acquaintance. Individuals do achieve accuracy in their judgments of others' trustworthiness by all criteria by moderate acquaintance. Indeed, by this time individuals also achieve accuracy in their meta-judgments both at the individual and dyadic level.

Linear and Consensus Accuracy

[3] The results of the clustering correction analysis showed that standard errors were not correlated and therefore not overstated.

In discriminating in the ability to achieve linear and consensus accuracy, the results of this study show that individuals are able to be linearly accurate – that is, their earlier judgments are moderately calibrated with their later judgments. This finding exceeded consensus accuracy, with the only significant (and accurate) perception in regards to integrity. The success in achieving linear accuracy shows support for the influence of individuals' bias on perception and decision making. The measurement of linear accuracy uses only the individuals' perception over time to gauge changes in evaluations of trust and trustworthiness. Inherent in these perceptions are biases, which are used initially in developing swift trust perceptions of their teammates at minimal acquaintance. Biases such as anchoring and adjustment can account for this calibration; individuals may anchor on their initial impression and evaluate all incoming information consistent with this initial baseline. Unless there is an obvious trust violation, individuals' future perceptions will vary only slightly from their initial anchor. Other theories such as the self-fulfilling prophecy and self-perception theory can also explain the moderate calibration effects. The self-fulfilling prophecy operates similarly to the anchoring and adjustment heuristic in that the perceiver interprets all incoming information consistent with their initial impression, but also takes into consideration the role of the target's behaviors in forming future perceptions. However, the data in this study did not allow for the evaluation of the targets' behaviors in comparison to the perceivers' evaluations, making it difficult to determine the specific cognitive mechanisms responsible for linear accuracy.

The inability to achieve consensus accuracy is consistent with Kenny's (2004) PERSON theory as well as the variance shifts addressed by using the social relation

model. In addressing the shift in variance, the results of this study demonstrate that initially individuals tend to rate everyone similarly, as evidence of the higher perceiver variance. Over time, individuals are able to discriminate and agree on who is trustworthy and who is not which is seen in the higher degree of target variance within times two and three. Lastly, the high degree of relationship variance especially at time three shows that individuals are developing particular relationships within the groups where there are higher or lower levels of trust within a particular dyad in the group. This shows that individuals are coming to know each other better as acquaintance increases, and individuals tend to agree on these perceptions. Kenny's PERSON model predicts that individuals may agree on who is trustworthy (i.e., target variance) if they are exposed to the same information over time. This overlap develops a consistent impression across all team members. This theory coincides with the result of consensus accuracy which was only significant after time two.

While the general trend of linear accuracy was significant, there was variation with the factors of trustworthiness. In comparing time 1 and time 3, individuals were most calibrated with integrity and benevolence perceptions, as well as trust intentions. In correlating the actor effects (showing how much people trust others in general), benevolence and integrity are highly correlated at time 1 (r=.84), with the strength of the relationship decreasingly slightly from time 2 (r=.78) to time 3 (r=.76). These strong correlations show that perceivers are unable to distinguish benevolence and integrity perceptions initially but do so slightly more as time increases. Other research has found that benevolence and integrity are highly correlated, and Schoorman et al (2007, 2002) attribute this to the fact that benevolence is not developed enough early on in the

relationship to make a significant, independent contribution. This corresponds with Mayer et al (1995) who proposed that ability and integrity perceptions would form first, where benevolence would take longer to develop, and that benevolence would significantly influence the relationship as time increases. Therefore, individuals would not be able to differentiae the character perceptions of integrity and benevolence early on to make an independent influence on accuracy.

While integrity and benevolence were significant for linear accuracy, only integrity was significant for consensus accuracy. That is, perceivers' judgments at time 1 were consistent with their team's consensus of who has integrity at time 3. These results suggest that integrity presents particular cues that individuals tend to agree on and remain stable throughout the relationship. Individuals were neither calibrated nor consistent with their perceptions of ability. This may be due to the role of ability versus integrity or benevolence in new relationships. Individuals may be more concerned with threat and harm of someone they don't know at the initial meeting, unwilling to make themselves vulnerable. Trusting ability may seem less risky initially but as time increases; ability becomes more important in this context and thus more salient. The salience of ability over time creates more variation in the perceivers' evaluations therefore is not initially significant. Further, feedback received during the semester directly reflects the ability of each team member. This outside feedback from an authority (i.e., the professor) will reinforce or change each person's perception of their teammate's ability to correspond with this feedback. The inaccuracy of ability perceptions with both linear and consensus accuracy may suggest that context plays a role in shaping the accuracy of perceptions. Future studies should address the impact of context on perceptions of ability,

benevolence and integrity to distinguish which cues aid in achieving accurate perceptions.

Accuracy of Meta-perceptions

The results of this study also support accuracy from a realist perspective in that individuals are able to achieve both dyadic and generalized meta-accuracy at moderate and close acquaintance. That is, individuals are successful in understanding how much their team mates trust them in general, and which particular teammates may trust the meta-perceiver more than others. Based upon prior research findings, individuals were exceptional at achieving dyadic meta-accuracy, and only modest at attaining generalized at time 2, increasing dramatically by time 3.

In first examining the results of generalized meta-accuracy, the data show that, like linear accuracy, individuals are able to better access how others view their character based on integrity and benevolence perceptions. Whereas judgments of how others viewed their ability and trust intentions were also accurate, the correlations were much lower, indicating that it was more difficult for them to understand whether their team members viewed them as competent and trusting though easier for them to determine who saw them as having integrity or benevolence. The ability to achieve accuracy of these factors may be due to the use of the direct feedback model, where individuals observe how their behaviors influence their team members' reactions. Perhaps feedback from peers regarding integrity and benevolence is more immediate as it is based upon how team members treat the meta-perceiver during the interaction. Meta-perceptions of

ability may be more delayed and harder to judge, especially prior to receiving feedback regarding the team's performance.

Unlike generalized meta-accuracy individuals were more accurate in understanding how particular team members perceive their ability as well as their integrity. This finding supports the Mayer et al (1995) proposition that ability and integrity are developed first within the relationship, and benevolence develops later on. However, this finding goes against the prediction that individuals would achieve dyadic meta-accuracy with benevolence. The lack of support for this prediction may be due to the strength of the biases that are operating when the meta-perceiver is interpreting the team member's cues. The team member may be acting under the self-presentation bias where they are faking their care and concern for the meta-perceiver. This would imply that individuals are not able to accurate discern genuine cues with regards to benevolence.

The data collected allowed for the examination of one possible mechanisms lending to the accuracy of dyadic meta-perceptions. In testing the reciprocity of judgments, or "I trust you because I think you trust me", the results show evidence of substantial reciprocity. This provides evidence that individuals will not be vulnerable to another person and take on risks associated with the relationship unless they know their interaction partner will do the same. The findings here support past research demonstrating the role of reciprocity in meta-judgments (i.e., Elfenbein et al, 2009). Future research should examine other mechanism that may be responsible for achieving meta-accuracy, as well as determine if accuracy is achievable at minimal acquaintance.

This study provides support for use of the subjective and objective measures of accuracy. While there has been a tendency to utilize objective criterion in measuring trust, the results of this study support the subjective nature of trust, in particular, initial trust judgments. The lack of consensus accuracy implies that individuals tend to view their team mates differently leading to divergence in trust and trustworthiness perceptions. The subjective nature of trust suggests that individuals are successful in using their initial trust judgments in accomplishing their interaction goals within the team and context. However, individuals are not as adept at using the social information to navigate them through their social worlds (i.e., lack of consensus accuracy). In this case, acquaintance matters where individuals are able to gather more information to assist in the construction of their social environment to differentiate what is accurate versus inaccurate.

The present study departs from much of the existing research on trust within groups and work settings in several ways. Two key research question in this literature have been: What benefits accrue from trusting others and how do individuals develop trust? (Kramer, 1999). This question poses an important complementary question: Are the beliefs that individuals develop accurate or appropriate? This is question is important because, as noted earlier, benefits are only likely to accrue if individuals make accurate judgments. In other words, if individuals see others as trustworthy when they are not, they may be taken advantage of, or if individuals believe the target to be untrustworthy when they subsequently prove not to be. With regard to the development of trust, the present study does not look at the factors and processes that shape trust, but seeks to evaluate whether the judgment that individuals arrive at are consistent with their prior

judgments or that of their team's. Therefore, the present research might be seen as new and important line of inquiry and can lead to a number of different questions. The second study of this dissertation addresses one of these questions by examining a particular cognitive mechanism, the self-fulfilling prophecy, which may be a factor that allows for the accuracy of initial trust judgments.

STUDY 2

Study 1 utilized a subjective approach to examining the accuracy of trustworthiness perceptions between individuals and their team members, demonstrating a high degree of linear accuracy. This subjective approach can be used to approximate how trustworthy individuals may be within a particular context. However, despite our best efforts to measure and predict the true trustworthiness of a target, we cannot. The current measurement of trust and contextual variations make it seemingly impossible to accurately pinpoint whether an individual has integrity or benevolence across all settings. Swann (1984) refers to this as generalized accuracy, meaning that individuals have full information to make an informed judgment of a target's trustworthiness across situations and contexts. Because of this inherent difficulty in determining the generalized accuracy of a target's traits such as trustworthiness, Swann (1984) coined the term "circumscribed" accuracy to denote that individuals can subjectively evaluate the target's trustworthiness within some contexts with some degree of accuracy, but not in others.

Further complicating the ability to achieve generalized accuracy of trustworthiness perceptions is the measurement of these factors. While many of the traits and characteristics examined by Swann and other scholars in the interpersonal perception domain have a correct, objective measure to quantify "accuracy" trust has no such qualities. Objective measures used are typically void of a relational context that provides the foundation for and formation of trust perceptions. The experiments designed to get at the trustworthiness of a target are typically simulated in a game where relational stakes are minimal and do not characterize those outside of the laboratory. Further, the contextual elements are important to consider when forming a generalized accurate level

of trust of a target which are typically not accounted for within the literature. Therefore, while the objective measures of accuracy are quantifiable way to account for trust within a particular context, using them to obtain a generalized accurate, level of trust is unlikely.

In an attempt to identify another way of getting at the true accuracy of an individual, some scholars have attempted to use the consensus perception of a group of individuals. According to Kenny (2004) consensus can reflect an "objective" sense of accuracy. Kenny states that individuals who observe the same information over time share similar perceptions of the target individual and that their collective perception, or consensus, can be used as an indicator of the individual's "true" behavior within that particular context. These perceptions represent the expectation of an individual to be characteristic of a certain trait, for example, trustworthy or untrustworthy.

However, this consensus approach also does not capture the generalized trustworthiness of a target and therefore cannot be used as an objective measure of accuracy. Research in economics and finance agree with this perspective. For example, the efficient market hypothesis (EMH) (Fama, 1970) states that the market prices reflect all available information, including insiders' knowledge (in the strong form). Proponents of the EMH argue that because of this, the market is efficient and that prices are correct. However, skeptics argue that the limitations of this approach lies in the assumption that the individuals are always rational and the market always reflects full information. The housing market crash in 2008-9 supports these limitations and is proof that individuals are not always rational and that market prices are not based on full information. If EMH were true, and consensus judgments were an indicator or measure of generalized accuracy, then investors would be able to predict the bubble crashing and create a fund so

that people would profit from this event. This was not the case; in fact, with the exception of Goldman Sachs, everyone lost money. Like with trust, if consensus judgments were indeed a measure of "objective accuracy" then everyone would have profited from the housing crisis as they initially predicted when deciding to make their investments. Similarly, the consensus judgment about Madoff was that his competence would gain individuals a high return on their investments. Ultimately, investors were misled and Madoff instead cost some of them their life savings.

The limitations across these domains (finance, economics, psychology) reinforce that trust is inherently subjective and accuracy is a "correct" perception unique to the perceiver that may or may not be shared by others. These limitations in the measurement of a generalized accurate level of trust can also be explained by the fact that people are not always good decision makers. In the absence of information, individuals may make a decision using cognitive mechanisms (McKnight et al, 1998; Meyerson et al, 1995; Willams, 2005) which influences the accuracy of their initial perception. Porter and ten Brinke (2009) suggest that individuals use cognitive mechanism such as stereotypes to form an initial trust judgment. Using these mechanisms clouds their evaluation of all information gathered during the interaction, leading them to support their initial beliefs and creating their own perception of what is accurate. This process underscores the idea of the self-fulfilling prophecy (SFP), or erroneous initial expectations that are seen as certain through the evaluation of verbal and nonverbal cues. For example, initial impressions of low trust would cause perceivers to evaluate information and behave as if their interaction partners were untrustworthy, maintaining this perception regardless of its veracity (Beckstead, 2003).

This paper examines the effects of the SFP on forming and evaluating initial trust judgments, and the accuracy of these judgments. Study 1 supported the hypothesis proposing that individuals are able to achieve linear accuracy but not consensus accuracy. One of the mechanisms proposed to explain this was the self-fulfilling prophecy effect. This study also takes a linear accuracy (i.e., subjective) approach and examines how the self-fulfilling prophecy affects behaviors, decisions and the accuracy of initial trust judgments. I propose that individuals' expectations perpetuate theirs and the target's behaviors thereby creating the perceiver's own unique perception of accuracy. Given such logic, this paper makes a contribution to the literature on initial trust development by examining: 1) how initial trust judgments influence perceptions and perpetuate the target and perceiver's trust behaviors; and 2) whether these behaviors reinforce the perceiver's expectations, thereby influencing the accuracy of their initial judgments.

Theoretical Foundations

Consistent with prior research, I define trust as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another" (Rousseau et al, 1998, p. 395). Mayer et al (1995) propose that positive judgments of trustworthiness allow trust to form, where the trustor is willing to be vulnerable and accept risks within the relationship. Trustworthiness is therefore central to arriving at a judgment of trust and is defined by three factors: competence, benevolence and integrity (Mayer et al., 1995). Competence is defined as beliefs about the skills and abilities of the trusted party. Benevolence is the belief that the trusted

party's actions are with good intention and not for some other underlying motive or profit. Integrity is the belief that the trusted party adheres to accepted rules of conduct, such as honesty and credibility.

Trust is built between individuals by an exchange of information over time, where each person communicates their intentions both verbally and nonverbally. Through this repeated exchange individuals can infer the cause of their partner's behavior based on the information acquired during these interactions (Rusbult & Van Lange, 2003). These attributions allow for individuals to develop expectations of future behavior based on the interpretation of the observed behaviors. Especially in trust development, causal attributions are central to establishing trust (Korsgaard et al, 2002).

Although models of trust are based on the assumption of a shared history between the trustor and trustee (i.e. Mayer et al, 1995; McAllister et al, 1995), scholars have noted that trust can develop between unacquainted individuals without a relational history (McKnight et al, 1998; Meyerson et al, 1996). In these cases, individuals use proxies as mechanisms to develop trust perceptions, based on visual or contextual cues (Brunswik, 1954; Fiske & Taylor, 1991). For example, biased information such as group membership or stereotypes can be used to categorize individuals (McKnight, Cummings & Chervany, 1998; Meyerson, Weick & Kramer, 1996; Williams, 2001) as trustworthy or untrustworthy. Because of this tendency, individuals over-attribute these characteristics as indicators of trustworthiness. This over-attribution of traits is referred to as the fundamental attribution error, meaning that individuals are more likely to error in their initial perception of trustworthiness because they overly attribute biased cues to be the

cause of the trustees' behavior. Because of this tendency of biased evaluations of first impressions of trust, the perceptions formed of the trustee may not be accurate.

This paper examines the linear accuracy of the perceiver's judgment of the target's trustworthiness. The results of study 1 show that individuals are able to achieve linear accuracy, or the calibration of their initial trust judgments and future judgments. This study extends these results by providing a mechanism that can explain this effect.

What does it mean to be accurate?

The measurement of accuracy has been debated within and between literatures. The main critiques of accuracy stem from those within two major perspectives on accuracy: the objective and subjective perspective. These two perspectives differ in conceptualizing the mechanisms used to arrive at judgments and as well as the measurement of the judgments. According to the objective perspective, the criterion is set by the experimenter, where a "true" right answer exists (Kruglanski, 1989). Advocates from this view argue that the objective outcome should not be based on social perceptions, but rather a standard in which social perceptions can be compared to (Jussim, 2005). Alternatively, the subjective perspective allows for the perceiver's perceptions to influence the mechanism as well as the outcomes. In this paper I define accuracy using both perspectives, based on the perceiver's subjective perception of trust as well as how their behaviors objectively influence the target's reactions.

Both perspectives are appropriate to use in this study. The subjective perspective of accuracy incorporates perceptual biases such as stereotypes to predict behavior present in linear accuracy, where the objective view discounts the use of these in determining

accuracy and instead focuses on the quantifiable behaviors elicited. Some advocates of the subjective perspective (i.e. Swann, 1984) use the self-fulfilling prophecy effect (SFP) as a mechanism to describe the influence of perceptions during the interaction between perceiver and target and how these may change or reinforce the perceiver's initial impression. Specifically, advocates of the SFP and subjective measurement of accuracy believe that the perceiver's SFP will influence both the perceiver's and target's actions, and the perceiver's future perceptions, therefore should be considered when examining how parties arrive at particular outcomes. The objective approach can also be used to measure the extent to which the perceiver's views influence the target's behaviors. The target's behaviors should reflect the content and tone of the perceiver's and is measurable and quantifiable. Therefore, the target's behaviors can also be used as an objective measure of accuracy.

Like with study 1, I use linear accuracy as a subjective measurement of accuracy. Buehler and McFarland (2001) also refer to this approach as "calibration" and can be thought of as the consistency of individuals' behaviors over time. Therefore, the subjective measurement of accuracy is defined as the strength of the relationship between the perceiver's initial and post-interaction trust perceptions of the target. Using the objective approach accuracy is defined by the changes in the target's behavior based on the perceiver's trusting behaviors.

Accuracy of Initial Trust Perceptions

Indeed, isolating the mechanisms used to form initial trust judgments is important in understanding how trust is developed. Yet, research examining whether they are accurate in predicting trust behaviors is relatively absent throughout the trust literature. They have, however, been examined in related fields where certain physical features are linked to accurate trust perceptions. For example, Stirrat and Perrett (2010) found that people view men with wider faces as less trustworthy, and in a trust game, these men did exploit the trust of others. Porter et al (2008) asked subjects to discriminate between trustworthy (CEOs) and untrustworthy (criminals from America's Most Wanted) based on cues that indicate kindness.

While these studies suggest individual's can discriminate between trustworthy and untrustworthy individuals, there is also reason to believe they may not be able to. Sabatelli, Buck and Dreyer (1983) suggest that the ability to accurately read nonverbal cues is a function of the pre-existing trust established between dyads. They found that individuals with high trust for each other (married couples) were able to accurately decode each other's nonverbal cues, where as strangers (low trust) were unable to do so. In summary, the above evidence suggests that behavioral information is used to predict trust that may or may not be accurately interpreted by perceivers.

But what is it about the use and interpretation of these cues that leads to accurate initial trust judgments? Cues are used as a source of information to evaluate how the perceiver will behave based on their expectations for the target (Fiske et al, 1995; 2002). For example, nonverbal cues such as appearance and demeanor form performance expectations (Balkwell, 1995; Fiske et al, 1995), and these cues become salient to the perceiver in situations relevant to the task at hand (Fiske et al, 1995; 2002). Once these

expectations are formed they guide behaviors, perpetuating and reinforcing them until they become a self-fulfilling prophecy (Balkwell, 1995). At this point, the perceiver's perceptions influence their evaluation of the target's behavior to determine whether these perceptions are accurate.

Creating accuracy through the SFP

Self-fulfilling prophecies (SFP) occur when "a false definition of the situation evokes a new behavior which makes the original false conception come true" (Merton, 1957). This implies that individuals' beliefs or expectations – regardless of their truth – will affect the outcome of a situation by influencing how the perceiver behaves and processes information. For example, in one classic study, Rosenthal and Jacobson (1968) found that teachers who believed their students were poor performers treated their students this way, and the students did indeed underperform (see also: Jussim, 1986). This pattern of behavior has been found in numerous studies involving different trait ascriptions such as gender (Kray et al, 2001), race (Word, Zanna, & Cooper, 1974), power differences (Copeland, 1994), leadership (Davidson & Eden, 2000; Eden 1992) physical attraction (Jones & Panitch, 1971) and personality (Snyder et al, 1977).

SFPs create changes in behavior because perceivers who are influenced by the SFP may have inflated expectations that seem more certain than they actually are. These perceptions then shape the perceiver's attitudes and behaviors by distorting the perceptual process used in gathering information from the target, as well as the way they (the perceiver) express information (Judice & Neuberg, 1998). It is important to note that the perceiver's impressions may be accurate, but regardless of whether they are they will

continue to reinforce and influence current and future perceptions and behaviors. For instance, if the perceiver holds positive trust perceptions of the target, they will be more likely to ask questions from the target to support this view (Snyder & Stukas, 1999), and act more positively towards the target during the interaction (Harris & Rosenthal, 1985; Neuberg et al, 1993).

Perceiver expectations also are reinforced because they influence the target's behaviors (or perception of the target's). Research shows that there are two different models through which the SFP operates (see Figure 3): The first (model 1) involves the behavior of the target (i.e. behavioral confirmation) (Snyder, 1992; Snyder et al, 1977). This model is predominately used to predict and test SFP effects. The second model, which has received less empirical and theoretical attention, does not take into account the target's behavior. Instead, the SFP influences the perceiver's perceptual process without the influence of the target's behaviors. This perceptual confirmation means that regardless of the behaviors communicated by the target, the perceiver believes their initial perceptions to be true (Bem, 1972; Jussim, 1989; Miller & Turnbull, 1986; Snyder 1992).

The first model shows that the perceiver's later judgment is achieved because of the target's behaviors within the interaction. This is mechanism is behavioral confirmation, referring to the behavioral changes within the target that act to support or verify the perceiver's expectations by displaying attitudes or behaviors that support them, communicated either verbally or non-verbally. Behavioral confirmation can be achieved because of the goals and motivations of the perceiver, for example, when they are instructed to be accurate but are highly distracted, depleting their cognitive resources

(Biesanz, Neuberg, Smith, Asher & Judice, 2001). However, being motivated to be accurate prevents the perceiver from gathering thorough information about the target (Judice & Neuberg, 1998) and in fact makes them less accurate (Biesanz et al, 2001) as they are not able to succeed in behavioral confirmation. The motivation of the target also influences their confirmation, for example when they are instructed to "go with the flow" and accommodate the perceiver (Snyder & Haugen, 1995).

The second model describes circumstances when the target may not confirm or disconfirm the perceiver's initial trust perceptions so accuracy would be achieved only by way of the distortions in the perceiver's perceptual process. One example of this occurs when the perceiver pays attention to only information that confirms their expectations (Jones, 1986; Olson, Roese & Zanna, 1996) regardless of how minute it may be. Another example is when the perceiver uses their own internal state to inform them how to perceive and treat the target. In these situations the perceiver's initial perceptions are verified regardless of the target's true behavior due to the perceiver's self-perception (also a perceptual bias) (Miller & Turnbull, 1986; Snyder & Stukas, 1999).

Self-perception (Bem, 1972) influences one's self-view by "coming to know" their own attitudes, emotions, and other internal states partially by inferring them from observations of their own overt behavior and the circumstances in which this behavior occurs (Bem, 1972, p. 2). This means that individuals understand their own attitudes from how they behave towards others and less by how the target responds. For example, Strachman and Gable (2006) found that perceivers who had avoidance social goals were more likely to remember and interpret information as negative and adopted a more pessimistic view of the target. Further "nonbehaviors" are also informative of opinions

or attitudes, for example, finding a cartoon funny based on their reaction to it (i.e., laughing resulted in a "funny" response) (Fazio, Shreman & Herr, 1982). These studies show that regardless of the target's actual behavior, the perceiver's evaluation of their internal states validates their attitude towards the target, confirming their initial perception or expectation.

SFPs and the Accuracy of Initial Trustworthiness Perceptions

The influence individuals have over each other's attitudes and behavior can have important consequences for trust perceptions. Accordingly, SFP theory can also be used to explain how individuals arrive at accurate conclusions when attributing trust judgments.

In new relationships, individuals may be concerned with their interaction partner's true intentions and motivations - whether the target is honest or operating under false pretenses. This uncertainty creates expectations of low or ambiguous trustworthiness leading the perceiver to question the validity of the information provided by the target. Theoretical (i.e., Mayer et al, 1995; McAllister, 1995) and empirical (i.e., Mayer & Davis, 1999; Ferrin & Dirks, 2003; Ferrin et al, 2008) work supports the notion that psychological states of trust impact the perceiver's trusting behavior. In this paper, trusting behavior is defined as perceiver's willingness to be vulnerable and accept the risks that may occur within the new relationship. Perceivers demonstrate trusting behavior in ways that show the targets that they are willing cooperate, and have care and concern for the relationship. Low trust leads to more competitive behaviors and lower

trustworthiness perceptions of others (Parks, Henager & Scamahorn, 1996), where higher trust leads to more cooperative behaviors (Dirks & Ferrin, 2001; McAllister, 1995). What stands apart from this paper and the aforementioned research is that prior work has examined how trust behaviors are influenced by an interaction. This work proposes that trust behaviors are influenced by expectations that are formed prior to engaging in an interaction, before attributions are able to be made based on the target's behavior. Here, trust behaviors are predicted to occur because of a rational interest in protecting one's self until proven otherwise (Weber, Malhotra & Murnighan, 2005).

According to the elaboration likelihood model (ELM) individuals who are motivated by accuracy are more likely to pay attention to suspicious cues (Petty & Cacioppo, 1986). The SFP will influence this process in that all cues that are considered suspicious will then be processed and evaluated either confirming or disconfirming their initial perception. For example, individuals who believe their interaction partner is untrustworthy will engage in avoidance behaviors signaling non-cooperation and self-concern (Strachman & Gable, 2006). Neutral cues, or cues that are not suspicious, however, will not be actively processed in this way and instead remain in the periphery. If the perceiver forms a positive initial trust judgment and uncertainty is not present, positive cues may also be processed similar to suspicious cues but when operating under the SPF will result in a favorable judgment. These perceptions influence the perceiver's trusting behaviors, or willingness to engage in an interaction that would be beneficial to both parties; low trust prevents the perceiver from wanting to engage in risky behaviors where they would be vulnerable to the target's exploitation or opportunism.

Hypothesis 1**.** An initial expectation of high (low) trust will cause the perceiver to engage in (low) trusting behaviors.

The perceiver's expectations of trustworthiness will influence the target's trustworthy behaviors within the interaction, or actions that prove they are trustworthy through honest and respectful behavior, cooperation, and intent to create value for both parties. During this interaction, the perceiver decodes the target's non-verbal and verbal behaviors (i.e. identity cues) in an attempt to detect the possibility of exploitation or deception (Swann, 1984; 1987). In desiring to be trusted, the target may send signals that reflect this aspiration. This reaction by the target acts as a behavioral confirmation mechanism and relays information back to the perceiver that their expectation is correct. For example, if a perceiver operates under the expectation of low trust, the perceiver may treat the target more contentiously, and the target will in turn match this behavior and act contentiously as well. Ultimately, behavioral confirmation is achieved when the perceiver's expectations are met by the target – when the perceiver's expectations ("I trust you") are consistent with the target's actions (i.e., the target is manifesting behaviors indicative to the perceiver that the target is trustworthy) (Swann, 1984; 1987). The perceiver will therefore use this information to draw a conclusion regarding the target's trustworthiness.

Empirical evidence shows support for this – that the perceiver's trusting behavior will cause the target to reciprocate, showing similar trustworthy behavior (Serva et al, 2005). Recently, Ferrin et al (2008) found evidence of this reciprocity in their examination of trust spirals, or repeated instances of cooperative behavior based on

perceptions trustworthiness between individuals. They found that trust perceptions mediate the relationship between interpersonal (and intergroup) cooperation, creating reciprocal cooperative behaviors. Beyond this, evolutionary theories argue that individuals are innate cheater detectors and can identify when cooperative behaviors are not reciprocated (Cosmides & Tooby, 1989). Although cooperation does not mean the target is trustworthy (Mayer et al,1995), cooperative behaviors are a signal of trustworthy behavior, and also a result of a trusting relationship (Ferrin et al, 2008). Therefore, the perceiver's trusting behaviors will lead to greater trustworthy behaviors by the perceiver, reflecting model 1 (Figure 3).

> Hypothesis 2: The perceiver's initial trust and their trusting behavior will influence the target's trustworthy behavior, where expectations high (low) trust will yield (un)trustworthy behaviors from the target.

Accuracy can be achieved through two mechanisms: with behavioral confirmation or without behavioral confirmation and through the perceiver's perceptual biases. Behavioral confirmation, outlined in hypothesis two, states that the perceiver's accuracy is driven by their SFP (i.e. "I think the target is untrustworthy") because their trusting behavior influences similar trustworthy behavior from the target (i.e. the target exploits the perceiver), where accuracy is defined as the positive association between the perceiver's initial trust and later trust perception after becoming acquainted with the target. That is, higher initial trust will result in higher trust once the target and perceiver are acquainted because of the behaviors produced and elicited by the perceiver. Alternative to this, inaccuracy occurs when the perceiver's initial perceptions are

negatively or not significantly related to their post interaction perceptions. This may happen if the target continually disconfirms the perceiver's expectations of the target's trustworthy behaviors which change the perceiver's initial impression. For example, inaccuracy would result if the perceiver expected the target to be trustworthy later discovering that they are indeed untrustworthy.

Alternatively, model 2 shows that a perceiver is able to achieve accuracy without relying on the target's behaviors to confirm their initial trust judgment. Instead, the perceiver's self-perception drives their post-interaction trust perceptions, creating accuracy through perceptual confirmation. If the perceiver feels trust for the target, they will use this internal state to assume that the target is trustworthy regardless of the target's trustworthy behaviors. Therefore, accuracy is defined similar to the previous argument where their initial impressions are maintained over time and does not change, however accuracy is arrived at differently; the target's behaviors may not meditate the perceiver's initial and later trust judgments (Ferrin & Dirks, 2003; Jones, 1990).

Using the perceptual confirmation mechanism, the target may or may not confirm perceiver's initial trust perceptions, but regardless, the perceiver's evaluation of the target's behavior is unlikely to deviate from their initial judgment. Here, the perceiver's interpretation of the target's behaviors and not necessarily the target's actual behaviors confirm their trust perceptions (Ferrin & Dirks, 2003). Ferrin and Dirks (2003) found evidence of this effect, examining how trust is influenced by individuals presented with either cooperative or competitive reward structures. They found that individuals with high initial trust expectations chose more cooperative than competitive behaviors, and rated their partner as more trusting regardless of whether they were. Thus, high initial

trust has a strong influence on the effect of rewards on trust because of the perceiver's self-perception; perceivers were able to use their internal state (high trust and cooperative behaviors) to infer their opinion of their partner (trustworthy).

In summary, accuracy can be achieved in two ways. In line with behavioral confirmation predictions, the perceiver's expectation-consistent behavior will create similar behaviors in the target. Behavioral confirmation will occur when the target's behaviors confirm – rather than disconfirm – the perceiver's expectations. This confirmation of their expectations reflects accuracy of the perceiver's initial trust judgment. Therefore, I present two competing hypotheses representing each mechanism that accuracy can occur by:

Hypothesis 3a: The perceiver's accuracy will be mediated by the perceiver's trusting behavior and the trustee's trustworthy behavior.

Hypothesis 3b: The perceiver's initial trust perception will be mediated only by the perceiver's trusting behavior.

Behavioral Disconfirmation

While accuracy can be achieved through the target's behavioral confirmation, inaccuracy can occur as a result of the target's behavioral disconfirmation, or when the target acts in opposition to the perceiver's expectations. Inaccuracy occurs when the perceiver's initial trust perception would be unrelated or negatively related with a later trust perception. Behavioral disconfirmation is one reason perceivers may change from their initial trust perception and can happen when, for example, the perceiver does not feel strongly or is ambivalent about their first trust perception (Swann & Ely, 1984), or

when the target is instructed to assert their own self-view (Smith et al, 1997). Further, disconfirmation may occur when targets have a strong self-concept. This process of self-verification (Swann, 1987) causing the target to not confirm the expectations that act in opposition to their self-view. Therefore, targets will distort or attempt to change perceiver's expectations if they do not match the target's self concept (Swann et al, 1989; Swann et al, 1992).

In an interaction, targets may choose to verify their own self concept (self-verification) in instances where they believe they possess certain traits counter to how the perceiver may view them. In other words, targets who believe they possess a high degree of integrity will maintain this stance despite how the perceiver may treat them and will interfere with the behavioral confirmation process by disconfirming the perceiver's expectations. For example, Jill believes that Jack is going to deceive her within their negotiation. Jill is going to treat Jack as if she doesn't trust him, perhaps by attempting to monitor him, being uncooperative or withholding information. Jack, however, sees himself as having a lot of integrity and under very few circumstances would he ever consider being dishonest. Despite Jill's treatment towards Jack, Jack's strong perception of his own sense of integrity will prevent him from giving into Jill's expectations – he will not confirm them. Instead, Jack will consistently display cues that he is willing to cooperate and will not deceiver her. Instead of confirming her expectations, Jack disconfirms which will have the effect of changing Jill's perception of him. Jill will eventually come to believe that Jack will not cheat her and therefore can be trusted.

Behavioral disconfirmation through self-verification is evident throughout SFP theoretical and empirical literatures. In studying instances where targets may disconfirm

perceiver's expectancies, Swann and Hill (1982) provided targets with feedback about their tendency towards dominance and submissiveness. Perceivers treated targets as either dominant or submissive. They found that targets who were told that they were dominant disconfirmed perceivers' expectations when treated submissively. Similarly, Swann and Ely (1984) found that targets who were certain about their personality traits (extroverted versus introverted) were less likely to confirm perceiver's expectations when treated opposite of their self-confirmed personality profile. For example, in the case where perceivers treated extroverted targets as introverted, targets who were more certain they were extroverted disconfirmed perceiver's expectancies only to verify their own self-concept. In these cases, perceivers ceased their efforts in confirming their expectations.

Similarly, as with the example of Jack above, a person's propensity to act trustworthy, in particular integrity, can be influenced by how closely they hold values such as honesty and creditability to their identity. The target's integrity and subsequent trustworthy behavior can be defined and shaped by their integrity identity. Integrity identity can be described as a self-schema related to how an honest and credible person is likely to think, feel and behave (Aquino & Reed, 2002). Individuals vary in how closely they tie integrity into their personal identity, which translates into their self-concept of integrity. If targets believe having integrity is not important in defining their identity, then they are less likely to have a self-schema related to this trait which will also influence their behaviors (i.e. less likely to act with integrity). However, those who do have a strong integrity identity are able to access this information more readily (Aquino & Reed, 2002).

When this schema is activated, individuals with a strong integrity identity are able to utilize it in order to regulate their actions or behaviors (Aquino et al, 2008), for example, when an individual or situation may challenge their integrity. Thus, the strength of targets' integrity identity can determine whether they confirm or disconfirm perceiver expectations; if the target has a weak integrity identity (self-schema) it is less likely to be activated and they would be more likely to deviate from honest and credible behaviors. A stronger self-view of integrity will disconfirm the perceiver's expectations of low trust. Eventually, the perceiver will alter their trust perceptions and the target's self-view will become the new expectation (Swann & Ely, 1984).

> Hypothesis 4: The target's self-view of trustworthiness will moderate the relationship between perceiver's trust behavior and the target's trustworthy behavior. Targets who have a greater self-view will disconfirm the low trust expectations of the perceiver, influencing their own trustworthy behavior.

SFPs: Expectations of Integrity and Negotiation Behaviors and Outcomes

In a negotiation context, the SFP can be very influential in achieving accuracy as it can influence both the bargaining process and outcomes. Negotiations are an interdependent process where each party desires a particular outcome and attempts to utilize tactics in order to reach that goal. Trust is influential here in terms of the type of orientation chosen (i.e., cooperative or competitive), the ability to predict behaviors and solve problems (Lewicki & Bunker, 1996), as well as how each party reacts to the other's concessions (Van Kleef et al, 2006). Further, trust and trustworthiness behaviors are

shaped by the bargaining process characterized by the degree of reciprocity of information sharing and concession making. In particular, trustworthiness perceptions are especially relevant as each party is concerned with the potential of deceptive or dishonest behaviors, and the willingness to accept information as sincere (Parks, Henager & Scamahorn, 1996). Because of the importance and relevance of trust within a negotiation, this experiment examines the perceiver's SFP of initial trust within a negotiation context.

Accuracy of trust perceptions is also important in negotiations. According to Lewicki, Saunders and Berry (2006), negotiators who believe their counterpart to be trustworthy runs the risk of being deceived in the event that he or she behaves dishonestly. The opposite is also true; negotiators who distrust their counterparts are less likely to share information and cooperate even if their partner's intentions are honest. In either situation, the risk of being inaccurate affects not only outcome but future relationships and behaviors.

Research has shown that trustworthiness can produce a SFP effect within a negotiation producing accuracy through the behavioral confirmation model. For example, Tenbrunsel (1998) examined the relationship between the expectations and the use of unethical behavior, suggesting that factors that influence expectations may also influence behavior. She concluded negotiators who believed their partners would misrepresent information led them to do so. Olekalns and Smith (2007) examined how the general impressions of trustworthiness of one's negotiation partner influenced the negotiator's behavior and use of deception in a negotiation. They found that positive expectations of trust with low consequences for punishment triggered the

misrepresentation of information (i.e., opportunistic betrayal). These behaviors can be self-fulfilling because of the strategic choices used within the negotiation are based on the initial expectation of whether the target intentions are favorable or whether they will take advantage of the perceiver.

The trusting and trustworthy behaviors within a negotiation are chosen based on each party's motivations and desired outcomes (Pruitt & Rubin, 1986; Pruitt & Carnevale, 1993). For example, if the perceiver is concerned about preserving the relationship for future negotiations or business deals, they may have a higher concern for their outcomes as well as their partner's. In this example, the perceiver would use an integrative bargaining style, promoting cooperative behavior to find a mutually beneficial agreement (win-win) (Walton & McKersie, 1965). Because trust promotes cooperation and information sharing, integrative tactics and behaviors used are indicative of trust between the parties.

On the other hand, if the perceiver's concern is only to "win" at the expense of the target, they are more likely to use distributive behaviors characterized by competitive tactics such as threats and displays of dominance (McClintock & Liebrand, 1998). Lewicki, Saunders and Minton (1999) describe this type of bargaining as a conflict where the parties try to gain an advantage over the other through misrepresentation (Boles et al, 2000; Murnighan, 1991). Because the concern for "winning" is higher in this example, trust may be low or perhaps ambiguous. Relative to integrative styles, distributive negotiations provide less opportunities for trust to develop. In times of lower trust, the perceiver would be more likely to believe that the information and offers presented by the target are deceptive and not out of concern for the perceiver's best interest. The

perceiver's low trust would be communicated by the use of distributive tactics perhaps with the intention of claiming as much value as possible for themselves to secure their own future.

Because trusting and trustworthy behaviors – as indicated by the integrative and distributed behaviors - are chosen based on motivation and outcome goals within a negotiation, they have effect on the value claimed by each party. In Olekans and Smith's (2007) experiment cooperative individuals are more likely to maximize their own gain as well as their partner's, leading to greater joint gain. Low trusting behaviors demonstrating the concern for self and unwillingness to be vulnerable to the target may also create similar trustworthy behaviors from the target. The contention that is likely to arise from the use of distributive tactics will result in less value for each party (lower integrative potential), smaller or fewer concessions (van Kleef et al, 2004), more claiming value (Allred et al, 1997), and / or a greater potential for impasse.

> Hypothesis 5: The perceiver's initial trust perceptions will influence the value claimed by each party. This effect will be mediated by the perceiver's trusting behavior and the target's trustworthy behavior.

The theoretical model is show in Figure 4.

METHOD

Participants and Design

Participants were 106 (53 dyads) enrolled in a private university in the Midwestern United States. They participated in this experiment in fulfillment of course

credit. The average age of the participants was 19.65 and 49% were female. The final sample consisted of 47 dyads. 6 dyads were excluded because of technical errors in data collection. The average age of the final sample was 19.6, and 49% were female.

Participants were randomly assigned to the role of perceiver / trustor (Company Representative) or target / trustee (Inventor) and then randomly assigned to a partner to negotiate over a computer mediated chat terminal. The initial trustworthiness – specifically integrity – perceptions of the trustor were manipulated (high, low).

Procedure

Upon arrival to the experimental laboratory, students were randomly assigned to a computer terminal to determine their role, condition and negotiation partner. After general instructions, the role specific instructions were presented to each participant on their computer screen. Participants also viewed a video tutorial to learn how to navigate the negotiation interface. Following the tutorial, all subjects completed the SINS measure of the acceptability of negotiation tactics. A short online quiz was administered to ensure comprehension of their role and the negotiation task. The experimenter provided guidance and clarification to any individual who missed a question until they could demonstrate proper understanding of the information. The trustor then received the initial trustworthiness manipulation, consisting of false feedback about their negotiation partner's perception of the ethicality of particular negotiation tactics.

The negotiation case was an adaption of the New Recruit (Neale, 1997) where the premise of the cases consisted of a negotiation between an Inventor (trustee / target) who created a Hydrogen Fuel Cell and a representative from ABC Corporation (trustor /

perceiver) who desired to buy the fuel cell (see **Appendix A** for the case and payoff table). The Inventor was given a Best Alternative to a Negotiated Agreement (BATNA) of 5000 points (the total possible points to earn were 10,800 for both parties). The Company Representative (Rep) and Inventor were required to negotiate over eight (8) issues of an employment contract. Of the eight issues, two were distributive, two were compatible and four had integrative potential. Participants had 20 minutes to negotiate a settlement on all eight issues. A clock on the screen indicated to the subjects at all times how close they were to the time deadline. If the negotiation was successfully completed (i.e., no impasse) subjects then completed a post negotiation task – the Trust Game. The Inventor was the player who passes the initial amount and the Rep returned a portion of their tripled amount back to the Inventor. All subjects were informed in advance that they would be paid in cash for their earnings from the Trust Game. The final portion of the experiment measured each participants' integrity identity with an IAT.

Trustworthiness manipulation. Initial perceptions of integrity were manipulated and given to the Rep prior to any interaction with their negotiation partner. The manipulation was based on false feedback reports to the Rep about their partner's negotiation tactics based on the results of the Self-Reported Inappropriate Negotiation Strategies (SINS) scale, a measure of negotiator ethicality (Robinson, Lewicki & Donahue, 2000). The SINS scale helps to identify what tactics are appropriate and inappropriate in a general negotiation context. Although all participants were instructed to take the SINS measure, actual scores were not reported. There will be false reports of high SINS and low SINS, where high SINS indicates unethical behavior and low SINS indicates ethical behavior. The false feedback reports are located in **Appendix B.**

The class scores in the high integrity condition were created by taking one standard deviation below the mean scores reported by Robinson et al (2000) (SD=.77) to create a further disparity between class scores and partner scores. Partner scores were also created based on this standard deviation, where the first of five tactics (Bargaining competitively) was one standard deviation above the mean, and the other four were two standard deviations above the mean. The class scores in the low integrity condition were computed similarly. The class scores were one standard deviation above the mean, while the partner scores were 1-2 standard deviations above the mean. The class mean and median scores reported in both conditions were the same, and obtained from Robinson et al's (2000) paper.

Measures

Chat messages were coding using a modified version of Weingart et al's recommended coding scheme for qualitative analyses of negotiation transcripts (**Appendix C**).

The conceptual map for Hypotheses 1-3 is depicted in Figure 5. This map shows how each variable is measured according to the conceptual definition. The measurement of hypothesis four (point earned) does not require a conceptual definition. Hypothesis 5 will be measured using an implicit task.

Perceiver's (Company Rep's) Initial Trust Perceptions. Mayer and Davis' (1999) measure of trustworthiness – the integrity and benevolence subscales - were used. The scale reliability (alpha) for integrity was .95 and .98 for benevolence. The Integrity subscale will be the measure used in the present research.

Perceiver's (Company Rep's) Trusting Behavior. The perceiver's trusting behavior was conceptualized as the willingness to make themselves vulnerable and take on risk by demonstrating their interest in cooperation and relationship building. (See Figure 5 for the conceptual model and measurements.) This use of integrative tactics and behaviors is also indicative of trusting behavior (De Dreu, Giebels & Van de Vliet, 1988). Integrative behaviors are based upon cooperation and relationship building, compromise and value creation (Fisher & Ury, 1981; Walton & McKersie, 1965). High trust yields the use of integrative tactics, cooperation, information sharing and a goal of value creation for both parties (Rhoades & Carnevale, 1999). Therefore, integrative behaviors are reflective of and coded as trusting behaviors – behaviors that elicit cooperation and relationship building.

Rhoades and Carenvale argue that a problem solving approach- or a higher regard for one's own and the other's outcomes – is defined by less contention, and greater cooperation with the goal of value creation for both parties. Weingart et al (2004) also note that code schemes used can be reflective substantive tactics (i.e., value claiming and creation) but also relational elements such as showing concern for the other party's outcomes, and the use of particular tactics (i.e., integrative or distributive). They recommend that while these "behaviors are not mutually exclusive" coding schemes should emphasize the information and behaviors that are theoretically relevant. Trust expectations and behaviors both have implications for the relational dynamics between parties, as well as the substantive tactics used to claim or create value. Along these lines, the perceiver's trusting behavior was created similarly by taking into account the behaviors that were used to create or claim value – substantive (i.e., offers that help

create value for both parties, asking about preferences, compromising behavior, etc) and relational dynamics (i.e., contention) used by the perceiver, and labeled together as "integrative behaviors". The relational dynamic was conceptualized as the degree of contention and was rated on a -2 (very contentious) to 2 (very positive) scale. All substantive oriented variables were coded as 0,1. (See Appendix C for the coding scheme used in this experiment.)

Weingart et al (2004) also suggests developing a coding scheme that reflects either a theory driven approach, a reflection of the negotiation process, or a hybrid of the two. I used a hybrid approach by examining what has already been done and how negotiation scholars conceptualize "integrative behaviors" that also reflected the conceptualization of "trusting behavior". The codes chosen were refined based on the type of integrative tactics that would be used to reflect such behaviors. For example, willingness to make one's self vulnerable and assume risk would be reflected by the contention within the negotiation, signaling a power stance and unwillingness to negotiate from their position. Cooperation and relationship building are also conceptualized as trusting behaviors were created to reflect the integrative tactics of "compromising" "asking about preferences" and "offers to create value for both parties".

After coding for the behaviors, I then used an empirical approach to determine which were most appropriate to use. First, I correlated the variables to see which were highly related. Those highly related variables would be combined. I also mapped out the variables using a MDS approach. Both the correlation table and the MDS graph showed the perceiver's contention to stand alone as its own dimension, and compromising, offers to help create value for both parties, and asking about their partner's preferences were all

highly correlated and clustered together through the MDS approach. (See Table 15 for correlation table and Figure 8a for cluster diagram). Weingart et al (2004) recommend this approach and it has also been used within other empirical studies (i.e., Adair et al 2005; Carnevale, De Dreu & Carsten, 2005; Putnam, 2005;).

The end result was the creation of the variable, trusting behavior. This was done by first summing together the variables coded as "0,1". The second step was to combine the variable "tone" (defined as the degree of contention) with the composite variable. Combining variables measured on different scales into a single factor is best done by creating factor scores. Factor scores are the standardized score on each variable, multiplied by the corresponding factor loading of the variable for the given factor and sums these products. This new factor created – in this case, a measure of the Rep's trusting behavior – represents the linear relationship between the variables.

Target's (Inventor's) Trustworthy Behavior. The target's trustworthy behavior was created similar to the perceiver's trusting behaviors. These variables were chosen again using the correlation / MDS approach to see how well they "hang together". Variables chosen were highly correlated with each other – no others were – and were clustered together within the MDS diagram. (See Table 16 for correlation table and Figure 8b for cluster diagram).

The resulting variable, trustworthy behavior, was a composite of "offers to help" and "cooperation" as substantive behaviors (coded as 0,1) and "contention" as the relational dynamic (coded as -2 (very contentious) to 2 (very positive). As with the

Trusting Behavior variable, the substantive and relational codes were combined using factor scores because of the differences in coding scales.

Negotiated Outcomes. Negotiated outcomes were measured as number of points earned by each party – Company Representative (trustor) and Inventor (trustee) – in the negotiation.

Post Negotiation Trustworthiness Perceptions. Post-trustworthiness perceptions were measured after the negotiation took place and prior to the post-negotiation task. I used Mayer and Davis (1999) items to measure integrity and benevolence. Both trustor and trustee completed this measure (integrity: α=.94; benevolence: α=.94).

Post-Negotiation Task. To examine the impact of the trustworthiness manipulation on the Reps' and Inventor's behavior away from the bargaining table subjects were provided with a second task, the Trust Game. This game was played with the same partners from the first negotiation task. Only Inventors were endowed with $5, and were instructed to forward any portion of their endowment in $.50 increments to the Rep (or they did not have to send anything at all). Whatever sum they passed to the Rep would triple in value. The Rep would then be given a decision about how much, if any of this tripled sum to return to the Inventor.

RESULTS

Manipulation check and Descriptive Statistics

Descriptive statistics and interclass correlations are located in Table 10.

The manipulation check demonstrated that the integrity manipulation was successful. As a manipulation check, all trustors completed the Mayer and Davis (1999) measure of trustworthiness (benevolence and integrity) and trusting intentions. For purposes of the manipulation check and measurement model, only the initial integrity perception measure was used. Subjects in the low integrity condition reported significantly lower integrity ratings (M=2.02, SD=.80) than those in the high integrity condition (M=5.67, SD=.85, p<.001).

Hypothesis Tests

Hypothesis 1 predicted that the Rep's initial integrity perceptions would create a change in their behavior. I used linear regression to test whether the initial perceptions of integrity influenced the Rep's trusting behavior. The results show that initial integrity does impact Rep's behaviors (β=.37, p = .01), supporting hypothesis 1.

Hypothesis 2 predicted that the Company Representative's behavior would change the behavior of the Inventor so the Inventor's behavior would mirror that of the Representative's. This hypothesized relationship is also an objective measure used to access the affect of the SFP and t accuracy. I tested for mediation using the four step sequence recommended by Baron and Kenny (1986). Step 1 examines the initial predictor's effect (the Rep's initial trust perception) on the dependent variable (the Inventor's trustworthy behavior). Table 11 shows that the Rep's initial integrity perceptions predicted the Inventor's trustworthy behavior – that high integrity perceptions will cause the Inventor to use a more integrative tactics (β=.36, p<.05). Step 2 presents the influence of the predictor on the mediator (Company Rep's trusting

behavior). As shown in Table 11, initial integrity perceptions significantly predicted the Rep's behavior (β=.37, *p*=.01). . As evident by step 3, when the mediator is entered into the equation with the independent variable, the influence of the independent variable (initial integrity perceptions) on the dependent variable (trustee's behavior) becomes non-significant (β=-.09, *p*=.38). Therefore, the Rep's behavior fully mediates the relationship between the integrity manipulation and the Inventor's behavior, supporting Hypothesis 2.

Hypothesis 3a predicted a double mediation effect – that the Rep and Inventor's behavior would mediate the relationship between the integrity manipulation and the Rep's post-negotiation perceptions of integrity – while **hypothesis 3b** predicted that only the Rep's behavior would be a significant mediator. To evaluate which hypothesis predicts the accuracy of the Rep's behavior, I used the multiple mediation macro ("indirect") provided by Preacher and Hayes (2008).

The indirect tests also use a bootstrapping method, producing a distribution of the values of *ab*. Three sets of confidence intervals are produced: percentile, bias corrected (BC) and bias corrected and accelerated (BCa). The percentile confidence intervals are produced using 2.5% and 97.5% endpoints. These CIs are only accurate if the bootstrap distribution is symmetric, otherwise the results will be strongly biased (Efron & Tibshirani, 1983). The BC and BCa methods are used to correct the skewness, and are more accurate than the percentile when the sampling distribution is asymmetrical. BCa is different from BC in the use of an acceleration statistic. Efron and Tibshirani (1983) suggest that the BCa is the best CI to use.

Using a causal step approach outlined by Preacher and Hayes (2008), the proposed mediators are significant when either of the hypothesized indirect effects through the mediators is significantly different from zero. Table 12 shows the results of the multiple mediation analysis, the indirect effects of the initial integrity perceptions on post integrity perceptions through Rep and Inventor behaviors. The statistic Z is the asymptotic critical ratio for the total indirect effect of X on Y (Preacher & Hayes, 2008).[4] The total indirect of the mediators on the dependent variable is significant. However, Preacher and Hayes (2008) state that if one of the paths is non-significant then that mediator does not have an effect of the independent variable (X) on the dependent variable (Y). As table 12 shows, both mediators are not significant predictors of the Rep's trust perception after the negotiation, and this finding is significant across all three variations of confidence intervals. Therefore, according to Preacher and Hayes criteria, the mediators do not predict the Rep's post integrity perceptions, therefore cannot be considered mediators within this model lending no support to hypothesis 3a. However, because of the high correlation between the mediators (r=.85, p<.001), a significant degree of collinearity may account for this insignificant effect (Preacher & Hayes, 2008). Further, these mediators are highly correlated because they both rely on a common cause therefore may not demonstrate large enough unique effects on the outcome variables.

To evaluate hypothesis 3b as well as an additional step to explore the individual effects of each mediator, I ran a simple regression model with each mediator separately,

[4] Z is computed by (1) taking the sum of the specific indirect effects (**f**); (2) computing the asymptotic variance of **f**; (3) Z= **f** / √var(**f**) (Preacher & Hayes, 2008)

followed by a Sobel test.[5] I also ran a simple regression model because of the conflicting results of hypothesis 3a – that the total indirect effect was significant, yet each mediator was not. Examining them individually will at show how significant they are in predicting the Rep's post-negotiation integrity perception without the influence of the collinearity when both are present in the model.

According to Barron and Kenny's (1986) criterion for mediation, each mediator partially mediated the effect of the independent variable on the dependent variable; adding the mediator into the regression equation only slightly decreases the significance of the independent variable. See Tables 13a and 13b for the simple mediation tests using the Inventor and Rep's behaviors as separate mediators. Looking at the Rep's behavior as the mediator, the addition of this factor into the model caused a slight decrease in effect size from the independent variable, but the independent variable remained significant. Rep's behavior is therefore a partial mediator of their initial integrity perceptions and post integrity perceptions. The Sobel test statistic was significant indicating that the Rep's behavior is a significant mediator (2.24, $p < .05$). Inventor's behavior also resulted in a partial mediation model, slightly decreasing the significance of the independent variable on the dependent variable. The Sobel test statistic was significant (2.15, $p < .05$); this along with the results of the simple mediation test demonstrate that Inventor's behavior partially mediates the relationship between the Rep's initial integrity and post integrity perceptions, supporting hypothesis 3b.

[5] The Sobel test is based on the assumption that the variables being used are normally distributed. Therefore, if the variables are skewed the Sobel test statistic may not be meaningful. Both of the mediators are skewed – the skewness statistic for the Reps's behavior is -.36 and -.76 for the Inventor's behavior. The bootstrap method is more appropriate as it does not make any assumptions about the distribution of the data (Preacher & Hayes, 2004).

The Inventor's integrity identity was predicted to moderate the relationship between the Rep's trusting behavior and the Inventor's trustworthy behavior (**Hypothesis 4**). Given the Rep's behavior, the interaction effect showed that the Inventor's integrity identity did not influence their corresponding behavior (β=.14, *p*=.59), finding no support for Hypothesis 5. See figure 6 for a graph of the interaction.

Hypothesis 5 predicted that the integrity manipulation would influence the value claimed (i.e., number of points awarded in the negotiation) by each party by way of the Rep's and Inventor's trusting and trustworthy behaviors; that higher trust would create more integrative behaviors resulting in more value for each party. To analyze the full effect of the manipulation on the dependent variables through the mediators, I performed a multiple mediation analysis using the same method as outlined in Hypothesis 3 putting the points earned by each party into separate models. In examining the Rep's points earned first, the results (see Table 14) show that indeed, both mediators are not significant. However, the total indirect effect is marginally significant (Z=1.74, *p*=.08).

In examining the specific relationship of the mediators to the dependent variables, the results demonstrate that the Rep's initial trust judgment did not have a significant total effect on the value claimed by either Inventor (B=-7.96, *p*=.95) or Rep (B=-64.46, *p*=.64). Because this effect is not significant, the multiple mediation model is not significant, nor in the predicted direction, finding no support for hypothesis 5. Further, because of this non-significant finding, the simple regression models also show that the mediators are not significant individually, as they are in the results of hypothesis 3a and 3b.

Finally, because the point values earned are interdependent, I also examined the mediators influence using a MANOVA. The results are consistent with those above; the Rep's initial trust judgment had no impact on the negotiated outcomes, but their trusting behaviors significantly predicted the points they earned in the negotiation ($F(1, 41)=4.54$, $p<.05$) although not the Inventor's ($F(1, 41)=1.30$, $p=.26$). Similar to the simple regression above, the Inventor's trustworthy behavior had a marginal impact on the Rep's points earned ($F(1, 41)=3.68$, $p=.06$) but not their own point values ($F(1, 41)=.36$, $p=.55$).

Non-Contracted Behavior – The Trust Game: An Exploratory Analysis

Accuracy can further be examined by the behavior that occurs after the contract has been agreed upon. The SFP effect predicts that the perceiver will engage in trusting behaviors consistent with their initial perception, eliciting similar trustworthy behaviors from the target. Together, these were predicted to influence the outcomes of the negotiation and the perceiver's post trust perception. The results of this study show that when the perceiver engages in trusting behaviors that they are reciprocated by the target, yet do not jointly predict post-trust judgments nor the negotiated outcomes. However, the post-negotiation game can be used to determine if individuals' future behaviors reflect their negotiation behaviors and post-trust perceptions. Do these behaviors and perceptions spill over into future behaviors?

Examining these spill over affects is important in understanding how the behaviors and perceptions created by the negotiation process shape future exchange. Battacharya et al (1998) created a model of trust based on outcomes, where they consider

the consequences of the outcomes for both parties as the downstream affect of trust. Similar to other models of trust, their model shows that the actions carried out by each party are evaluated based on how sincere or believable they are perceived to be. The actions (behaviors) and attitudes (beliefs) of the parties then interact to influence outcomes, which create social and / or economic consequences for each party. Similar to the negotiation, the trust and trustworthy behaviors communicated and evaluated within the negotiation are the actions and thus the sincerity of them influences the negotiated outcomes. While empirical and theoretical work have made a distinction between the relational and economic outcomes, Misin et al (2010) demonstrate that they are both important and influence future non-contracted exchange behaviors. The consequences then are the post-trust judgments and behaviors that have the potential of influencing the future relationship and implementation of the contacted deal. To consider this effect, I measured the influence of both relational (post-trust judgments) and economic (point earned in the negotiation) outcomes and their consequences by using a non-contracted exchange, the Trust Game (Berg et al, 1995).

Unlike the negotiation where the parties played for points, the Trust Game was played for real money where individuals would be paid in cash for their earnings. In this game, the Representative and Inventor switch roles – the Representative becomes the trustee and the Inventor assumes the role of the trustor. The amount of money the Inventor passes to the Representative signifies the trust they have in the Representative to return a portion of the money back with the expectation of at least an amount equal in proportion to what was sent. The amount of money passed back by the Representative represents their trustworthy behavior. The Trust Game is a unique aspect of this

experiment because it incorporates risk; the Inventor does not know how much money the Rep will send in return, if they will reciprocate the same percentage of their pie or leave them walking away without any money.

In addition to examining how the negotiated outcomes spill over to influence post-negotiation behaviors, this non-contracted exchange also shows the extent to which the SFP produces a contagion effect. During the negotiation both parties are forming trust beliefs of each other, influencing how they communicate and interact. Because the partners' behaviors "match" each other's within the negotiation, it is possible that the perception of trust or trustworthiness is also matched, influencing the non-contracted behavior after the negotiation has concluded. The money sent represents the influence of the Reps's SFP on the Inventor's corresponding trusting behavior; it is literally the amount of risk the Inventor is willing to take based on their perception of the Rep's trustworthiness, or likelihood of returning a "fair" proportion of the money.

In analyzing the effects of the integrity manipulation on the money sent, the results show that the integrity manipulation did not influence the amount of money sent by Player 1 (Figure 7) – those in the low integrity condition did not send a significantly different amount (M=2.72, SD=1.92) than those in the high integrity condition (M= 3.22, SD=1.60). The amount of money sent back by Player 2 also did not differ across conditions; the subjects in the low integrity condition (M=2.64, SD=3.79) did not pass back an amount significantly different than those in the high integrity condition (M=4.17, SD=2.84). These results replicate Mislin et al (2010) – the initial manipulation does not directly influence the non-contracted post-negotiation behavior.

Mislin et al (2010) attribute this contracted behavior to the relationship between the parties that is built during the negotiation – the trust each party has for the other - that has an effect on the values passed by each Player. A MANOVA analysis does not reveal any significant relationships with the manipulation, trust and trustworthy behaviors and money exchanged in the Trust Game. Because of the high correlation between the mediators (trust and trustworthy behaviors) that prevent each from having an independent impact on the dependent variables, I performed a simple regression analysis. This analysis revealed that the Representative's trusting behaviors predicted the proportion of money they sent back to Player 1 during the Trust Game (β=.54, p=.01) but not their initial integrity perception (β=-.23, p=.27), post integrity perception (β=.10, p=.66) or the points they earned in the negotiation (β=-.07, p=.69). While the correlation between post-negotiation benevolence perceptions and the proportion of money sent back by the Rep is significant (r=.43, p<.01), this effect is not significant in a regression analysis (β=.23, p=.22).

Examining the Inventor's trustworthy behavior, points earned and post-negotiation trust perceptions on the money sent reveals null results. These factors do not significantly influence the money they chose to send their partner in the Trust Game. For a game based on perceptions of trust, the Inventor's rating of the Rep's integrity and benevolence had no bearing on the amount of money they were willing to exchange. These results show that the Inventor's behavior had no direct influence over their outcomes; it was the Representative's trusting behaviors and choice of negotiation tactics that caused them to send more money back to the Inventor rather than walk away with it.

DISCUSSION

Trust plays a critical role in interpersonal relationships, yet the accuracy of these perceptions bears the most importance; inaccuracy has negative consequences such as personal, emotional or monetary costs that can sever current and future relationship. Individuals may arrive at inaccurate judgments because of the way the perceiver decoded or misread the target's nonverbal cues. One factor that can also contribute to inaccuracy is the cognitive mechanisms perceivers use to decode and interpret behavioral information from the target. That is, regardless of how trustworthy the target may be, the perceiver's subjective evaluation causes them to behave and evaluate information consistent with their own perceptions. For example, initial trust perceptions may be made based on how sincere, honest and credible the perceiver believes the targets intentions to be. Low initial trust creates a SFP effect where the perceiver interprets incoming information consistent with this perception, and also engages in low trusting behaviors. Accuracy is achieved when the SFP causes the perceiver's initial trust perception to be calibrated with their post-interaction trust perception.

The results of this study show that SFPs can have a powerful impact on the attitudes and behaviors of both the perceiver (who holds the SFP) and the target (who is the recipient of the perceiver's behaviors and reciprocates with similar trustworthy behaviors). Along with prior research, this experiment also supports the SFP's effect and shows that the initial perceptions of low or high trust remains consistent so that post-interaction perceptions of trust are highly correlated with initial perceptions (r=.57, p<.01). This significant, positive correlation demonstrates that strength of the SFP effect on the perceiver's behaviors and future evaluations.

However, further analyses show that individuals achieve accuracy differently depending on their level of initial trust. The models presented in figure 3 show the two different mechanisms responsible for the perceiver's accuracy. The first model shows the influence of the target's behavior. If the perceiver's trusting behavior is able to influence the target's trustworthy behavior, then the perceiver will use this as feedback to keep their post-interaction perception consistent with their initial perception. However, accuracy can also be achieved without the influence of the target's behavior. In this case, the perceiver uses their self-perception to form their trustworthiness judgments based upon their own internal states. For instance, a perceiver in the high trust condition uses their behaviors and perceptions during the interaction to infer or assume that the target has the same level of trustworthiness.

Model 1: Behavioral Confirmation. In examining the effect of the perceiver's SFP in achieving behavioral confirmation, the results show that higher trust judgments caused the perceiver to use trusting behaviors, measured by the tone and content of the interaction. These behaviors, indicative of integrative negotiation tactics, consisted of behaviors such as compromising and the types of offers made. As well as the overall level of contention expressed by each party. The target reciprocated these using trustworthy behaviors, measured by cooperation and the types of offers made. The SFP effect had a very strong reaction on this reciprocation resulting in a highly significant relationship (r=.85). As predicted by SFP theories, the perceiver's initial trust judgment caused the perceiver to show their trust for the target (trusting behaviors) and a reaction from the target showing they are indeed trustworthy (trustworthy behaviors).

Model 2: Perceptual Confirmation. This model was measured using a simple mediation test, including only the perceiver's trusting behavior as the mediator. While the strength of the independent variable (initial trust perception) only decreased slightly when adding the mediator into the model, the Sobel test revealed a significant statistic showing support for full mediation.

Which model determines accuracy?

After testing both models, the results were difficult to interpret in order to draw a clear distinction of which created the perceiver's accuracy. On the one hand, the double mediation model considering both target and perceiver behaviors shows that the indirect effect of each mediator is not significant, yet the total indirect effects are. On the other hand, when performing a simple mediation test using the mediators in separate models, the Sobel test statistic and boot strap confidence intervals indicate a full mediation effect.

In deciding which model contributes to the perceiver's accuracy, consideration must be given to the relationship between the mediators. Because the mediators are so highly correlated (r=.85) – and in addition to the small sample size – it is hard to interpret the results of the multiple mediation model. The multicollinearity may be preventing either mediator from being exerting a significant effect on the dependent variable. Credence must also be given to the reason for the multicollinearity, as it demonstrates the perceiver's ability to receive behavioral confirmation from the target as a result of their SFP. So while the multicollinearity may be preventing statistical significance, it succeeds in demonstrating the affect of the perceiver's SFP on the behaviors exchanged in the negotiation. Given this, and the importance of statistical significance, the simple

mediation models examining each mediator's independent influence on the perceiver's accuracy may be the best way to interpret the results and identify the appropriate mechanism. Therefore, perceivers are able to achieve behavioral confirmation as a result of their SFP (achieving objective accuracy) but it does not fully contribute to their ability to achieve accuracy. The perceptional confirmation model bears more influence on the perceiver's accuracy and therefore should be considered to explain their consistency in perceptions (achieving subjective accuracy).

Negotiated outcomes and Non-Contracted Behaviors

While initial trust influences the perceiver's post-negotiation trust perception, it does not influence the outcomes – or points earned from the negotiation – for each party. The multiple mediation model predicting the point values earned by each party was not significant. However, examining the indirect effect of each mediator independently shows that the perceiver's trusting behaviors, and partially the target's behaviors assisted the perceiver in gaining more points for themselves. The behaviors of each party had no bearing on the Inventor's points. This shows that the when the perceiver demonstrated a willingness to trust the target - to compromise and create value for both parties - they were able to create more value for themselves; showing that demonstrating trust for the target earned them more points. The target's trustworthy behavior, however, had a very small influence on the perceiver's negotiation outcomes. This implies that the perceiver was able to use their trusting stance to their advantage by gaining more concessions from the target.

Surprised that the SFP did not exert more influence on the negotiated outcomes, I examined each condition separately to gather alternate explanations for the lack of significant results. In the high trust condition none of the variables measured predicted the point earned by the perceiver or target. In the low integrity condition the perceiver's trusting behaviors (β=.37, p = .07) and post-interaction integrity perceptions (β=.50, p < .01) contributed to the value they were able to claim. By demonstrating their trust for the target, under conditions of low trust the perceiver was able to marginally gain more value. The cognition of the perceiver may differ in the low versus high integrity condition, explaining this discrepancy. The low initial trust condition may cause perceivers to be more conscious of behaviors and engage in more explicit processing when the outcome affects the value they are able to claim. Perceivers in the high integrity condition may use different information processing when negotiating with the target. High trust perceptions are more likely to result in implicit processing and not influence the value of the negotiated agreement. They may hold their trust judgments separate from their negotiation behaviors.

The target's integrity identity may also play an interesting part in the value of each party's outcomes across conditions. The target's points earned were correlated only with their IAT score in the high integrity condition (r=-.46), and their post-interaction benevolence perception of the perceiver (r=.44) in the high integrity condition. The negative correlation between points earned and IAT score in the low condition means that the greater the target's integrity identity (i.e., the more he or she associates with honest behaviors) the fewer points they were able to earn. Their tendency for honesty prevented cheating and deception but at the expense of the value they were able to claim. This can

also be supported by the association between the target's IAT score and the perceiver's points earned in the high trust condition (r=.49). Honesty appeared to cost the target value. DeRue et al (2009) recently described the paradox of honesty within a negotiation: being honest makes you feel good yet it has the influence of decreasing your payout in a negotiation. These authors found that being honest and straightforward led to greater concessions within a negotiation and lower payouts.

Examining the non-contracted behaviors using the Trust Game further revealed further influence of the SFP as well as the perceiver's use of self-perception theory. The amount of money the target was willing to pass in the trust game is an indication of their level of trust for the perceiver. However, the amount passed was not related at all to their post-interaction trust perceptions nor any other factor measured. Prior Trust Game results show a significant relationship between the amount of money passed by Player 1 (the target) and the proportion of the amount passed back by Player 2 (the perceiver). However, the results of this study do not support this relationship. Assuming the target was trustworthy, the perceiver reciprocated this level of trustworthiness by sending back a proportion of their earnings to the target. The amount of money they chose to send back was related to their joint gain ($r=.31$, $p<.05$), their trusting behaviors ($r=.47$, $p<.01$), the target's trustworthy behaviors ($r=.37$, $p<.05$) and their post-interaction benevolence perception ($r=.43$, $p<.01$).

To provide an explanation for the non-significant relationship predicting the money exchanged in the Trust Game, I again analyzed each condition separately to gain alternate perspective. This exchange behavior was the portion of the experiment that was most impacted by the manipulation. Interestingly, the manipulation had an influence on

the money passed by the target (Player 1) in the high integrity condition (r=.46). The money sent by the target was also related to the perceiver's trusting behaviors in the high trust condition only (r=.50) as well as the perceiver's post integrity perception (r=.54). The proportion of money passed back by the perceiver was related to their post benevolence perceptions (r=.56). These significant findings suggest that the perceiver's initial trust had a direct effect on their behaviors as well as the target's level of trust, demonstrated by the value they chose to pass in this exchange. However, these relationships disappeared in the low trust condition. In fact, in the low trust condition the decision to pass a particular dollar amount was not related to any measured variable.

The point values for each player and the perceiver's post trustworthiness perceptions also had an impact on the money exchanged in the trust game between the conditions. In the low integrity condition the value captured by the perceiver predicted the proportion of money sent back to the target (β=.75, p<.05), where the target's points (β=.55, p<.10) were marginally predictive. The number of points earned in the high integrity condition did not significantly predict the non-contracted exchange behaviors. This shows that individuals' post-negotiation trust / trustworthy behaviors were more influenced by the points they were able to earn, particularly in the low trust conditions.

Conclusion

These results of this study show how significantly an initial trust perception can influence behaviors, perceptions and outcomes, and accuracy. The SFP exerts influence by causing the perceiver to evaluate new information consistent with their perception of

the target's intentions, influencing not only their behaviors but the target's as well. The SFP maintains its influence throughout the interaction, affecting post-negotiation trust perceptions as well as negotiated outcomes and downstream behaviors. While the perceiver does have some influence on the target's behaviors, their expectation of how the target may behave – not how the target does behave – is the cause for their accuracy and outcomes.

This shows that trust does affect attitudes and behaviors (Jones & George, 1998), but that attitudes and behaviors have varying effects on outcomes; attitudes – or mindset toward the target's trustworthiness - do not shift much and directly influence relational outcomes, where behaviors influence the value negotiators are able to walk away with. But they are interrelated - the attitude of one party also has a strong effect in shaping behaviors of both parties. This is less of an "attitudes are contagious" effect because of the uncorrelated trust perception of the perceiver and target, rather, a "behavioral contagion" which can be used strategically to extract value for one's self. This follows Rhoades and Carnevale's findings that behaviors tend to "match" within a negotiation motivations are similar. Perceivers and targets reciprocated each other's behaviors but the perceiver did not fully take into account what the target's behaviors meant – only that they were using their own trusting behaviors to gain points, with a bit of assistance from the target.

Overall, the results support the use of the perceptual confirmation model to achieve accuracy. The perceptual confirmation model indicates that the perceiver did not rely on all behavioral information communicated by the target to achieve accuracy. The perceiver used only their perceptions to assume the target's level of trustworthiness. This

shows the strength of initial perceptions on subsequent behaviors and judgments. Regardless of the target's true level of trustworthiness, the perceivers' initial impression caused them to evaluate information consistent with it, discounting other information that may object to it (Petty & Cacioppo, 1986).

Perceptional confirmation also differs across conditions and influences how the perceiver achieves accuracy. In the high integrity condition perceivers use both their initial perceptions to guide their behavior, influencing their ability to achieve accuracy. This, however, is not the case in the low integrity condition. Individuals' initial perceptions still influence their post-negotiation perceptions however they do not rely on their trusting behavior to arrive at this judgment. According to the ELM (Petty & Caciopicco, 1986), the perceiver's motivation to process new incoming information will engage them in thoughtful processing (i.e. explicit) that will either change or support their initial perception. If they are not motivated to process this information, then cues will be unnoticed (i.e. implicit). Perceivers in the high trust condition seemed to rely more on implicit processing that guided their behaviors. Low initial trust had the opposite effect. The perceiver was motivated to discover new information that indicated the target's trustworthiness, but refrained from engaging in trusting behaviors. Therefore, their accuracy was achieved because they did not discover information significant enough to alter their behaviors or counter their initial impression.

This is also similar to how individuals use their affective state to process information and arrive at particular conclusions (Schwartz & Clore, 1983). High trust indicates to the perceiver that it is safe to take a risk, therefore should engage in trusting behaviors. Low trust, however, informs the perceiver of potential threats that may stand

in the attainment of their goals. Therefore, with low initial trust perceptions perceivers are not likely to engage in trusting behaviors in fear of exploitation by their partner. This also serves to explain the reason the outcome variables were uncorrelated with the perceiver's initial and post-interaction integrity perceptions. The high trust condition, however, influenced both perceiver behaviors, relational outcomes and non-contracted behaviors. Specifically, the high trust condition had a direct effect on the money passed by the target and the proportion returned by the perceiver. This implies that the perceiver was able to gain the target's trust, and by way of self-perception theory, the perceiver's trustworthiness for the target increased their level trustworthiness as indicated by the money they sent back.

Although examining accuracy and outcomes across conditions produces interesting showing that the level of initial trust may alter how accuracy is achieved, these results are only exploratory. Due to the small sample size of each condition many of the results bordered on significance and should be cautiously interpreted.

GENERAL DISCUSSION & CONCLUSION

Trust serves an essential function in interpersonal relationships; without it, social and organizational interactions would not be possible. Trust gives us the permission to be vulnerable to others and take on in risky behaviors that may be present within the relationship; it allows us to engage in activities without making rational calculations of potential destructive outcomes (Lewis & Weigart, 1985). Trustworthiness also springs from the definition of trust itself. Trustworthiness is said to be a perception or "belief about another's ability, benevolence and integrity which leads to a willingness to risk, which leads to risk taking in the relationship, as manifested in a variety of behaviors" (Dirks & Ferrin, 2001: p. 452). These perceptions of an individual's trustworthiness fuel the attribution process that leads to either trust or distrust (Simons & Peterson, 2000).

However, with the potential of developing trust also brings the potential of changing the amount the trust perceived. This change can come as a result of a particular attitude or event, or discovery of new information requiring the reassessment of the original state of trust. This shift in judgment from trust to distrust, or from distrust to trust, is a reflection of the inaccuracy of the perceiver's (trustor's) initial judgment. Despite the severity of the consequences that may occur as a result of inaccurate perceptions, researchers have not directly addressed this problem it is necessary to do so. While the development, violation and repair of trust are essential research questions, what is more important is whether individuals are accurate and how this influences the development process, potential for violation and possibility of reparations.

This dissertation provided an initial examination of individuals' ability to achieve accuracy and proposed a mechanism that contributes to the accuracy of judgments. The first part of this research statement addressing whether individuals can be accurate in their initial trust was addressed in study 1. Using temporary teams and measuring trust over time, I demonstrated that individuals are both accurate and inaccurate depending on the conceptualization and measurement of accuracy, either using subjective or objective criterion. Subjective approaches to accuracy use individuals' perceptions as a criterion and reference point, where comparing them over time produces measures of linear and consensus accuracy. Using a linear accuracy model, I found that individuals' perceptions remain consistent over time, from minimal acquaintance to well-acquainted. This is true for all factors of trustworthiness with the exception of ability, where individuals were inaccurate.

The second measure of subjective accuracy, consensus accuracy, demonstrated a convergence in perceptions over time. Consensus accuracy was achieved if individuals' initial judgments at minimal acquaintance corresponded with their teams' consensus judgment of the target (i.e., team member) after meaningful interactions. The results of this consensus based approach demonstrated that individuals only converge with integrity perceptions, and benevolence, ability and trusting intentions are not initially accurately perceived.

Finally, as an objective measure of accuracy, meta-perceptions were measured assessing the accuracy of the tustors' perception of how much their team members trust them (generalized meta-accuracy), as well as whether particular team members trust them (dyadic meta-accuracy). Meta-accuracy, a measure of whether trustors know who "has

their back", was exceptionally high particularly at the dyadic level where these relationships are typically non-significant.

The second part of the research statement, addressing possible mechanisms responsible for this accuracy, was explored in study 2 and also used an objective and subjective measurement of accuracy. This experimental laboratory study manipulated initial trust of the trustor and measured trust after the trustee and trustor engaged in a 20 minute negotiation. Testing the theory that trustors create their own accuracy through use of the self-fulfilling prophecy, this study found that individuals' initial perceptions were consistent with their later perceptions proving that individuals create their own accuracy. Trustors used the initial trust manipulation to form a judgment of their interaction partner's intentions and motivations, which was reinforced and maintained throughout the negotiation as well as in their post-negotiation evaluation. Subjectively, perceivers' initial level of trust was correlated with their post-interaction level (accuracy); objectively perceivers' SFP had a direct relationship on how they treated the target and how the target reciprocated through engaging in similar behaviors.

Taken together the results of these two studies suggest that individuals can be accurate in their initial trust judgment but their achievement of accuracy may be due to their self-fulfilling prophecies. The use of SFPs in achieving accuracy, as well as the high degree of linear accuracy, supports the notion that (and measurement of) trust is subjective – that it is truly in the eye of the beholder. While individuals may agree on who is trustworthy after significant acquaintance, initial perceptions may vary due to the difference in how perceptions are cognitively represented and processed.

The results of this dissertation present opportunities for future work. The SRM analysis in study 1 presented the shift of variance over time, from initially high perceiver variance ("I see everyone similarly") to high levels of target ("we agree on who is trustworthy") and relationship ("I trust one individual in particular to a greater or lesser degree than others within the team") variance after meaningful interaction. This variance suggests two avenues for future research. First, the initially high levels of perceiver variance indicate that individuals are generally trusting of their teammates despite lack of personal knowledge and information about their trustworthiness. Yet, individuals do not agree on who seems to be trustworthy as evident of the initially low target and relationship variance. Future work can address these shifts in variance. One way this can be done is by taking context into account, for example, by examining how individuals disposition based on their initial trust levels interact with perceptions of the institution interact to produce the initial trust perception and how this continually influence perceptions over time. Initial trust models suggest the relationship between institution based trust and dispositional trust interact to influence trustworthiness and trust perceptions but little empirical work has addressed this proposition. The institution based trust factor could be responsible for consensus accuracy of integrity perceptions in study 1.

Second, the high level of relationship variance suggests that trust networks are forming within the groups. Future work can explore how the trust networks or factions may develop within teams and how this affects ongoing team functioning and behaviors. Further, addressing how influential these factions can be on team perceptions can explain how the convergence of perceptions occurs and whether it's a function of information

overlap as Kenny (2004) suggests or whether it's due to an influential trust network or few key individuals.

Future work can also address why some individuals are more or less accurate than others. Existing research emphasizes some perceivers are more or less generally trusting of others (Fetchenhauer & Dunning, 2010), which is a perceptual lens and form of bias. Target characteristics also receive research attention, notably the attributes of targets that are diagnostic versus 'red herrings'. Intriguingly, recent research suggests a target's facial width may reliably predict behavior in a trust game (Stirrat & Perrett, 2010). At the relationship level, research can examine why some dyads are more accurate than others, and whether this relates to dyadic factors such as rapport or similarity.

Further, just as individuals are concerned with accurately assessing the true motivations and intentions of their counterparts, they are also equally concerned with being trusted by them. Especially in instances where developing and maintaining a successful relationship is important, the trustor places a large emphasis on gaining the initial trust of their partner. For example, a financial advisor will need to be trusted in order to continue the relationship with his or her client. How do individuals manipulate their behavioral cues to portray themselves as trustworthy in order to be trusted?

The high levels of meta-accuracy at moderate acquaintance propose the question of whether individuals are able to achieve this level of accuracy at zero or minimal acquaintance. This can be important in some settings, for example, in an interview when the perceiver's accuracy in understanding how they are viewed by the employer can result in obtaining a job. Meta-accuracy helps the perceiver know how to respond to the

employer based on his/her reaction to the perceiver. Research has examined meta-accuracy at zero acquaintance with traits such as physical attraction (Marcus & Miller, 2003) and personality (Jung, 2006) and found agreement between self and other ratings. But trust perceptions are different in that it is a relationally based construct. Are individuals just as accurate in achieving accuracy at zero-acquaintance? Further, research has also not yet explored predictors of trust meta-accuracy. Does, for example, the self-fulfilling prophecy also play a role in achieving meta-accuracy?

The results of study 2 show that the SFP is responsible for the accuracy of initial trust perceptions. Two research questions can expand this finding. First, the results show that the target's behavior did not fully influence the perceiver's post-interaction trust perception. There are experimental designs that may be able to increase the influence of the targets' behavior to directly influence the perceiver's judgments. This could involve increasing opportunities for deception within the negotiation or incentives to encourage the target to engage in potentially riskier actions. Perhaps acting on these strategies will make the targets' behaviors much more salient and noticeable to the perceiver. Closely related, another option would be to create an experimental design that would remove the SFP effect. Other design factors such as time pressure or increasing cognitive load may impair the perceiver's use of the SFP, creating inaccuracy in their initial trust perceptions.

Theoretically, the results from this dissertation in conjunction with other work in person perception can form a theory of implicit trust judgments, describing how initial trust perceptions can be made "automatically" without thoughtful effort. Skowronski and Ambady (2008) state that forming first impressions is "fundamental to the processes of person perception and social cognition" (p. 2). The cues used to form these initial

impressions – particularly trust perceptions – can be interpreted inaccurately resulting in a misperception of the target. Using the fundamental attribution error, for example, can decrease accuracy, or perhaps processing information implicitly prevents the perceiver from recognizing other salient, potentially diagnostic information. The use and interpretation of the targets' visible cues aids in the formation of these implicit trust perceptions and therefore can increase or decrease the likelihood of achieving accuracy.

With the strengths of this research also come limitations. First, a subjective measure of accuracy was used to understand whether individuals' perceptions converge or remain consistent over time. Researchers use other objective measures to assess trust perceptions and while they are appropriate for their context, they were not as appropriate here. Second, both studies use self-report data to assess perceptions of trustworthiness. Third, trust perceptions were gathered in study 1 at minimal acquaintance and not zero-acquaintance. Although this minimal time difference should not interfere with accuracy (Kenny, 1991) it should be taken into account when generalizing the results.

References

Albright, L., Forest, C., & Reiseter, K. (2001). Acting, behaving, and the selfless basis of metaperception. *Journal of Personality and Social Psychology, 81*(5), 910-921.

Ambady, N., Hallahan, M., & Conner, B. (1999). Accuracy of judgments of sexual orientation from thin slices of behavior. *Journal of Personality and Social Psychology, 77*(3), 538-547.

Ambady, N., Hallahan, M., & Rosenthal, R. (1995). On Judging and Being Judged Accurately in Zero-Acquaintance Situations. *Journal of Personality and Social Psychology, 69*(3), 518-529.

Bayliss, A. P., & Tipper, S. P. (2006). Predictive gaze cues and personality judgments - Should eye trust you? *Psychological Science, 17*(6), 514-520.

Beckstead, J. W. (2003). Attitudes accentuate attributes in social judgment: The combined effects of substance use, depression, and technical incompetence on judgments of professional impairment. *Journal of Social Psychology, 143*(2), 185-201.

Bem, D. J. (1972). Self Perception Theory. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (Vol. 6). New York: Academic Press.

Borkenau, P., & Liebler, A. (1993). Consensus and Self-Other Agreement for Trait Inferences from Minimal Information. *Journal of Personality, 61*(4), 477-496.

Costa, P. T., & McCrae, R. R. (1995). Domains and Facets - Hierarchical Personality-Assessment Using the Revised Neo Personality-Inventory. *Journal of Personality Assessment, 64*(1), 21-50.

Funder, D. C. (1996). From accuracy to error to accuracy again: The realistic accuracy model. *International Journal of Psychology, 31*(3-4), 1313-1313.

Harris, M. J. (1989). Personality Moderators of Interpersonal Expectancy Effects - Replication of Harris and Rosenthal (1986). *Journal of Research in Personality, 23*(4), 381-397.

Judice, T. N., & Neuberg, S. L. (1998). When interviewers desire to confirm negative expectations: Self-fulfilling prophecies and inflated applicant self-perceptions. *Basic and Applied Social Psychology, 20*(3), 175-190.

Jussim, L. (1989). Teacher Expectations - Self-Fulfilling Prophecies, Perceptual Biases, and Accuracy. *Journal of Personality and Social Psychology, 57*(3), 469-480.

Kenny, D. A. (1994). *Interpersonal Perception: A Social Relations Analysis* New York: The Guilford Press.

Kenny, D. A., Albright, L., Malloy, T. E., & Kashy, D. A. (1994). Consensus in Interpersonal Perception - Acquaintance and the Big-5. *Psychological Bulletin, 116*(2), 245-258.

Kenny, D. A., & Depaulo, B. M. (1993). Do People Know-How Others View Them - an Empirical and Theoretical Account. *Psychological Bulletin, 114*(1), 145-161.

Kenny, D. A., Horner, C., Kashy, D. A., & Chu, L. C. (1992). Consensus at Zero Acquaintance - Replication, Behavioral Cues, and Stability. *Journal of Personality and Social Psychology, 62*(1), 88-97.

Kenny, D. A., & Kashy, D. A. (1994). Enhanced Co-Orientation in the Perception of Friends - a Social-Relations Analysis. *Journal of Personality and Social Psychology, 67*(6), 1024-1033.

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An Integrative Model of Organizational Trust. *Academy of Management Review, 20*(3), 709-734.

McKnight, D. H., Cummings, L. L., & Chervany, N. L. (1998). Initial trust formation in new organizational relationships. *Academy of Management Review, 23*(3), 473-490.

Meyerson, D. W., Karl E.; Kramer, Roderick M. (1996). Swift Trust and Temporary Groups. In R. M. T. Kramer, Tom R. (Ed.), *Trust in Organizations: Frontiers of Theory and Research* (pp. 166-193). Thousand Oaks: Sage Publications, Inc.

Miller, D. T., & Turnbull, W. (1986). Expectancies and Interpersonal Processes. *Annual Review of Psychology, 37*, 233-256.

Neuberg, S. L., Judice, T. N., Virdin, L. M., & Carrillo, M. A. (1993). Perceiver Self-Presentational Goals as Moderators of Expectancy Influences - Ingratiation and the Disconfirmation of Negative Expectancies. *Journal of Personality and Social Psychology, 64*(3), 409-420.

Porter, S., England, L., Juodis, M., ten Brinke, L., & Wilson, K. (2008). Is the Face a Window to the Soul? Investigation of the Accuracy of Intuitive Judgments of the Trustworthiness of Human Faces. *Canadian Journal of Behavioural Science-Revue Canadienne Des Sciences Du Comportement, 40*(3), 171-177.

Porter, S., & ten Brinke, L. (2009). Dangerous decisions: A theoretical framework for understanding how judges assess credibility in the courtroom. *Legal and Criminological Psychology, 14*(1), 119-134.

Snyder, M. (1992). Motivational Foundations of Behavioral Confirmation. *Advances in Experimental Social Psychology, 25*, 67-114.

Snyder, M., & Stukas, A. A. (1999). Interpersonal processes: The interplay of cognitive, motivational, and behavioral activities in social interaction. *Annual Review of Psychology, 50*, 273-303.

Snyder, M., Tanke, E. D., & Berscheid, E. (1977). Social-Perception and Interpersonal-Behavior - on Self-Fulfilling Nature of Social Stereotypes. *Journal of Personality and Social Psychology, 35*(9), 656-666.

Stirrat, M., & Perrett, D. I. (2010). Valid Facial Cues to Cooperation and Trust: Male Facial Width and Trustworthiness. *Psychological Science, 21*(3), 349-354.

Williams, M. (2001). In whom we trust: Group membership as an affective context for trust development. *Academy of Management Review, 26*(3), 377-396.

Table 1
Summary of the Perspectives on Accuracy

	Realist	Pragmatic	Constructivist
Defines accuracy as:	Standard criterion set by experimenter; "correct" response.	Individual criterion based on accomplishment of goals.	Whether social perceptions correspond with social reality.
Emphasizes:	Observable and measurable behaviors.	Accomplishing goals / motivations through the interaction.	Interprets social reality based on experiences.
Goals:	Focuses on eliciting a desired response from the individual (outcome focused).	Focuses on learning and using the appropriate strategies to accomplish goals (process and outcome focused).	Focuses on constructing knowledge rather than acquiring it (process focused).
Mechanisms:	Cues lead to purpose-drive behaviors; "if →then".	Influenced by the perceiver; degree to which they use cues to achieve outcome goals.	Context specific; individuals understand the situation based on what they know.
Measured in this study by:	Meta-Accuracy	Consensus Accuracy	Linear Accuracy

Table 2
Means, Standard Deviations, Reliability Coefficients, and $r_{alerting}$

	Time 1			Time 2			Time 3			$r_{alerting}$
Variable	M	SD	α	M	SD	α	M	SD	α	
Integrity	5.48	.95	.91	5.89	1.13	.93	6.12	1.17	.95	.93
Benevolence	5.24	.97	.88	5.66	1.17	.88	6.03	1.14	.92	.99
Competence	5.37	1.15	.83	5.73	1.15	.89	5.97	1.21	.93	.99
Trust Intentions	4.05	.87	.81	5.64	1.18	.88	5.92	1.25	.93	.93
MP: Integrity	--	--	--	5.71	.93	.90	6.04	.93	.95	
MP: Benevolence	--	--	--	5.65	.90	.88	5.99	.96	.92	
MP: Competence	--	--	--	5.55	.96	.88	5.95	.94	.90	
MP: Trust Intentions	--	--	--	5.72	.93	.85	6.02	1.01	.91	

Table 3.
Relative Variance Partitioning for Trust Intentions and Trustworthiness Ratings

Sources of Variance: Perceptions									
	Perceiver Effects			Target Effects			Relationship Effects		
Variable	Time 1	Time 2	Time 3	Time 1	Time 2	Time 3	Time 1	Time 2	Time 3
Integrity	56%	18%	8%	2%	29%	26%	18%	32%	51%
Benevolence	54%	23%	12%	2%	11%	6%	19%	46%	66%
Ability	52%	14%	8%	0%	28%	20%	19%	39%	58%
Trust Intentions	55%	19%	18%	2%	30%	26%	14%	33%	42%

Table 4.
Relative Variance Partitioning for Meta-Perceptions of Trust Intentions and Trustworthiness Ratings

Sources of Variance: Meta-Perceptions						
	Perceiver Effects		Target Effects		Relationship Effects	
Variable	Time 2	Time 3	Time 2	Time 3	Time 2	Time 3
Integrity	0%	2%	32%	35%	45%	45%
Benevolence	0%	2%	24%	24%	55%	58%
Ability	0%	2%	44%	31%	38%	48%
Trust Intentions	0%	5%	25%	29%	53%	48%

Table 5.
Degree of calibration between initial individual judgments of trust and later perceptions (Linear Accuracy)

	Linear Accuracy		
	T1,2	T1,3	T2,3
Integrity	.24**	.20**	.67**
Benevolence	.39**	.19**	.57**
Ability	0.09	0.08	.58**
Trust Intentions	.25**	.19**	.66**

Table 6.
Degree of convergence between initial individual judgments of trust and team's consensus (Consensus Accuracy)

	Consensus Accuracy		
	T1,2	T1,3	T2,3
Integrity	0.08	.13*	.48**
Benevolence	0.03	0.05	.31**
Ability	-0.04	0.04	.42**
Trust Intentions	0.01	0.05	.48**

Table 7.

Dyadic and Generalized Meta-Accuracy

	Meta-Accuracy			
	Generalized Meta-Accuracy		Dyadic Meta-Accuracy	
Variable	Time 2	Time 3	Time 2	Time 3
Integrity	.44**	.72**	.31**	.33**
Benevolence	.68**	.78**	.27**	.28**
Ability	.25**	.55**	.29**	.32**
Trust Intentions	.34**	.60**	.31**	.34**

Table 8.
Testing the Mediation of Meta-Perceptions of Benevolence (Time 3)

	Benevolence Perceptions, T3 (Does Bob perceive Beth to be benevolent?)								
	Model 1			**Model 2 (Predicting MP)**			**Model 3**		
	β	SE		β	SE		β	SE	
Main Effect									
Benevolence (Perceiver) *(Does Beth think Bob's benevolent?)*	0.23	0.05	***	0.83	0.03	***	0.004	0.03	
Mediators									
Meta-Perception of Benevolence (Perceiver) *(Does Beth know how benevolent Bob perceivers her to be?)*							0.82	0.03	***
R^2	0.05			0.69			0.67		
F( )	22.8			918.31			416.1		

Table 9.
Testing the Mediation of Meta-Perceptions of Competence (Time 3)

	Competence Perceptions, T3 (Does Bob perceive Beth to be competent?)								
	Model 1			**Model 2 (Predicting MP)**			**Model 3**		
	β	SE		β	SE		β	SE	
Main Effect									
Competence (Perceiver) *(Does Beth think Bob's competent?)*	0.24	0.05	***	0.32	0.04	***	0.07	0.04	
Mediators									
Meta-Perception of Competence (Perceiver) *(Does Beth know how competent Bob perceivers her to be?)*							0.52	0.06	***
R^2	0.06			0.10			0.30		
F( )	23.92			45.56			87.24		

Table 10.
Descriptive Statistics and Correlations

		M	SD	1	2	3	4	5	6	7	8	9	10
1	Rep's Initial Integrity Perception	3.73	2.01	1									
2	Rep's Post Negotiation Integrity Perception	4.20	1.62	.57**	1								
3	Rep's Points	6187.23	1656.95	-0.14	.30*	1							
4	Inventor's Points	6781.91	1508.54	0.04	-0.11	-.72**	1						
5	Joint Gain	12969.15	1192.07	-0.15	0.28	.48**	0.26	1					
6	Rep's Trusting Behavior	0.00	1.00	.37*	.58**	0.28	-0.17	0.17	1				
7	Inventor's Trustworthy Behavior	0.00	1.00	.36*	.53**	0.25	-0.09	0.22	.85**	1			
8	Inventor's IAT Score (Integrity Identity)	0.61	0.33	-0.21	-.40**	0.04	-0.09	-0.06	-.41**	-0.28	1		
9	Money Sent by Inventor	2.87	1.78	0.11	0.18	-0.02	0.06	0.05	0.26	0.09	-0.05	1	
10	Proportion of Money Sent Back by Rep	0.34	0.29	0.05	0.27	0.21	0.01	.31*	.47**	.37*	-0.18	0.13	1

* $p < .05$ ** $p < .01$

Table 11.
Mediation analysis (Initial trust → Trustor behavior → Trustee behavior)

Variable	Trustor's Behavior	Trustee's Behavior
Equation 1		
Initial Integrity		.39*
R2 (adjusted)		.15 (.13)
F		6.84
Equation 2		
Initial Integrity	.38*	
R2 (adjusted)	.14 (.12)	
F	6.39	
Equation 3		
Initial Integrity		0.21
Trustor's Behavior		.50***
R2 (adjusted)		.37 (.33)
F		10.72

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

Table 12.
Double Mediation Analysis, Indirect effects of IV on DV through mediators (ab paths)

		Product of Coefficients		Bootstrapping (5000)					
				Percentile 95% CI		BC 95% CI		BCa 95% CI	
	Effect	SE	Z	Lower	Upper	Lower	Upper	Lower	Upper
Rep's Behavior	0.15	0.10	1.48	-.03	.32	-.02	.34	-.01	.35
Inventor's Behavior	0.02	0.06	0.37	-.08	.13	-.07	.14	-.07	.15
TOTAL	0.17	0.07	2.37	.04	.31	.05	.33	.05	.32

Note: Values represent indirect effects; BC: bias corrected, BCa: bias corrected and accelerated; 5000 bootstrap samples

Table 13a.
Simple mediation analysis, Company Representative's (Rep's) Trusting Behavior as mediator

Variable	Trustor's Behavior	Post Integrity
Mediator: Trustor's Behavior		
Equation 1		
Initial Integrity		.57***
R^2 (adjusted)		.32 (.31)
F		21.23
Equation 2		
Initial Integrity	.38*	
R^2 (adjusted)	.14 (.12)	
F	6.39	
Equation 3		
Initial Integrity		.41***
Trustor's Behavior		.43***
R^2 (adjusted)		.48 (.46)
F		19.59

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

Table 13b.
Simple mediation analysis, Inventor's Trustworthy Behavior as mediator

Variable	Trustee's Behavior	Post Integrity
Mediator: Trustee's Behavior		
Equation 1		
Initial Integrity		.57***
R^2 (adjusted)		.32 (.31)
F		21.23
Equation 2		
Initial Integrity	.36*	
R^2 (adjusted)	0.13 (.11)	
F	5.75	
Equation 3		
Initial Integrity		.49***
Trustee's Behavior		.36**
R^2 (adjusted)		.50 (.47)
F		18.77

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

Table 14.
Double Mediation Analysis, Indirect effects of IV on DV through mediators (ab paths) for the points earned for Inventor and Company Representative (Rep)

DV: Inventor's points earned				Bootstrapping (1000)					
				Percentile 95% CI		BC 95% CI		BCa 95% CI	
	Effect	SE	Z	Lower	Upper	Lower	Upper	Lower	Upper
Rep's Behavior	-140.55	126.01	-1.12	-387.67	38.40	-390.42	34.37	-388.31	39.75
Inventor's Behavior	49.80	82.65	.60	-92.71	243.59	-85.20	247.86	-86.56	238.55
TOTAL	-90.76	73.99	-1.23	-238.67	45.56	-244.18	35.58	-251.43	35.56

DV: Rep's point earned				Bootstrapping (1000)					
				Percentile 95% CI		BC 95% CI		BCa 95% CI	
	Effect	SE	Z	Lower	Upper	Lower	Upper	Lower	Upper
Rep's Behavior	120.88	130.08	.92	-93.12	379.88	-85.18	378.00	-80.35	408.67
Inventor's Behavior	26.60	84.67	.31	-144.69	195.35	-115.12	226.17	-131.42	224.92
TOTAL	147.48	84.77	1.74	3.00	334.34	25.35	365.71	24.83	385.73

Table 15.
Correlations between variables coded for Perceiver's (Company Representative's) Trusting Behaviors

		1	2	3	4	5	6	7	8
1	Offers to help	1							
2	Compromises	.41**	1						
3	Tone (Contention)	.36*	.65**	1					
4	Asks Preferences	.55**	0.30	0.16	1				
5	Shares Private Information	-0.27	-0.03	0.05	-0.18	1			
6	Shows appreciation	0.14	0.18	.33*	0.09	-0.14	1		
7	Uses Humor	0.01	0.27	0.29	-0.12	.41**	-0.03	1	
8	Uses "we" v . "I"	.34*	0.06	0.02	0.26	-0.22	-0.09	-0.16	1

* $p < .05$ ** $p < .01$

Table 16.
Correlations between variables coded for Target's (Inventor's) Trustworthy Behaviors

		1	2	3	4	5	6
1	Offer to help	1					
2	Tone	.46**	1				
3	Cooperates	.56**	.60**	1			
4	Shares Private Information	-0.07	-0.26	-0.04	1		
5	Uses "we" v. "I"	0.02	0.06	-0.18	0.06	1	
6	Power (asserts BATNA)	-.48**	-.60**	-.45**	0.1	-0.22	1

* $p < .05$ ** $p < .01$

Table 17.
Correlations, Means and SDs in the Low Integrity Condition

		M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Rep's Initial Benevolence Perception	1.64	1.08	1														
2	Rep's Initial Integrity Perception	2.19	1.11	.87**	1													
3	Rep's Post Negotiation Benevolence Perception	3.05	1.45	.43*	.38*	1												
4	Rep's Post Negotiation Integrity Perception	3.58	1.52	.44*	.40*	.87**	1											
5	Inventor's Post Negotiation Benevolence Perception	3.66	1.55	0.07	0.18	-0.17	-0.09	1										
6	Inventor's Post Negotiation Integrity Perception	4.55	1.27	0.01	0.01	-0.02	0.05	.70**	1									
7	Rep's Points	6496.43	1757.63	0.02	-0.08	.61**	.49**	-0.23	-0.11	1								
8	Inventor's Points	6753.57	1620.92	-0.12	-0.01	-0.26	-0.21	.437*	0.34	-.67**	1							
9	Joint Gain	13250.00	1384.77	-0.12	-0.12	.48**	.377*	0.22	0.26	.49**	0.32	1						
10	Money Sent by Inventor	2.89	1.89	0.02	-0.10	0.20	0.00	0.31	0.28	0.09	0.15	0.29	1					
11	Proportion of Money Sent Back by Rep	0.30	0.20	-0.19	-0.35	0.21	0.11	-0.01	-0.04	0.37	0.03	.48*	0.24	1				
12	Inventor's Trustworthy Behavior	-0.25	1.05	0.24	0.13	.54**	.49*	-0.26	0.05	0.30	-0.07	0.36	-0.02	0.42	1			
13	Rep's Trusting Behavior	-0.24	0.96	0.20	0.17	.50*	.56**	-0.08	0.17	0.37	-0.13	0.37	0.08	0.30	.83**	1		
14	Inventor's IAT Score (Integrity Identity)	0.68	0.31	-0.14	-0.06	-0.20	-0.35	0.31	.40*	-0.30	0.22	-0.12	0.01	-0.14	-0.27	-.42*	1	
15	Rep's IAT Score (Integrity Identity)	0.67	0.45	0.16	0.12	0.26	0.20	-0.09	-0.09	0.35	-.42*	-0.05	0.02	-0.08	-0.03	-0.13	-0.10	1

* $p < .05$ ** $p < .01$

Table 18.
Correlations, Means and SDs in the High Integrity Condition

		M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Rep's Initial Benevolence Perception	4.91	0.71	1														
2	Rep's Initial Integrity Perception	5.61	0.78	.60**	1													
3	Rep's Post Negotiation Benevolence Perception	4.02	1.32	0.08	0.19	1												
4	Rep's Post Negotiation Integrity Perception	4.83	1.51	0.10	.49*	.80**	1											
5	Inventor's Post Negotiation Benevolence Perception	3.54	1.13	0.21	-0.21	-0.10	-0.31	1										
6	Inventor's Post Negotiation Integrity Perception	4.54	1.04	0.31	0.03	0.20	-0.08	.59**	1									
7	Rep's Points	5946.00	1379.83	-0.07	0.18	0.27	0.22	-0.25	-0.06	1								
8	Inventor's Points	7116.00	1378.84	0.01	-0.28	-0.21	-0.28	0.10	0.08	-.53**	1							
9	Joint Gain	13062.00	1341.20	-0.08	-0.09	0.06	-0.07	-0.15	0.02	.49*	.49*	1						
10	Money Sent by Inventor	3.02	1.70	0.24	.40*	0.39	.52**	0.07	0.09	-0.15	-0.14	-0.30	1					
11	Proportion of Money Sent Back by Rep	0.38	0.34	-0.21	-0.14	.56**	0.34	0.00	0.35	0.17	-0.02	0.18	0.07	1				
12	Inventor's Trustworthy Behavior	0.35	0.84	0.10	0.40	.50*	0.41	0.15	0.31	0.26	-0.21	0.05	0.23	0.29	1			
13	Rep's Trusting Behavior	0.30	0.99	0.09	.49*	.61**	.50*	-0.15	0.16	0.27	-0.28	0.00	.50*	.59**	.84**	1		
14	Inventor's IAT Score (Integrity Identity)	0.55	0.31	0.13	0.01	-0.14	-0.13	0.16	0.23	.49*	-.46*	0.05	0.06	-0.15	-0.11	-0.33	1	
15	Rep's IAT Score (Integrity Identity)	0.60	0.37	0.08	-0.15	0.13	0.07	0.32	.67**	-0.07	-0.16	-0.25	-0.13	0.26	-0.22	-0.36	0.30	1

* $p < .05$ ** $p < .01$

Figure 1.
Brunswick's lens model

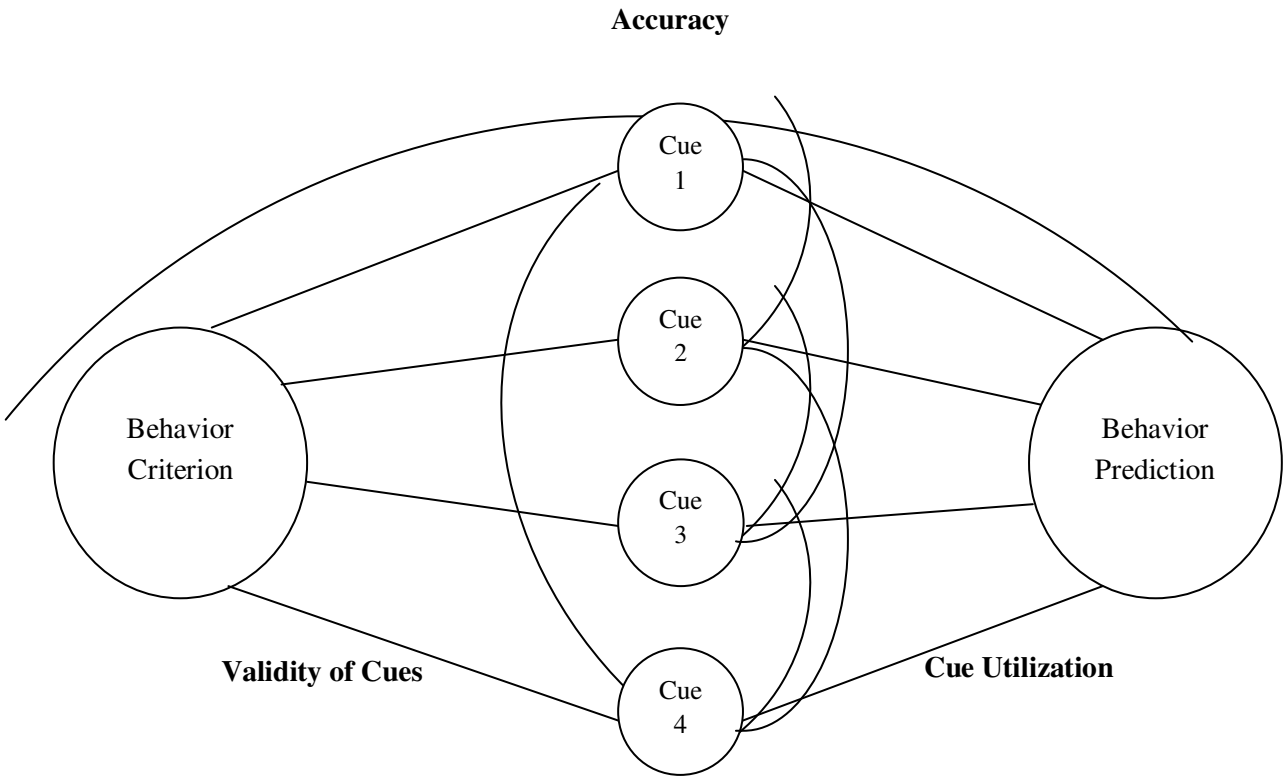


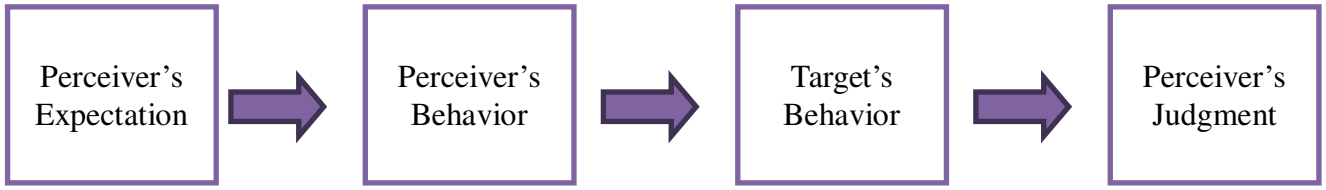
Figure 2
Time line of courses and data collection

August	
5-Aug	**DATA COLLECTION, TIME 1**
10-Aug	Group presentation - Critical Thinking
13-Aug	Group presentation - Critical Thinking
28-Aug	Case write-up for Crown Cork & Seal - Management & Strategy
September	
7-Sep	Walgreens Assignment (Group Project I) - Financial Accounting; also do peer evaluations
9-Sep	Activity Map for Edward Jones - Management & Strategy
16-Sep	Case write-up for Ryanair - Management & Strategy
28-Sep	Lexmark Assignment (Group Project II) - Fin Acct; also do peer evaluations
October	
3-Oct	**DATA COLLECTION, TIME 2**
8-Oct	Concept Map of Strategic Management - Management & Strategy
9-Oct	Sample Final Exam Write-up (Group Project III) - Financial Accounting
29-Oct	Case Assignment - Marketing
November	
12-Nov	Case Assignment - Marketing
December	
1-Dec	Case Assignment - Marketing
15-Dec	ICE presentations
16-Dec	ICE presentations
17-Dec	ICE presentations
19-Dec	DATA COLLECTION, TIME 3

Required 1st Year Courses (FA08):
Statistics (Gordinier)- all individual work
Financial Accounting (Fields)- Three Group Assignments
Critical Thinking (Nickerson) - 2 group presentations; class meets 5 times
Intro to Management and Strategy (Elfenbein) - 4 group projects
Marketing (Lewis)- 3 group cases
Missing: Ray's class

Figure 3.
Models of Self-Fulfilling Prophecy

Model 1. Using the target's behaviors (i.e., through behavioral confirmation) to achieve accuracy



Model 2. Perceiver's achieve accuracy without full reliance of the target's behaviors (i.e., through perceptual biases)

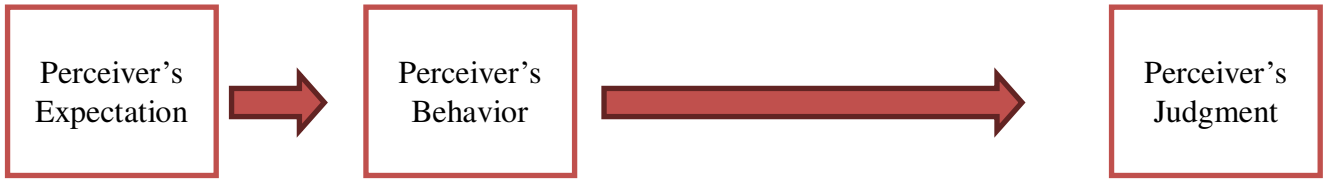


Figure 4.
Proposed theoretical model and hypotheses

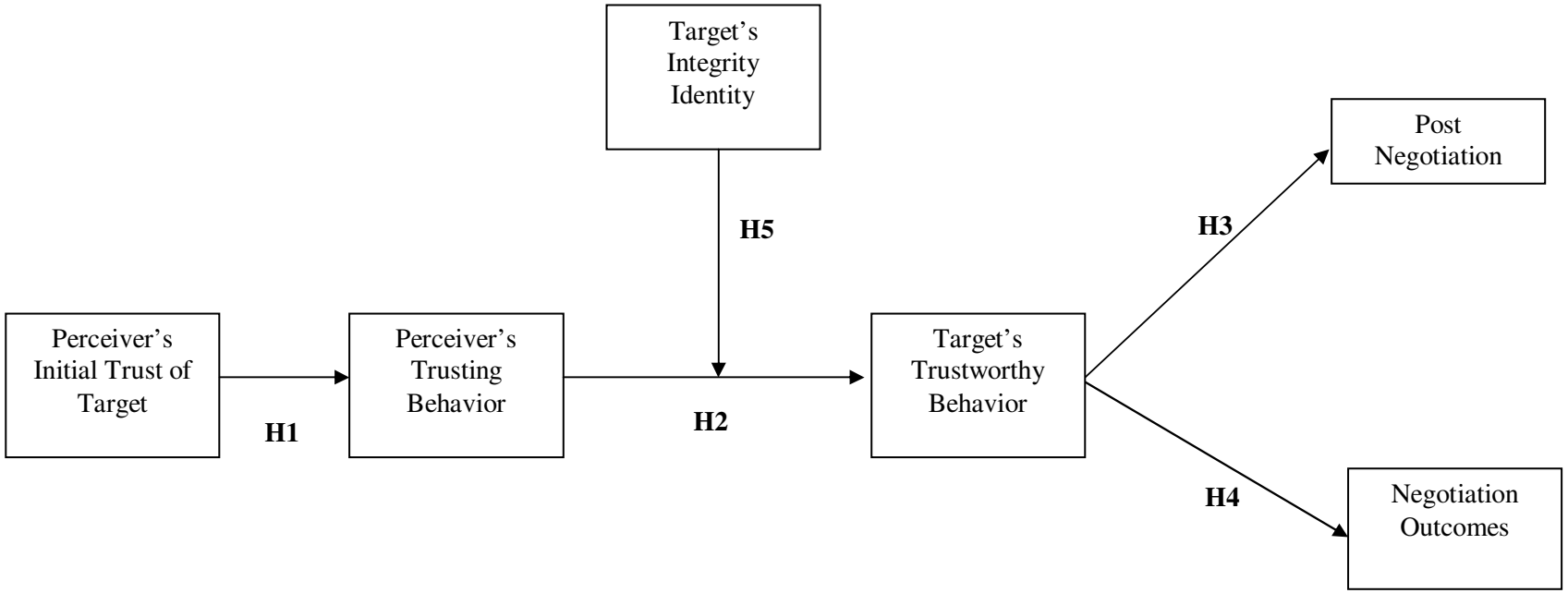


Figure 5.
Proposed conceptual map, H1-H3

IV/Med	Initial Integrity	⇒	Perceiver's Trusting Behavior	⇒	Target's Trustworthy Behavior	⇒	Post Integrity (Accuracy)
Definition	Perceiver's perception of Target's Integrity, post manipulation, pre-interaction		1. Willingness to make self vulnerable and take on risk 2. Demonstrating a willingness to cooperate and relationship building		1. Displays of integrity[6] or benevolence[7] that proves Target can be trusted; 2. Showing honest, respectful behavior that promotes cooperation, reciprocity and positive outcome for both parties.		Perceiver's perception of Target's integrity, post-negotiation / trust game
Measure	*Mayer & Davis (1999) measure of initial perception of integrity.*		*Perceiver's tone* – degree of contention present within the negotiation; *Integrative tactics* – demonstrating a willingness to provide information (vulnerability) and help create value with partner; interested in value creation for both parties.		*Target's tone (contention); Integrative tactics*- Whether the Target presents their alternatives to an agreement during the negotiation; this shows the Perceiver that the Target is solely concerned with own outcome, driven by profit; not concerned with fairness of outcome for both sides, mainly Target's outcome.		Mayer & Davis (1999) measure of *post perception of integrity*. *Accuracy* is achieved if the correlation between initial integrity and post integrity is positive and significant.

[6] *Integrity*: Adhering to accepted rules of conduct such as honesty and credibility; consistency of actions and deeds; fairness and sense of justice (Mayer, Davis & Schoorman, 1995)

[7] *Benevolence*: Evidence of wanting to do good to the Perceiver aside from egocentric profit motives; holds attitudes / values / preferences similar to the Perceiver (Mayer, Davis & Schoorman, 1995)

Figure 6.
Interaction of IAT and the Inventor's trusting behavior by integrity condition

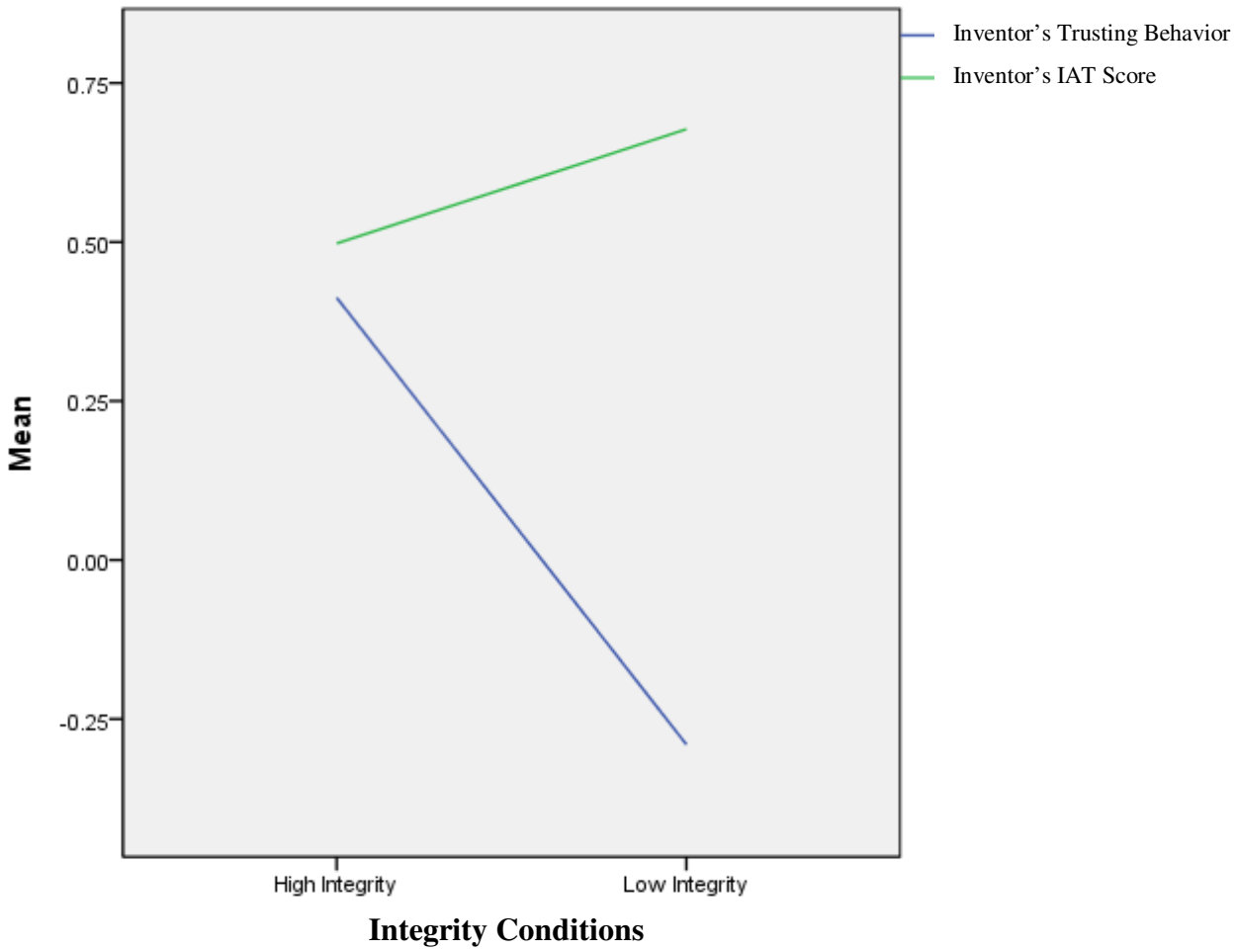


Figure 7.
Money exchanged in the Trust Game

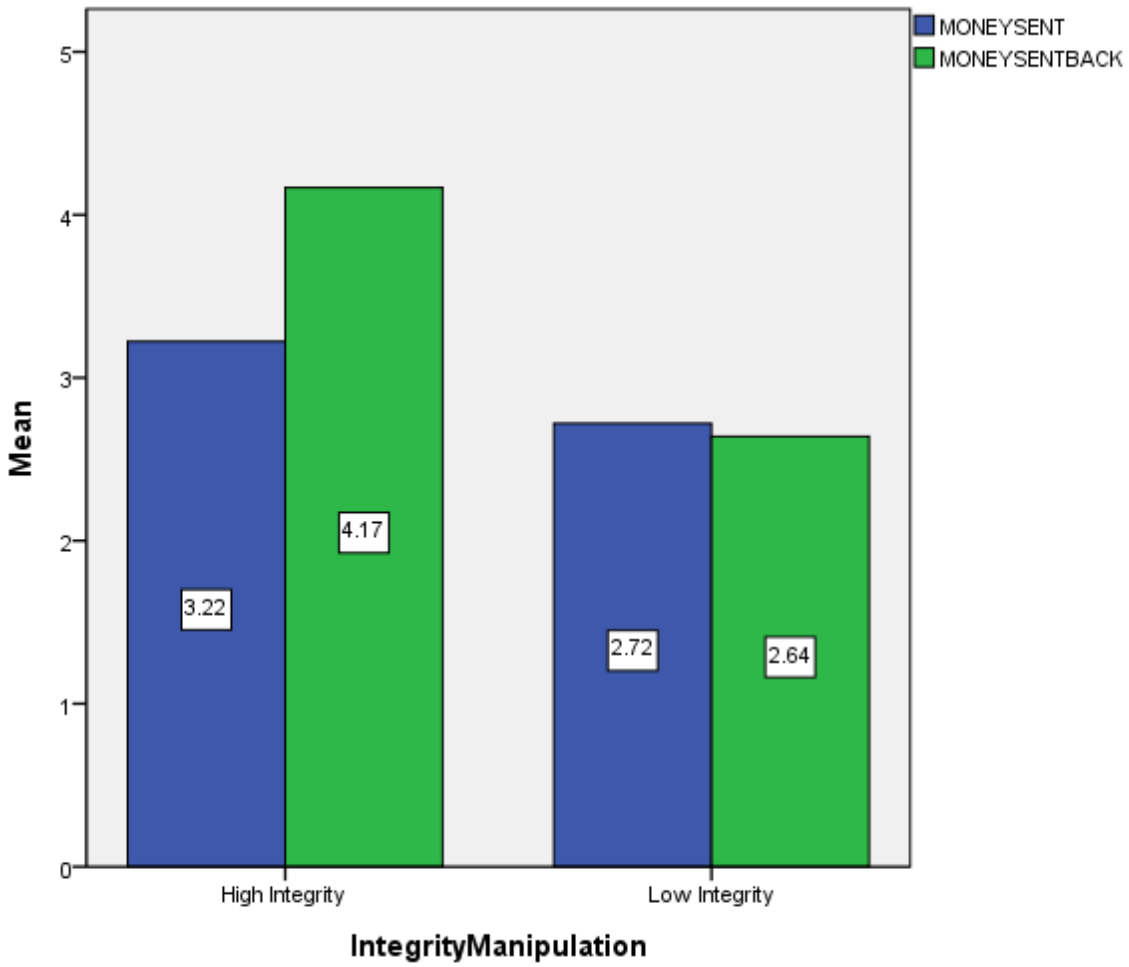


Figure 8a.
MDS Results used to create the Perceiver's (Company Representative) Trusting Behavior Variable

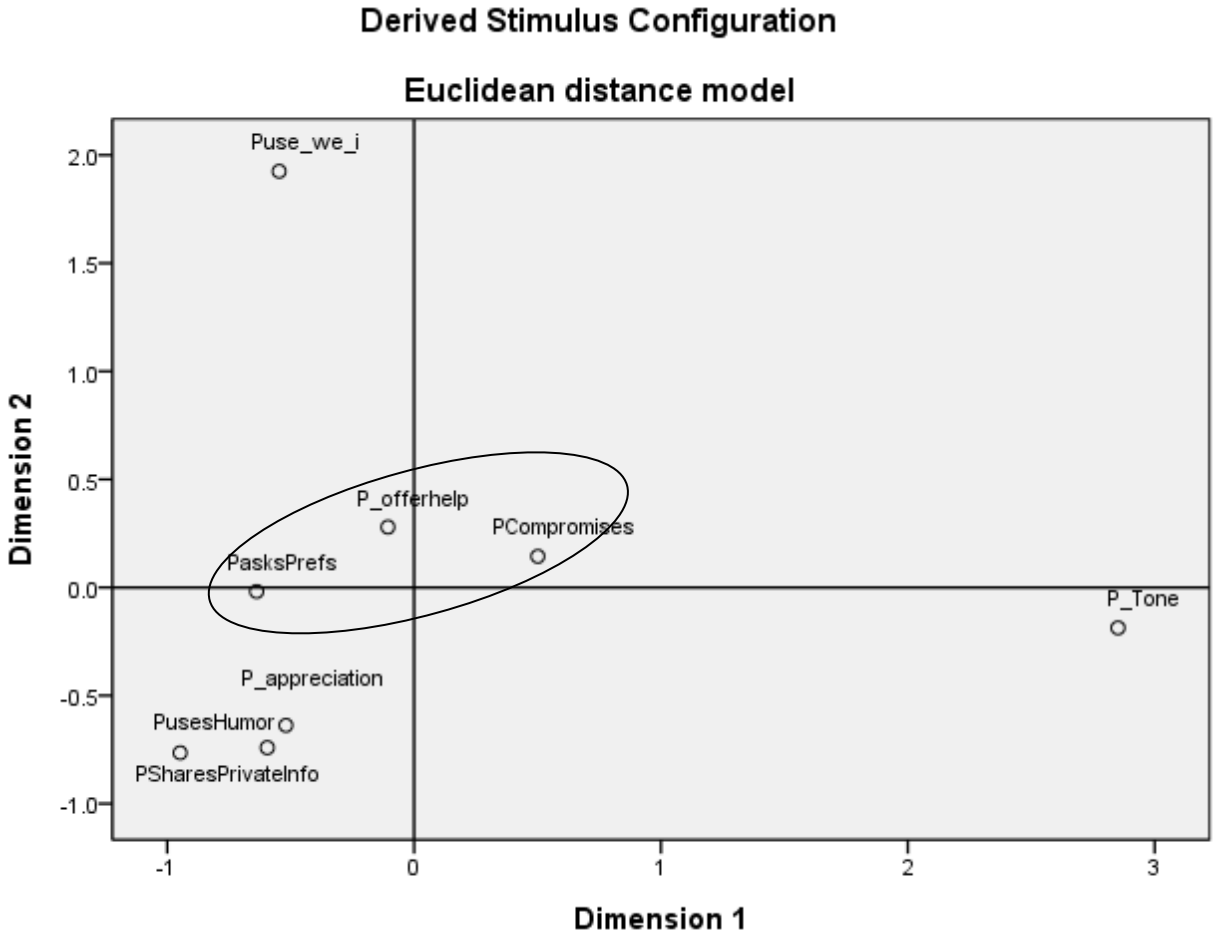
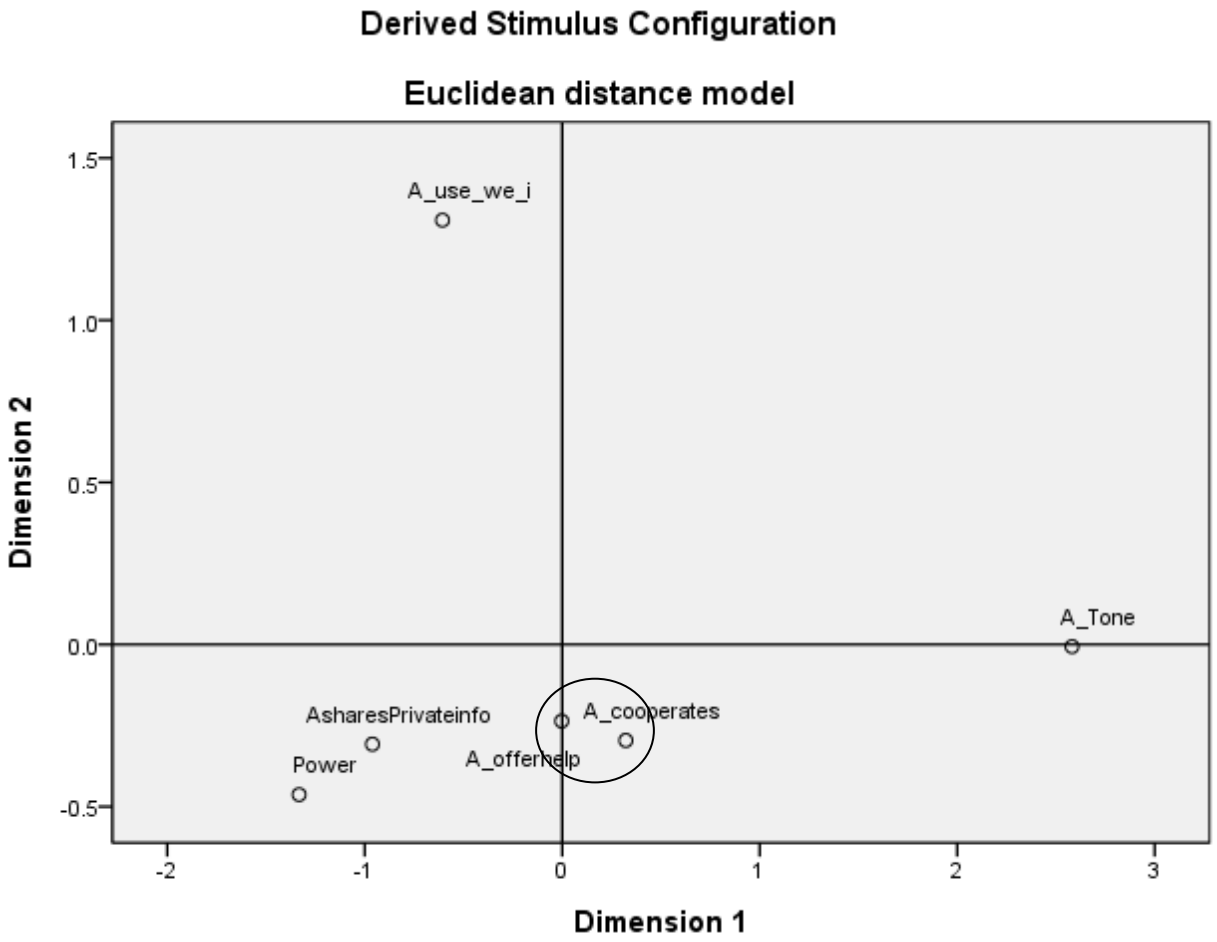


Figure 8b.
MDS Results used to create the Target's (Inventors) Trustworthy Behavior Variable



Appendix A.
Negotiation Case and Payoff Table

TEXT FOR INVENTOR

Instructions

During this experiment you will be asked to conduct a negotiation with another person over a hydrogen fuel cell contract. You have been assigned the role of the Inventor of the Hydrogen Fuel Cell. Your negotiation partner is a representative from ABC Motor Corp who has been asked to negotiate this agreement with you on behalf of his company.

An Inventor's Dilemma

You are assigned the role of the inventor. You have produced a new product that will aid in producing a hydrogen fuel cell to power automobiles. Several car manufactures have been interested in developing such an alternative fuel source but have not been able to successfully complete any models. After hearing of this new invention, ABC Motor Company is interested in acquiring your new invention/product. You are also eager to sell your product to an organization that is able to reproduce it and build it into vehicles internationally, with ABC Motor Company being among your top choices. A representative has been sent from the company to meet with you, where you will be negotiating the terms of the contract to manufacture this fuel cell within the ABC Motor Company.

You will be negotiating over eight (8) issues:

1. Ownership rights
2. Royalties to inventor
3. Duration of patent
4. Location of manufacturing plant
5. Salary to inventor
6. Allocation of staff
7. Control over trademark and advertising
8. Upfront costs

You are very confident in the successful development of your fuel cell. Without a doubt, you know it will turn huge profits for you and ABC Motor Company. The only detail you have not worked out is the environmental impact of this fuel cell. In several preliminary tests of your product, you have discovered that the environmental impact of the carbon dioxide released from burning fossil fuels can have a dangerous impact on the environment. Not only that, but releasing hydrogen into the environment causes a break down in the ozone layer and could lead to increased global warming.

You should strive for an agreement that provides the best possible terms on these issues. On the payment schedule below, you should place the most emphasis on the options with the greatest point value. Thus, the greater the point value, the more valuable this option is to you. You should study the chart carefully in order to earn the maximum payoff from your participation in the experiment.

You will have a total of 20 minutes to reach agreement on all issues. In order to conclude the deal, the two of you must reach an agreement on eight issues of potential concern. Reaching agreement on only some of these issues is not sufficient. You must negotiate a successful resolution of all 8 issues. If you and your partner do not reach an agreement at the end of your 20 minute negotiation time, the ABC Company Representative will have five (5) minutes to finalize the terms of the contract, and send it to you for your approval. You may accept or reject this final contract. If you accept it, you will move on to the final portion of this experiment. If you reject it, you will not earn any points and this part of the experiment is over.

For purposes of the experiment, all communication will take place via messaging over the computer. There will be no face to face discussions with your negotiation partner in this experiment.

While you are negotiating, you are not permitted to disclose any information that might reveal your actual identity to the other party within the messages you send. You are also not permitted to divulge the number of points you would be getting from deals proposed. The information about points and payoffs is strictly for your personal use in evaluating different options.

[PAGE 2]

You, the Inventor, have the opportunity to back out of the contract and manufacture your fuel cell elsewhere. Here are your options if you choose not to strike an agreement with ABC Motor Corp.

1. Back out completely, leaving the company with no compensation or production rights to the fuel cell, where the company rep will earn no money from this experiment. This will earn the inventor an additional 5000 points.
2. Back out completely, but agreeing to provide financial compensation to ABC, ranging from 0-5000 points, to cover some of the potential losses. (This would be deducted from your total points earned)

TEXT FOR COMPANY REP

Instructions

During this experiment you will be asked to conduct a negotiation with another person over a hydrogen fuel cell contract. You have been assigned the role of the corporate representative of ABC Motors to negotiate a contract for your partner – the fuel cell Inventor – to begin production of his fuel cell at your company.

An Inventor's Dilemma

An Inventor produced a new product that will aid in producing a hydrogen fuel cell to power automobiles. Several car manufactures have been interested in developing such an alternative fuel source but have not been able to successfully complete any models. After hearing of this new invention, your organization, ABC Motor Company, is interested in acquiring this new product. The Inventor is also eager to sell his/her product to an organization that is able to reproduce it and build it into vehicles internationally, with ABC Motor Company being among his top choices. ABC Motor Company has sent you as its representative to meet with the Inventor, where you will be negotiating the terms of the contract to manufacture this fuel cell within the ABC Motor Company.

You will be negotiating over eight (8) issues:

1. Ownership rights
2. Royalties to inventor
3. Duration of patent
4. Location of manufacturing plant
5. Salary to inventor
6. Allocation of staff
7. Control over trademark and advertising
8. Upfront costs

ABC Motor Corporation prides itself on its dedication to the environment, which is part of their interest in taking on the hydrogen fuel cell project. ABC has noted the positive benefits that yield cleaner and more efficient results. The current CEO informed you directly that she would be extremely unsatisfied if this fuel cell proved to in anyway damage the environmental commitment and values of ABC. In so many words, ABC's CEO has made it our job to ensure very minimal damage in its production and use. You know that if you screw this up, your job would be on the line.

You should strive for an agreement that provides the best possible terms on these issues. On the payment schedule below, your company has placed the most emphasis on the options with the greatest point value. Thus, the greater the point value, the more valuable this option is to you. You should study the chart carefully in order to earn the maximum payoff from your participation in the experiment.

You will have a total of 20 minutes to reach agreement on all issues. In order to conclude the deal, the two of you must reach an agreement on eight issues of potential concern. Reaching agreement on only some of these issues is not sufficient. You must negotiate a successful resolution of all 8 issues. If you and your partner do not reach an agreement at the end of your 20 minute negotiation time, you, the ABC Company Representative will have five (5) minutes to finalize the terms of the contract, and send it to the Inventor for his/her approval, where s/he may accept or reject this final contract. If the Inventor accepts it, you will both move on to the final portion of this experiment, and if rejected neither of you will earn any points and this part of the experiment is over.

For purposes of the experiment, all communication will take place via messaging over the computer. There will be no face to face discussions with your negotiation partner in this experiment.

While you are negotiating, you are not permitted to disclose any information that might reveal your actual identity to the other party within the messages you send. You are also not permitted to divulge the number of points you would be getting from deals proposed. The information about points and payoffs is strictly for your personal use in evaluating different options.

[PAGE 2]

You, the ABC Motor Company representative have just learned that the Inventor has received multiple offers from various, more prestigious firms, and has granted contract negotiation sessions to at least two other companies. If the inventor backs out of the contract negotiated with this company, ABC Motor Company will lose millions of dollars that have already been invested in production facilities and materials. Given this, you will have to insure the Inventor will follow through with his/her commitment to produce the fuel cell with ABC.

ISSUE	OPTIONS	ABC Motor's Points	Inventor's Points
	10 years	0	0
	9 years	300	300
Time To Delivery	8 years	600	600
	7 years	900	900
	6 years	1200	1200
	25M	1200	-600
	20M	1100	-500
Environmental protection insurance coverage	15M	1000	-400
	10M	500	-300
	5M	250	-200
	10 Years	1200	1200
	8 Years	900	900
Duration of Patent	7 Years	600	600
	6 Years	300	300
	5 Years	0	0
	100%	0	1600
	90%	100	1200
Allocation of Staff	80%	200	800
	70%	300	400
	60%	400	0
	$250K	0	400
	$200K	400	300
Salary To Inventor	$150K	800	200
	$100K	1200	100
	$50K	1600	0
	Phoenix	0	600
	Pittsburgh	150	450
Location of Manufacturing Plant	Minneapolis	300	300
	Dallas	450	150
	Charlotte	600	0
	(A)Inventor - Sole Control	0	3000
	(B) Inventor 80% / ABC 20%	750	2250
Control over Trademark and	(C) Inventor 50% / ABC	1500	1500

Advertising	50%		
	(D) ABC 80% / Inventor 20%	2250	750
	(E) ABC - Sole Control	3000	0
	50%	0	2000
	40%	200	1500
Royalties to Inventor	30%	400	1000
	20%	600	500
	10%	800	0

Appendix B.
False Feedback Reports given to the Perceiver (ABC Company Representative)

Integrity (SINS) Manipulation

Prior to this negotiation, you and your negotiation partner were asked to complete the SINS scale as a measure of negotiator ethicality. Some participants in this experiment were selected to see the result of their partner's results, and some were not. You were selected to receive the results, but your partner was not selected to see yours. Your partner's results are reported below.

Below you will find the average scores of 150 random Washington University in St. Louis, Olin Business School students selected to complete this survey, followed by your partner's average scores. Reported is the overall score, as well as the score on each individual "SIN" as predicted by the survey.

	Class Statistics	Partner's Scores
OVERALL	2.2	5.19
SD	0.77	0.77
Median	1.12	4.84
Specific SINS:		
1. Bargaining Competitively	4.27	6.73
2. Attacking opponent's network	1.84	5.41
3. Making False Promises	1	4.18
4. Misrepresentation	1.05	4.79
5. Inappropriate information gathering (i.e. use of bribes, hiring opponent's teammates, etc.)	1.12	4.84
All scores are calculated from a 7 point scale where 1 = not at all appropriate and 7 = very appropriate		

Interpreting your Partner's Score:

These SINS scores reflect that your partner is very likely to use unethical tactics to come to a negotiated agreement. Examples of such tactics are withholding information, lying about their position, providing misleading information, and making false promises. These negotiators seek agreements that benefit them more than you, negotiate unfairly and dishonestly, and are less trustworthy.

#8 B– SINS FEEDBACK – P's ONLY – CONDITION 2, HIGH INTEGRITY

Integrity (SINS) Manipulation

Prior to this negotiation, you and your negotiation partner were asked to complete the SINS scale as a measure of negotiator ethicality. Some participants in this experiment were selected to see the result of their partner's results, and some were not. You were selected to receive the results, but your partner was not selected to see yours. Your partner's results are reported below.

Below you will find the average scores of 150 random Washington University in St. Louis, Olin Business School students selected to complete this survey, followed by your partner's average scores. Reported is the overall score, as well as the score on each individual "SIN" as predicted by the survey.

	Class Statistics – HIGH Integrity	Partner – HIGH Integrity
OVERALL	3.74	1.84
SD	0.77	0.77
Median	3.6	1.12
Specific SINS:		
1. Bargaining Competitively	6.73	4.27
2. Attacking opponent's network	4.22	1.84
3. Making False Promises	3.12	1
4. Misrepresentation	2.87	1.05
5. Inappropriate information gathering (i.e. use of bribes, hiring opponent's teammates, etc.)	3.6	1.12
All scores are calculated from a 7 point scale where 1 = not at all appropriate and 7 = very appropriate		

Interpreting your Partner's Score:

These SINS scores reflect partner is very likely to use ethical tactics to come to a negotiated agreement. This means they will not typically withhold information, lie about their position, provide misleading information, and make false promises. These negotiators seek agreements that have been negotiated fairly and honestly, and are more trustworthy.

Appendix C.
Negotiation Coding Scheme

PRINCIPAL'S BEHAVIORS	
Shares private information	Sharing point values or how much they will be gaining / losing
Use of humor	Does the principal try to use humor?
Use of We v. I	Does the principal use more "we" or "I" statements
Use of denials	Does the principal deny anything that s/he is "accused" of
Asks about preferences / interests	Does the principal ask specifically about the Agent's preferences / interests in the negotiation
Willingness to make tradeoffs / compromise	Does the principal indicate his/her willingness to compromise or make tradeoffs? Or does the principal shoot the agent down (so to speak)
Offers something that will help the joint outcome	Makes reference to the offer helping both principal AND agent's outcomes
Offers something that will only help their own outcome	Offer references only helping OWN outcome, regardless of principal's
Use of apologizes	Does the principal apologize for his/her behaviors
Use of appreciation	Does the principal express gratitude / thanks towards the agent

AGENT'S BEHAVIORS	
Shares private information	Sharing point values or how much they will be gaining / losing
Offers something that will help the joint outcome	Makes reference to the offer helping both principal AND agent's outcomes
Offers something that will only help their own outcome	Offer references only helping OWN outcome, regardless of principal's
Use of We v. I	Does the agent use more "we" or "I" statements
Willingness to cooperate	Does the agent make counteroffers / proposals? Or shoot down the principal's offers / unwilling to negotiate further?

PRINCIPAL'S & AGENT'S BEHAVIORS	
Who talks more	Does the Principal or agent speaks a majority of the time in the negotiation