ABSTRACT

INTERPERSONAL SENSITIVITY AND SELF-CONSTRUALS: WHO'S BETTER AT THIN-SLICING AND WHEN?

by Tonya Marie Shoda

We combine research on self-construals and “thin slicing” to explore factors determining individuals’ accuracy at decoding nonverbal behavior. Specifically, we examined the relations between self-construals and ability to interpret nonverbal behaviors. We hypothesized that people whose self-construals reflect a greater emphasis on close relationships (relational self-construals) and larger group memberships (collective self-construals) would more accurately decode nonverbal behaviors in real social interactions, as assessed by the Interpersonal Perception Task (IPT; Archer & Costanzo, 1988). We expected this advantage to manifest in one of two ways: either as a general advantage in interpersonal sensitivity, or only in contexts involving congruent domains of interpersonal perception (i.e., intimacy and kinship). Surprisingly, relational and collective self-construals were highly related, leading us to combine them into a single measure of interdependent orientation. Showing partial support for the more-nuanced hypothesis, those greater in interdependent self-construal were more accurate at decoding interpersonal situations involving kinship and intimacy.

INTERPERSONAL SENSITIVITY AND SELF-CONSTRUALS:

WHO'S BETTER AT THIN-SLICING AND WHEN?

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Introduction

Understanding others is a basic and important social goal. Even from a distance and with limited knowledge, people have the ability to, with reasonable accuracy, infer a wealth of interpersonal information from extremely brief encounters (e.g., Ambady & Rosenthal, 1993). One critical channel in how people understand others is observing their nonverbal behaviors. A large body of research has accumulated examining interpersonal sensitivity, of which the ability to accurately decode nonverbal information to understand how others are feeling or what they are thinking is a major component. For example, perceivers have shown better than chance nonverbal recall accuracy (i.e., the ability to remember and recollect the nonverbal behaviors of another person) even when simply viewing a person's behavior (e.g., Hall, Murphy, & Schmid Mast, 2006). Moreover, research on "thin slices" of nonverbal behavior shows that from these observations, individuals can infer target characteristics of complete strangers (e.g., Ambady & Rosenthal, 1993). For example, studies have demonstrated that participants can accurately predict end-of-semester evaluations for college professors and high school teachers alike after viewing very brief (30, 15, and even 6 sec) segments of silent video of the instructor. Simply observing these limited amounts of nonverbal behavior provided sufficient information for perceivers to draw accurate inferences about the instructors' characteristics, which corresponded to later student and principal evaluations of the instructors.

Gender Differences in Interpersonal Domains

Although these basics skills are widespread, substantial individual differences exist in interpersonal sensitivity to nonverbal behavior. For instance, gender differences are routinely demonstrated in interpersonal contexts. Women, for example, tend to pay more attention to interaction partners (e.g., Ickes, Robertson, Tooke, & Teng, 1986), have a better memory for faces (e.g., Hall, 1984; Shapiro & Penrod, 1986), and remember more details about a person following a brief encounter (e.g., Yarmey, 1993). They are also more likely to report that they consider the perspective of an interaction partner (e.g., Davis, 1980) and experience more converging of thoughts and feelings to those of their interaction partner (e.g., Ickes, Tooke, Stinson, Baker, & Bissonette, 1988). Given the previously noted gender differences in interpersonal interaction style, it may not be surprising that women are, in general, better at decoding nonverbal behavior than men (e.g., Hall, 1984; Hall et al., 2006). However, little research has empirically explored *why* this is the case, and many questions remain unanswered.

For example, does this ability persist in all situations, or does the ability to decode nonverbal behavior reflect currently or chronically activated goals that in turn shape this ability and direct attention toward or away from particular features of the target or interpersonal context. These are the issues that the current work addresses.

Cognitive Resources and Interpersonal Sensitivity

Although individual differences in interpersonal sensitivity have been well documented, the processes that contribute to this ability have received less attention and many issues remain unsettled. For example, the cognitive resources required for decoding nonverbal behavior remains a contested issue. Numerous researchers have suggested that interpersonal sensitivity requires both conscious attention and working memory resources, citing evidence that some person perception processes can be disrupted by cognitive load (e.g., Gilbert, Pelham, & Krull, 1988). However, other theorists view interpersonal sensitivity as an automatic process, often taking place without conscious attention (e.g., Ambady, Bernieri, & Richeson 2000; Ambady & Gray, 2002; DePaulo & Friedman, 1998; Patterson, 1995; Tracy & Robins, 2008).

However, like many other aspects of social life (Wegner & Bargh, 1998), support is growing for a more nuanced view of interpersonal sensitivity, acknowledging the possibility that rather than a single skill, being automatic or deliberative, different types or domains of nonverbal social judgments may demand differing levels of attention and working memory capacity. Supporting this position, different measures of interpersonal sensitivity (e.g., Phillips, Tunstall, & Channon, 2007) and specific types of interpersonal judgments have been shown to require varying degrees of cognitive resources. Many studies support automatic processing in the successful interpretation of nonverbal behavior. In fact, a recent study documented increases in frontal lobe activity during deception detection, suggestive of working memory load (Mah, Arnold, & Grafman, 2004). An additional study found that judgment strategy mediated the effect of cognitive resources on Interpersonal Perception Task (IPT; Archer & Costanzo; 1988) accuracy (Patterson & Stockbridge, 1998). Specifically, participants instructed to use a more automatic, first impression strategy were more accurate in their assessments of real-world videos of interpersonal interaction under conditions involving high cognitive demand (which consumed processing resources). Alternatively, those instructed to use a more controlled strategy involving looking for specific nonverbal cues as the basis for their judgments were more accurate under low cognitive demand (where processing resources were more plentiful).

Knowledge and Motivation in Interpersonal Sensitivity

A related though distinct debate within the field centers on the role of knowledge and motivation in interpersonal sensitivity. Research supporting the knowledge-based theory of interpersonal sensitivity has found a positive relation between performance on interpersonal sensitivity tasks and paper-and-pencil tests of nonverbal cue knowledge (Rosip & Hall, 2004). In fact, gender differences in nonverbal decoding have been assumed by many researchers to reflect differences in knowledge (Briton & Hall, 1995; Brody & Hall, 1993; Noller, 1986), with research demonstrating that women often perform better than men on paper-and-pencil tests of nonverbal cue usage and meaning (Rosip & Hall, 2004), as well as recall of nonverbal behavior (Hall et al., 2006). Yet gender and other individual differences in interpersonal sensitivity are likely to reflect more than simply the amount of knowledge that an individual possesses. For example, Rosip and Hall (2004) found that controlling for knowledge did not account for observed gender differences in ability to decode nonverbal behavior. Although gender was a significant predictor of nonverbal cue knowledge, and knowledge was a significant predictor of accuracy in decoding nonverbal cues, the gender differences in decoding ability could not be fully explained by knowledge about nonverbal cues. In response to this and other research suggesting a more limited role of explicit knowledge in interpersonal sensitivity, a differential motivation explanation for gender differences has also been proposed.

Motivation-based explanations of interpersonal sensitivity suggest that because gender differences in interpersonal skills are typically viewed as female-stereotypic, women may be more motivated to perform well (or men may try less hard) on interpersonal sensitivity tasks. For example, research on empathetic accuracy (i.e., the ability to infer the thoughts and feelings of others, shown to be more important to women's self-concept; Gilligan, 1982; Zahn-Waxler, Cole, & Barrett, 1991) found an accuracy advantage for women only when the interpersonal nature of the task was made salient (Klein & Hodges, 2001). Research has also found disadvantages for men when female stereotypic aspects of the nonverbal task are highlighted (Koenig & Eagly, 2005). Yet when offered a monetary incentive for performance (a universal motivator), gender differences disappeared, with performance improving for men and women alike. Although motivation likely plays a role in interpersonal sensitivity, in-the-moment motivation does not tell the whole story because even under strong motivational influences, individual differences remain (Klein & Hodges, 2001).

Considering previous research, individual differences in interpersonal sensitivity may reflect differential motivation to be interested in and to value as a skill interpersonal perception. This, in turn, may affect the effort devoted to the task as well as guide the development of this ability, leading to differences in preexisting knowledge and motivation to perform well (Ickes, Gesn, & Graham, 2000; Rosip & Hall, 2004). Thus, numerous contributions including exposure to gender stereotypes (Briton & Hall, 1995; Spence et al., 1975) and socialization affecting self-construals (Cross & Madson, 1997) may contribute to observed differences in motivation and interpersonal sensitivity, the latter of which will be addressed in this research.

Self-construals: Previously Cited Individual and Gender Differences

Individuals differ in the extent to which they envision themselves as separate from or connected to others (Markus & Kitayama, 1991). These differences in self-construal may contribute to both knowledge and motivation in interpersonal sensitivity tasks, and thus could shed light on the moderating role of gender on nonverbal decoding skills. Work by Cross and colleagues suggests that women are more likely to have an interdependent self-construal, describing the self in terms of relationships with other people and roles, focusing on interpersonal goals that are more relationship oriented such as seeking connection with others and maintaining social harmony (Cross & Madson, 1997). In contrast, men have been shown to possess more independent self-construals, characterizing themselves in ways that differentiate them from others, endorsing interpersonal goals including seeking greater independence and autonomy through control and assertiveness (Cross & Madson, 1997; Swap & Rubin, 1983). These differential self-construals have been proposed to contribute to many previously observed gender differences including aggression, emotional expression, and self-esteem (Cross & Madson, 1997), and they may contribute to differences in interpersonal sensitivity as well.

Specifically, women may perform better on interpersonal sensitivity tasks because they develop the nonverbal decoding skills that facilitate the attainment and maintenance of close relationships as a consequence of their interdependent self-construal. In fact, many measures of interpersonal sensitivity seem to correspond to goals congruent with those who possess interdependent self-construals, the majority of whom tend to be women. Horgan and Smith (2006) recently explored this possibility, demonstrating that performance on measures of interpersonal sensitivity can be influenced by simply describing the purpose for using interpersonal judgment skills as stereotypically male or female (i.e., skills used by military

interrogators vs. social workers). Results were interpreted as indicating that differences in interpersonal sensitivity were the result of using measures that were typically more congruent with the interpersonal goals likely to be endorsed by women. However, this research employed gender as a proxy for interpersonal goal endorsement and could alternatively be explained as a gender-stereotype or framing effect. As such, there is a need for research that directly examines the influence of interpersonal goal endorsement in interpersonal sensitivity.

Although the proposal of gender-based explanations in self-construals highlight the importance of how characterizations of the self may affect social goals and interpersonal sensitivity (Cross & Madson, 1997), these gender distinctions may be over simplified. In fact, research suggests that men and women often exhibit similar levels of independent and interdependent self-construals (Gabriel & Gardner, 1999; Pelham, 1993). Although both men and women express needs for belongingness and are motivated to pursue connectedness or interdependence (Gabriel & Gardner, 1999), these motivations may be expressed through different means (Baumeister & Sommer, 1997). In particular, interdependent self-construals have been subsequently reconceived (Brewer & Gardner, 1996) as being either relational (concerning roles and intimate dyadic relationships with specific others) or collective (concerning groups and membership in more impersonal collectives). Although women in much of the previous research appear to be more interdependent (cognizant and concerned with one's connection and relationship with others), this may reflect the use of measures that have focused solely on close relationships. However when both relational and collective aspects of interdependence are examined simultaneously, research suggests that women tend to fulfill their interdependent needs through relational aspects of interdependence and men are the more likely to focus on collective aspects of interdependence (Gabriel & Gardner, 1999).

Interdependent Self-construals and Interpersonal Sensitivity

Although some research has examined individual differences in relational versus collective interpersonal self-construals (Gabriel & Gardner, 1999), surprisingly little research has explored the role of these interdependent orientations on interpersonal sensitivity. One of the functions of the self is to serve as an important organizing mechanism for one's thoughts and feelings about ourselves as well as others, influencing social interactions and social information processing (Baumeister, 1998). As such, there are many reasons to predict that an individual's self-construal may relate to their interpersonal sensitivity ability. Although often thought of as an

explicit characterization of the self, research suggests that self-construals impact implicit processes as well as a variety of other psychological variables, including group attachment, self-representation, and selective memory (e.g., Gabriel & Gardner, 1999; Kashima, Yamaguchi, Kim, Choi, Gefland, & Yuki, 1995; Seeley, Gardner, Pennington, & Gabriel, 2003). Thus, self-construals are likely to be one lens through which individuals interpret themselves, others, and the world around them (Markus & Kitayama, 1991). Although women have repeatedly been shown to exhibit increased interpersonal sensitivity (Hall, 1984; Hall et al., 2006), most of these measures focused on individual targets or close relationships and may have inadvertently advantaged individuals with a relational self-construal (the majority of whom are women).

In line with the previous research on the self, highly relational individuals are expected to think and act in ways that confirm and maintain their self-view (Cross, Morris, & Gore, 2002), emphasizing connectedness with others and engaging in behaviors that promote and strengthen relationships. For example, gender differences in attention correspond to perceived differences in interdependent orientation, with women attending to information pertaining to interpersonal relationships (Josephs, Markus, & Tafarodi, 1992; Ross & Holmberg, 1992), and men directing their attention toward information pertaining to social dominance (Maccoby, 1990; Sidanius, Pratto & Bobo, 1994).

In fact, self-description and behavioral differences related to relational and collective interdependence are present even in childhood and may affect the development of interpersonal skills in different contexts. For example, boys are more likely to provide self-descriptions that contain group memberships and exceed same-aged girls in collective aspects of interdependence (e.g., larger groups congregations; Maccoby, 1990), larger social networks (Belle, 1989; Berndt, & Hoyle, 1985), and more coordinated group activities (Beneson & Parnass, 1997). As a consequence of a social orientation that centers on groups, and for which membership necessitates knowledge of, and motivation to seek and maintain status, boys may become increasingly concerned with, and attentive to, situations involving power (Baumeister & Sommer, 1997). Research has supported this idea, demonstrating an advantage for men in interpersonal tasks involving status such as judging social power through patterns of eye-gazing (Dovidio & Ellyson, 1982) and making occupational rank and assertiveness judgments from photographs and videotaped interactions (Barnes & Sternberg, 1989). However the extent of this advantage is unclear, as many studies have demonstrated only a relative advantage for men, with

men's performance near or equivalent to that of women's in male-stereotypic domains (Hall & Schmid Mast, 2008). As with the debate regarding the role of cognitive resources and the importance of knowledge versus motivation, gender differences and the potential of interpersonal orientation to account for people's ability to decode nonverbal behavior is far from settled. To explore these and other issues in the literature, we examined the role of self-construals on interpersonal sensitivity.

The Current Work

People can with remarkable accuracy infer a wealth of interpersonal information from brief encounters (e.g., Ambady & Rosenthal, 1993). Yet, why are some people better at thin slicing than others? We reasoned that self-construals reflect important social domains for people, and may convey advantages in assessing social interactions congruent with their social orientation. By focusing on variation in self structure and related experience and goals, this research examined the impact of self-construals on general interpersonal sensitivity, gender differences in this ability, as well as differences in accuracy among various domains of interpersonal perception.

The aspects of interdependence that are valued and emphasized by individuals may serve to direct attention and facilitate memory for information congruent with one's social orientation. Because of their collective interpersonal orientation and increased sensitivity to achieving and maintaining memberships in large groups, it is possible that individuals with a collective interdependent focus may demonstrate an advantage (absolute or relative) on interpersonal tasks that involve groups as targets or emphasize status, dominance, rank, or power. And similarly, individuals with a relational interdependent orientation may reveal an advantage in contexts that focus on personal ties and dyadic relationships, such as those involving intimacy or family.

We examined two aspects of interdependent (focus on the self as an interrelated entity) self-construals: relational (focus on the self and personal relationships) and collective (focus on self and large group affiliations). We considered two hypotheses. First, people with more interdependent self-construals may reveal a general advantage for accurately decoding nonverbal behaviors in all interpersonal interactions. Alternatively, a more nuanced hypothesis predicts that people possessing particular forms of self-construals would reveal better nonverbal perception for social situations involving congruent types of interpersonal information.

Method

In the current study, the self-construals of 135 undergraduates at Miami University were assessed using a number of common measures, including the Relational Interdependence Self-Construct Scale (RISC; Cross et al., 1999) and the Collective Interdependence Self-Construct Scale (CISC; Gabriel & Gardner, 1999). Afterward, participants completed a nonverbal version of the Interpersonal Perception Task (IPT; Archer & Costanzo, 1988), which presents a number of real-life videotaped interaction vignettes related to relationship (i.e., kinship, intimacy) and group-oriented (i.e., competition, status) domains. For each vignette, participants answered a multiple choice question requiring that they accurately decode the vignette presented (e.g., “Which of these two men is the child’s father?”).

Interpersonal Perception Task

Participants completed the Interpersonal Perception Task (IPT; Archer & Costanzo, 1988) to assess interpersonal sensitivity, and specifically, the ability to accurately decode nonverbal behavioral information. The IPT presents videotaped stimuli consisting of 30 scenes of naturalistic, unscripted behavior, with each scene representing a common type of social interaction (i.e., involving status, intimacy, kinship, competition, or deception). Each scene is paired with an interpretive multiple-choice question about the interaction depicted in the scene, providing an objective criterion for accurate judgment. Because the answer to the question is not explicitly conveyed, participants must pay attention to the nonverbal cues of the interactants to answer the question correctly. The interpretive nature of the IPT questions (vs. simple emotion recognition) was implemented to make the task more closely resemble the complex interpersonal perception challenges faced in everyday life.

Although variations of the IPT have revealed good test-retest reliability over a five week period ($r = .73$; Costanzo & Archer, 1993), like many other measures of interpersonal sensitivity, the IPT exhibits a weak correlation with other measures and often has low internal consistency. This suggests that it may in fact measure several discrete interpersonal skills and that ability in one domain of interpersonal sensitivity (e.g., intimacy) may not necessarily generalize to other domains (e.g., competition) (Hall, 2001).

All videos were shown without audio in order to examine the impact of collective and relational aspects of interdependence on the ability to decode nonverbal behaviors only. Previous research has found that although accuracy is generally lower using the visual-only modality in

the IPT task compared to the audio-visual format (Patterson & Stockbridge, 1998; Smith, Archer, & Costanzo, 1991), performance still exceeds chance (Iizuka, Patterson, & Matchen, 2002).

Open-ended Measure of Self-construal

Participants also completed the Twenty Statements Test (TST; Kuhn & McPartland, 1954), in which participants provide 20 self-descriptions using “I am ____.” statements, completing the sentence however they choose. Similar to Gabriel and Gardner (1999), responses were coded as being either independent (e.g. “I am smart”), relational (e.g. “I am Jason’s girlfriend”), collective (e.g. “I am in a sorority”), or non-self oriented (e.g. “I am going out to lunch this afternoon”). Responses were coded by two independent judges ($r=.63$, $p<.001$), with disputes settled by a third rater.

Measuring Independent and Interdependent Self-Construals

Participants also completed Singelis’s Self Construal Scale (SCS; 1994) to assess differences in independent and interdependent self-construals. This measure asks participants to indicate their agreement with 24 statements (e.g. “My happiness depends on the happiness of those around me”) using a 7-point scale, ranging from 1 (Strongly Disagree) to 7 (Strongly Agree).

Measuring Relational and Collective Self-Construals

To assess individual differences in interdependent self-construals, participants completed a scale designed to measure relational interdependence (RISC; Cross, Bacon, & Morris, 1999) and a separate scale measuring collective interdependence (CISC; Gabriel & Gardner, 1999). Unlike the open-ended format of the TST, these two scales more explicitly and directly assess collective and relational aspects of interdependence, asking participants to rate their agreement with statements such as, “In general, groups I belong to are an important part of my self-image” on a 7-point scale, ranging from 1 (Strongly Disagree) to 7 (Strongly Agree).

Results

Scale Reliability and Interrelations

Unfortunately, analyses of Singelis’s (1994) SCS assessing relative independent and interdependent self-construals revealed unacceptably low reliability (Cronbach’s Alpha = .52) and will subsequently not be examined further.

Surprisingly and contrary to past research (Cross et al., in press), we identified a large positive correlation, $r(135) = .74$, $p < .001$, between the relational (RISC) and collective (CISC)

self-construals, and thus, the two measures were each standardized and their mean was computed to represent a single measure of interdependent self-construal (Cronbach's Alpha = .92). This combined measure was significantly correlated to the (not statistically reliable) Singelis SCS measure of Interdependent self-construals, $r(135) = .66, p < .001$. In the analyses reported below, we focus on this combined measure of interdependence rather than trying to draw distinctions between collective and relational self-construals given their strong, positive correlation.

General Performance on the IPT

To explore the overall performance of our participants on the measure of nonverbal behavioral decoding ability, we computed the proportion of accurate responses across the 30 IPT vignettes. Although accuracy is generally lower on IPT vignettes without audio, previous research has shown that accuracy rates generally still exceed chance under these circumstances (Iizuka, Patterson, & Matchen, 2002). Unfortunately, for 15 of the IPT vignettes, participant performance was below chance level (which varies for each vignette depending on the number of multiple choice response options provided). As is common in the literature in this area of research (e.g., Costanzo & Archer, 1989, 1993; Phillips, Tunstall, & Channon, 2007), we will focus on analyses involving those IPT vignettes answered at above chance levels (and note relevant analyses for all 30 IPT vignettes).

Replication of Past Work

To explore gender differences with respect to self-construals, we conducted analyses of variance (ANOVAs) where gender was the independent variable. First, we examined gender differences on our combined measure of interdependent self-construals (mean of RISC and CISC scores). Similar to the findings of Cross and colleagues (in press), women's self-construals were marginally more interdependent ($M = .08, SD = .87$) than men's ($M = -.26, SD = 1.07$), $F(1, 133) = 3.54, p = .06$.

To explore gender differences with respect to self-construals in the more open-ended format provided by the TST, we conducted a 2 (participant gender: male vs. female) X 2 (TST self-construal: independent vs. interdependent) mixed-model ANOVA with the latter factor repeated. The two-way interaction between self-construal type and gender was predicted, where based on previous research, we expected that women would exhibit relatively greater interdependent self-construal scores than men. However, analyses revealed only main effects of

TST self-construal, with a greater proportion of self-construals being classified as independent than interdependent, $F(1, 133) = 131.10, p < .001$ ($M = .71, SD = .22$ vs. $M = .24, SD = .21$, respectively). No other effects were significant, $F_s < 1$. We repeated these analyses with relational and collective self-construals as the within subjects variable and again found only a main effect of TST self-construal. Specifically, a greater proportion of self-construals were classified as collective than relational, $F(1, 133) = 35.24, p < .001$ ($M = .16, SD = .16$ vs. $M = .08, SD = .09$, respectively). No other effects were significant, $F_s < 1$.

Finally, we explored gender differences in interpersonal sensitivity. Specifically, we expected to replicate past research demonstrating an advantage for women on the IPT (Costanzo & Archer, 1989; Smith et al., 1991). A one-way ANOVA on the proportion of accurate IPT judgments (using the 15 vignettes where performance exceeded chance) showed a marginal gender difference, $F(1, 133) = 3.54, p = .06$. Unexpectedly, men tended to perform better than women on the IPT ($M = .66, SD = .11$ vs. $M = .62, SD = .10$). When conducting a parallel ANOVA on IPT performance using all 30 vignettes, a significant effect of gender, $F(1, 133) = 5.74, p < .02$, revealed that men ($M = .49, SD = .10$) performed better than women ($M = .45, SD = .08$). These findings are contrary to past results (Hall, 1984; Hall & Bernieri, 2001).

Interpersonal Sensitivity and Self-Construals

Dichotomized RISC/CISC measure of interpersonal self-construal and nonverbal decoding. Our primary focus was to assess participant accuracy on the IPT and whether specific forms of self-construal might benefit interpersonal sensitivity on corresponding social interaction types. For the combined (RISC and CISC) interdependence self-construal measure, we adopted a mean split approach when analyzing the data. To examine the effects of self-construal on interpersonal sensitivity, we conducted a 2 (Interdependent self-construal: high vs. low) X 5 (IPT task type: intimacy, kinship, deception, competition, status) repeated-measures ANOVA (where IPT task type was a within-subjects factor) for the 15 vignettes where performance exceeded chance and a separate 2x5 ANOVA for all 30 IPT vignettes.

Support for the general interpersonal sensitivity and self-construal hypothesis would show that people with greater interdependent self-construals would be better at decoding people's nonverbal behaviors across all IPT vignette types. However, the more nuanced hypothesis would anticipate that participants with greater interdependent self-construals would

perform better on the tasks involving congruent types of interpersonal information and relationships (i.e., intimacy, kinship).

A combined interdependent self-construal by IPT task type mixed-design ANOVA found a main effect of IPT vignette type, $F(4, 532) = 37.60, p < .001$. To further explore this finding, we conducted post-hoc LSD pair-wise comparisons (see Table 1). Simple comparison analyses revealed that participants were better at decoding nonverbal behavior in interpersonal situations involving kinship than in any other type of context presented in the IPT. After kinship, performance was best on the intimacy and status vignettes, for which performance was marginally better than performance on the competition and status vignettes. In addition, there was a marginal main effect of self-construal, $F(1, 133) = 3.60, p = .06$, which suggested that participants with more interdependent self-construals tended to performed better overall ($M = .67, SD = .01$) than those with less interdependent self-construals ($M = .63, SD = .01$).

A series of follow-up one-way ANOVAs examined whether there were differences in interpersonal sensitivity between people who vary in interdependent self-construals for each of the five vignette types. There were no significant differences for the kinship, status, competition, or the deception vignettes, $F_s < 2.3, ns$. However, there was a significant effect of self-construal on performance on the intimacy vignettes, $F(1, 133) = 3.88, p = .05$. Consistent with the more nuanced hypothesis, participants with greater interdependent self-construals perform better ($M = .66, SD = .24$) than those with less interdependent self-construals ($M = .58, SD = .26$).¹ A detailed presentation of means and standard deviations for each IPT vignette as a function of interdependent self-construal level is presented in Table 2.

Analyses treating interpersonal self-construal as a continuous measure. We also conducted correlational analyses to examine the relation between IPT performance and our continuous measures of self-construal. Support for the general interpersonal sensitivity and self-construal hypothesis would show that people with greater interdependent self-construals would exhibit better performance on interpersonal sensitivity across all vignettes. However, support for the more nuanced hypothesis would anticipate that those with greater interdependent self-construals would perform better on IPT tasks involving congruent types of interpersonal information and relationships (i.e., intimacy and kinship).

Although our continuous measure of interdependent self-construal was not systematically related to overall IPT performance, $r(135) = .12, p = .17$, IPT performance on congruent types of

interpersonal contexts was positively correlated with interdependent self-construals. Specifically, greater interdependent self-construals predicted better performance on the kinship vignettes of IPT, $r(135) = .21, p < .02$, and predicted better performance on the intimacy IPT vignettes, $r(135) = .18, p < .04$. Self-construal was uncorrelated for all remaining IPT vignette types, all $r_s < .03, p_s > .74$.²

Open-ended measure of interpersonal self-construal and nonverbal decoding. Using responses to the Twenty Statements Test (TST; Kuhn & McPartland, 1954), we assessed IPT performance by regressing it on the proportion of participant-provided self-construals that were judged to be independent or interdependent (both of these predictors were entered in a multiple regression). Unfortunately, neither independent nor interdependent self-construal predicted IPT performance (overall or vignette specific performance), all β es $< .32, t$ s $< 1.36, p$ s $> .18$. Next we examined whether the TST-derived measures of collective and relational self-construals could predict IPT performance in parallel regression analyses. The only effect observed was that participants with a greater proportion of relational self-construals tended to exhibit marginally better performance on the kinship vignettes of the IPT, $\beta = .16, t(132) = 1.75, p = .08$. No other effects were observed on either overall IPT performance or performance on specific vignette types, all β es $< .13, t$ s $< 1.36, p$ s $> .18$.³

Discussion

Performance on the IPT has been shown to predict meaningful social outcomes. For example, IPT scores are related to peer ratings of interpersonal sensitivity and social skills (Costanzo & Archer, 1993; Hodgins & Zuckerman, 1990), with individuals who perform better on the IPT showing greater social awareness and competence (Archer et al., 2001). In addition, performance on the IPT is positively correlated with measures of sociability and public self-consciousness, and negatively correlated with social anxiety, communication anxiety, and shyness (Schroeder 1995a, 1995b; Schroeder & Ketrow, 1997). Shown to be distinct from intelligence as measured by IQ tests (Campbell & McCord, 1996), interpersonal sensitivity is an important area of investigation. The measure used in the current study was designed for investigating the process of interpersonal perception, and in particular, the ability to accurately interpret the nonverbal behavior of others. Although extremely important, interpreting behavior of others is just one aspect of “social intelligence” or “social competence.”

Research has demonstrated that differences in interpersonal sensitivity may result from differences in the motivation to value, and be interested in, interpersonal perception. This orientation of the self may serve to guide in-the-moment attention to cues and circumstances in directing social attention and behavior. Accordingly in the current work, we anticipated that relational or collective aspects of interdependence should direct attention and memory toward information congruent to one's social orientation. Thus, the current work explored whether self-construals underlie differences in interpersonal sensitivity and might account for gender differences observed in past work (Costanzo & Archer, 1989; Smith et al., 1991).

Based on Gabriel and Gardner (1999), we expected to find that participants with more relational interdependent self-construals would reveal greater accuracy in decoding social situations involving close relationships (i.e., intimacy and kinship). Similarly, we expected those with greater collective self-construals would be better in assessing social situations involving group dynamics (i.e., status and competition). Surprisingly, relational and collective self-construals were highly related, leading us to combine them into a single measure rather than to consider them as distinct psychological constructs. Analyses revealed that gender differences in this combined measure of interdependent self-construal aligned well with previous research, with women exhibiting self-construals that tended to be more interdependent than men. And most important, those individuals greater in interdependent self-construal, based on this combined measure, were more accurate only at decoding situations involving kinship and intimacy. Thus, how the self is characterized may play an important role in people's ability to accurately decode the behaviors of others in specific interpersonal domains.

Unfortunately, we did replicate many of the previous findings in the literature. For example, analyses revealed that for our sample, Singelis's SCS (the measure of independent and interdependent self-construals) had unacceptable low reliability, and as a result we were unable to explore this distinction in the current work. Performance on our dependent variable was also quite poor. In particular, accuracy exceeded chance on only 15 of the IPT vignettes.

Additionally, we failed to replicate the classic gender difference in interpersonal sensitivity. Surprisingly, men in our sample tended to perform better than the women on the IPT. Lastly, we did not observe the previously observed orthogonal relationship of relational and collective self-construals e.g., Gabriel & Gardner, 1999). In fact, the measures of relational and collective self-construals in our sample were very positively correlated, leading us to combine them into a

single index of interdependent self-construal. Gender differences in this combined measure of interdependent self-construal, however, did align with previous research, with women exhibiting self-construals that tended to be more interdependent than men.

In examining the limitations and inconsistencies with prior research that are present in the current work, we consider a number of potential contributing factors. Although research has been conducted on different aspects of interdependent self-construals, the distinction between relational and collective interdependent self-construals has received empirical attention by only a handful of researchers (e.g. Gabriel & Gardner, 1999). As such, the distinction between these two self-construals may not be as clear cut as the literature would suggest.

A related possibility centers on the effects of certain aspects of the university in which these data were collected. The current study was run at Miami University, an institution with a strong emphasis on Panhellenic student life. In fact, data from Spring semester 2011 indicate that 32% of all undergraduates were involved in a Greek-letter (i.e., sorority or fraternity) organization (<http://www.units.muohio.edu/saf/gra/Facts-satistics>). It is possible that both the prevalence and importance of these inherently collective memberships result in Miami undergraduate women with strong relational (as shown in previous research) and highly collective self-construals, which could then increase the correlation between relational and collective self-construals and thus account for why gender differences in collective and relational self-construals were absent in the current study.

However, collective self-construals and memberships in more impersonal collectives may set the stage for more intimate and dyadic relationships. As such, it is possible that the importance of Greek life in the current sample population could result in increasing the prevalence of relational and collective self-construals for both men and women at Miami. However, if this argument is placed within the larger framework of self-construals and interpersonal sensitivity, one would expect that if Miami University students had self-construals that were greater in both relational and collective aspects of interdependence, they should exhibit elevated performance on our nonverbal measure of interpersonal sensitivity. However, this is not what was found. In fact, our participants performed at or below chance on 15 of the 30 IPT vignettes, which is at odds with the existent literature (e.g. Iizuka, Patterson, & Matchen, 2002; Patterson & Stockbridge, 1998; Smith, Archer, & Costanzo, 1991).

This poor overall performance on our measure of interpersonal sensitivity (i.e., the IPT vignettes) could result from a number of factors. For example, participant motivation may have been less than ideal. The IPT video task was rather long (over 30 min) and was not accompanied with sound. For many of our undergraduates, this may have been viewed as unreasonable amount of time to focus on the same task, and debriefings revealed that more than one participant expressed their disdain and boredom associated with the task. Alternatively, aspects of the video itself may have contributed to the overall poor performance. Although the IPT has a number of positive qualities (e.g. real interactions, objective criterion), this video may be slightly “dated.” It is possible that the poor quality of the video as well as the clothing and interactions of the targets (e.g., playing games such as racquetball, which is now somewhat passé) may have distracted participants from the task at hand or reduced their conscientious engagement with the materials.

Future research directions could explore a number of these possibilities, exploring alternative methodologies and the possible effects of group memberships on self-construals. For example, incorporating the thin-slice methodology could provide an alternative measure of nonverbal interpersonal sensitivity. For example, following the research methodology of Ambady and Rosenthal (1993), interpersonal sensitivity could be measured by asking participants to predict a professor’s end-of-semester evaluation after viewing brief (2-6 sec) clips of their nonverbal behavior during a lecture. Further work in a college setting could leverage the availability of professors with actual course evaluations to use such a methodology in future work.

Understanding the thoughts, feelings, and behaviors of other people is a basic and important social goal, and although nonverbal behavior decoding is one of the means through which we may accomplish this goal, interpreting the behaviors of others is only one aspect of interpersonal sensitivity or social intelligence. Future research should also explore the role of self-construals in other abilities related to accurately sensing, perceiving, and responding to the social environment.

Despite the non-replication of self-construal data and the absence of previously observed gender effects, our data does support the role of interdependent self-construals in the decoding on nonverbal behaviors in corresponding interpersonal interaction contexts. Moving forward and considering future work, the lessons taken from this research highlight the importance choosing all experimental measures carefully, taking into consideration the unique properties of the

specific sample population. Most importantly, the current research emphasizes the importance of considering a more nuanced and context-dependent view of interpersonal sensitivity and how it relates to self-construals.

Table 1			
<i>IPT(15) Performance by Vignette Type</i>			
	Vignette Type	Mean	Std. Deviation
	Kinship	.90 _a	.23
	Intimacy	.62 _b	.25
	Status	.62 _b	.27
	Competition	.56 _c	.25
	Deception	.56 _c	.28
<i>Note.</i> Means with differing subscripts differ based on Fisher's LSD post hoc pairwise comparisons. Differences between a and bc are significant ($p < .001$), differences between b and c are marginal ($p < .10$).			

Table 2				
<i>IPT(15) Performance by Self-construal</i>				
Vignette Type	Low Interdependent Self-construal		High Interdependent Self-construal	
	Mean	Std. Dev	Mean	Std. Dev
Kinship	.87	.26	.92	.20
Intimacy	.58	.26	.68	.24
Status	.60	.27	.63	.20
Competition	.57	.23	.56	.26
Deception	.56	.28	.56	.29

Table 3			
<i>IPT(30) Performance by Vignette Type</i>			
	Vignette Type	Mean	Std. Deviation
	Kinship	.43 _a	.16
	Intimacy	.41 _a	.17
	Status	.48 _b	.21
	Competition	.54 _c	.20
	Deception	.42 _a	.21
<i>Note.</i> Means with differing subscripts differ based on Fisher's LSD post hoc pairwise comparisons ($p < .05$).			

Table 4					
<i>IPT(30) Performance by Self-construal</i>					
Vignette Type	Low Interdependent Self-construal		High Interdependent Self-construal		
	Mean	Std. Dev	Mean	Std. Dev	
Kinship	.43	.18	.43	.15	
Intimacy	.40	.18	.42	.16	
Status	.48	.22	.49	.20	
Competition	.51	.21	.56	.19	
Deception	.40	.21	.43	.21	

Footnotes

¹ Parallel analyses involving all 30 IPT vignettes were conducted. The 2 (combined RISC/CISC interdependent self-construal: high or low) by 5 (vignette type: kinship, intimacy, competition, status, or deception vignettes) mixed-design ANOVA only revealed a similar main effect of IPT vignette type, $F(4, 532) = 10.26, p < .001$. To further explore this finding, we explored simple comparisons (see Table 3). Simple comparison analyses revealed that participants were significantly better at decoding nonverbal behavior in interpersonal situations involving competition than in any other type of context presented in the IPT. Next to the competition vignettes, performance was best on the status vignettes on the IPT. Performance on all other vignettes was statistically equivalent. In addition, participants were more accurate at responding to the status vignettes than the kinship, intimacy, or deception vignettes ($F_s > 6.29, p < .02$), which did not differ from each other, $F_s < 1.21, p > .27$. A series of one-way ANOVAs for each of the five vignettes examined whether there were differences in interpersonal accuracy as a function of interdependent self-construals, but no significant effects were found, $F_s < 2.01, ns$. For a complete table of means and standard deviations involving all 30 IPT vignettes as a function of interdependent self-construal, see Table 4.

² Correlational analyses involving all 30 IPT vignettes revealed that the continuous measure of interdependent self-construal was not significantly related to general performance on the IPT or performance on any vignette, all $r_s < .10, p_s > .22$.

³ We conducted similar analyses involving all 30 IPT vignettes. First, we computed the proportion of self-construals that were coded as being either independent or interdependent and entered them in a multiple regression to predict overall IPT performance as well as performance for each of the different vignette types. For overall IPT performance, participants performed worse on the IPT when they were greater in independent self-construals, $\beta = -.50, t(132) = -2.16, p = .03$, and were greater in interdependent self-construals, $\beta = -.46, t(132) = -2.00, p = .05$. Neither independent nor interdependent self-construal predicted performance on the individual vignette types, all $\beta_s < .36, t_s < 1.53, p_s > .13$. Next, we examined the predictive ability of TST-derived measures of collective and relation self-construals. Multiple regression analyses regressing IPT performance on these two measures of self-construals revealed no

relations in predicting IPT performance (overall or on specific vignette types), all β s < .10, t s < 1.1, p s > .32.

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