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# Empathic Accuracy and Adolescent Romantic Relationships

Peter T. Haugen

*University of Tennessee - Knoxville*

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To the Graduate Council:

I am submitting herewith a dissertation written by Peter T. Haugen entitled "Empathic Accuracy and Adolescent Romantic Relationships." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

Deborah P. Welsh, Major Professor

We have read this dissertation and recommend its acceptance:

Cheryl Travis, Lowell A. Gaertner, Heather A. Hirschfeld

Accepted for the Council:

Dixie L. Thompson

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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Accepted for the Council:

Anne Mayhew

Vice Chancellor and  
Dean of Graduate Studies

(Original signatures are on file with official student records.)

**EMPATHIC ACCURACY AND  
ADOLESCENT ROMANTIC RELATIONSHIPS**

A Dissertation

Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

Peter T. Haugen

August 2006

## **DEDICATION**

I dedicate this dissertation to  
my mother, Nancy Haugen,  
my aunt, Ellen Hughes, and my sister, Amy Haugen.

Without their love, sacrifice, and support,  
my exploration and work would not have been possible.

## ACKNOWLEDGMENTS

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## ABSTRACT

This dissertation describes a study that seeks to understand the role of empathic accuracy in adolescent romantic relationships. Such relationships are important in their own right and play a central role in shaping the general course of development in adolescence. Five specific questions are examined in this project. First, is there a gender difference in empathic accuracy? Second, does empathic accuracy improve over the course of a relationship? Third, does empathic accuracy improve with age? Fourth, is empathic accuracy related to relationship satisfaction? Fifth, is an individual's hiding something when discussing disagreements related to a decrease in the partner's empathic accuracy?

To explore these questions, we use data collected from 101 middle adolescent and 105 late adolescent dating couples. We use observational coded data gathered from recorded conversations whereby couples discuss an issue of disagreement in their relationship as well as survey data. To accomplish these analyses in a way that controlled for non-independence of partner-members' responses (which violate the assumptions of techniques such as multiple regression, and thus artificially inflates error terms), data were examined with hierarchical linear modeling. Although the ability of an individual to correctly infer the thoughts and feelings of their partner was very similar for males and females, we found that, overall, females were slightly more empathically accurate than their male partners. Relationship length was unrelated to empathic accuracy and age was only loosely associated. Controlling for age, we found that relationship satisfaction was significantly associated with empathic accuracy for males with a significant trend for females. Finally, females'

reports of “hiding something” was negatively associated with males’ empathic accuracy.

These results using a global measure of empathic accuracy are complimented by findings with four component dimensions: connection, conflict, uncomfortable, and being persuaded. We found complex, gender-linked differences in empathic accuracy and its relation to relationship satisfaction and a partner’s report of “hiding something.” Specifically, when females reported higher relationship satisfaction, they were more likely to accurately perceive their partners’ negative feelings and behaviors (conflict, persuading, and discomfort) with a significant trend in perceiving their partners’ feelings of connection. However, for males, higher relationship satisfaction was negatively associated with the accurate perception of feelings of connection and positively associated with accuracy in perceiving conflict. We also found that males were less accurate at perceiving conflict when their partner reported “hiding something.”

Findings and implications are discussed within the frameworks of a number of different paradigms, including developmental and social psychology, and feminism. Recommendations are made for discussing results in relation to the demands of interaction protocols and for more nuanced measurement systems.

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## CHAPTER I

### INTRODUCTION

The capacity to enter into and maintain a close relationship with another person is a major criterion of successful adult development (Baumeister & Leary, 1995; Furman, Brown, & Feiring, 1999). Such relationships, particularly romantic relationships, derive their significance not only from mutually self-disclosing behaviors but from the experience of feeling understood, validated, and cared for as a result of those behaviors (Reis and Shaver, 1988; Collins and Sroufe, 1999). The processes that comprise these behaviors, thoughts and feelings are complex, multiply-determined phenomena. One such process is empathy. Empathy, according to Carl Rogers (1961), “means entering the private, perceptual world of the other and becoming thoroughly at home in it. It involves being sensitive, moment to moment, to the changing felt meanings which flow in this other person...” (p.141). Social psychologists have operationalized empathy in order to study the correlates of its success and failure. Thus, *empathic accuracy* is the ability of individuals to accurately read the moment-to-moment cognitive and affective states of their partners (e.g., Noller & Ruzzene, 1991). Researchers have generally found that empathic accuracy is a positive predictor of relationship quality in dyadic interactions under certain conditions (see Ickes and Simpson, 1997, for review). Empathy is thought to facilitate skills essential for relationship maintenance, including effective communicating and problem-solving (e.g., Altman & Taylor, 1973; Noller &

Ruzzene, 1991). Adolescence, as an early site for the development of the capacities and skills germane to empathy and reciprocity, may be an opportune time to examine the role that empathic accuracy plays in the development of romantic relationships. Such relationships are important in their own right and play a central role in shaping the general course of development in adolescence (Furman & Shaffer, 2003). In this study, we will examine empathic accuracy in adolescent romantic relationships.

### **Developmental Perspective of Adolescence**

The ability to be empathically aware of others' emotions and cognitions is clearly in place by adolescence (Rosenblum and Lewis, 1999). Self-awareness and the ability to infer the emotional experience of others (rather than reacting to an event which has been witnessed) becomes more fully developed between the ages of 7 and 13 (Strayer, 1993) and corresponds with the development of cognitive role-taking skills; skills that are predictive of empathy (Roberts and Strayer, 1996). Cognitive developments in adolescence also include an increase in abstract thinking, enabling adolescents to more easily anticipate and respond to shifts in the emotional states, experiences, and expressions of others (Rosenblum and Lewis, 1999). Although the ability to be empathically aware of others' emotions is present in adolescence, it is unclear how contextual factors influence the exhibition of appropriate or supportive emotional responding. Eisenberg and colleagues (1994) found that engaging in empathic responsiveness requires the ability to tolerate the affect generated by such a connection. In the presence of another's negative affect, individuals who are less capable of such regulation may be prompted to avoid empathic responses or flee the

situation (Eisenberg, 2000). Research with conduct-disordered adolescents supports this assertion, as situations designed to evoke empathic responses were found to cause emotional dysregulation in adolescents described as conduct-disordered (Cohen and Strayer, 1996).

### **Adolescent Romantic Relationships**

Romantic relationships are normative and salient in adolescence. Over 70 % of adolescents report having been involved in a romantic relationship in the past 18 months by the age of 18 (Carver, Joyner, & Udry, 2003). Moreover, adolescents regard romantic relationships as one of their most significant and influential relationships (Adams, Laursen, & Wilder, 2001). Adolescent romantic relationships play an important role in the development of adolescents' identity. Sullivan (1953) has argued that there is a shift in heterosexual adolescents from seeking someone quite like the self to seeking someone quite different from the self –someone of the opposite sex. Adolescent romantic relationships also play an important role in the development of sexuality (Welsh, Rostosky, & Kawaguchi, 2000) and the transformation of family relationships (Gray & Steinberg, 1999). Thus, romantic relationships play a unique and important role in facilitating individual and relational maturity in adolescence.

Contemporary models of adolescent romantic relationships share a strong reliance on attachment theory (Collins & Sroufe, 1999; Downey, Bonica, & Rincon, 2000; Furman & Wehner, 1994, 1997). In his seminal works on attachment, John Bowlby (1969; 1973; 1980) proposed that there is a universal human need to form

and maintain affectional bonds. At the theory's core is the reciprocity of early infant-caregiver relationships. Infants engage in attachment behavior (e.g., clinging, proximity seeking, smiling), which should result in an appropriate response from the caregiver. This response in turn allows the infant to establish a sense of safety and security. It is this experience of safety that allows an infant to regulate its emotional experience (Sroufe, 1996). The experience of safety is also, according to Bowlby, the driving force behind the evolution of the attachment system. Bowlby proposed that such early attachment experiences form internal working models of the self and of others, which provide the prototype for all future relationships. These working models guide how individuals in close relationships interpret their own and their partners' behaviors and intentions over the course of their lifespan.

Building on the work of Bowlby and his successors, Hazan and Shaver (1987) conceptualized love relationships in terms of attachment, postulating that romantic partners replace parents as attachment figures. In turn, attachment status in adolescent romantic relationships is a powerful predictor of a number of relational processes and outcomes (Roisman, Madsen, Hennighausen, Sroufe, & Collins, 2001). Teens who are classified as securely attached are more effective communicators, use more constructive techniques to alleviate conflict, and have generally more positive exchanges with their partners, than those teens who are not securely attached (Carnelley, Pietromonaco, & Jaffe, 1994; Creasey & Hesson-McInnis, 2001; Creasey, Kershaw, & Boston, 1999). In contrast, adolescents who are more expectant of and anxious about rejection and abandonment view their relationships more negatively and behave with more hostility. These perceptions and behaviors are linked to low



levels of relationship satisfaction, emotional intimacy, and commitment (Collins & Read, 1990; Downey, Freitas, Michaelis, & Khouri, 1998). Furman and Wehner (1994, 1997) have provided a theoretical account of the development of romantic relationships across adolescence, which integrates attachment, affiliative, care-giving and sexual reproductive behavioral systems. They hypothesize that beginning in early adolescence, romantic partners take on increased significance and are utilized as an important resource in times of distress. As sexual desire emerges, sexual behaviors and feelings are incorporated into the relationship. Furman and Wehner conclude that through meeting these various needs, the romantic partner becomes a central figure in late adolescence and early adulthood (Furman & Wehner, 1994, 1997).

### **Adolescent Romantic Relationships and Gender**

Forming a sense of one's own gender is referred to as gender identity development. It begins early in childhood, but its salience is heightened during adolescence (Galambos, Almeida, & Peterson, 1990). Physical maturation presents teens with new questions regarding their identity and new types of relationships, including sexual and romantic ones (Tolman, Striepe, & Harmon, 2003). In early adolescence, individuals go through a period of "gender intensification" during which they increasingly conform to gender-role expectations, transmitted by the expectations of parents, teachers, and peers (Hill & Lynch, 1983). Consequently, by mid-adolescence, individuals' beliefs about gender-appropriate traits and behaviors become gradually more rigid (Badger, Simpson Craft, & Jensen, 1998). Algier and

McCormick (1983) provide a brief example of the impact that the meanings and expressions associated with masculinity and femininity can have on adolescent romantic relationships. These researchers found that both male and female adolescents thought members of the opposite sex expected them to behave on a date in ways much more gender-role-stereotyped than either sex actually wanted their dates to behave. Feiring (1996) found that when describing romantic relationships, mid- and late-adolescents describe girls as being more likely than boys to mention self-disclosure, support, and jealousy (Feiring, 1996). Zweig and colleagues (Zweig, Barber, & Eccles, 2003) point out that these over-stereotyped expectations of the other gender can lead both males and females to behave in an exaggerated manner in the early stages of adolescent heterosexual dating relationships. In short, romantic relationships provide a context in which these stereotypes can be both reinforced and broken down (Furman & Shaffer, 2003).

A number of researchers and theorists have suggested that empathy or a sensitive assessment of other people's thoughts and feelings is less important to boys than is being assertive. Gilligan and Wiggins (1988) argued that empathy is a defining trait of femininity. Adopting Chodorow's social-roles perspective (Chodorow, 1978), Gilligan and Wiggins (1998) reiterated that the caretaking role that women have played in various societies throughout history has led women to be particularly concerned with the maintenance of social relations. Indeed, a number of researchers have developed evidence that adolescent girls are more likely than adolescent boys to have intimate, self-disclosing same-sex friendships (Caldwell & Peplau, 1982; Furman & Buhrmester, 1985; Reisman, 1990; Savin-Williams &

Berndt, 1990; Way, 1996). Accordingly, argue Gilligan and Wiggins, women frame moral decision in terms of an ethic of care (rather than an ethic of justice), a perspective which promotes empathic concern for others. Men, according to Gilligan and Attanucci (1988), tend to be more detached from the plight of others. However, research has been mixed in its support of this suggestion. Lennon and Eisenberg (1987) point out that despite the overwhelming evidence for divergent paths in emotional socialization, the majority of behavioral empathy studies do not show clear-cut gender effects (Karniol, Gabay, Ochion, & Harari, 1998). In addition, a number of researchers such as Niobe Way, William Pollack, Michael Bamberg, and others have begun to seriously examine boys' relational experiences in various contexts and have found that adolescent boys, at least those from urban low-income environments, may desire intimate same-sex relationships as much as their female peers; girls may simply be more encouraged, successful, or skillful in fulfilling such desires. Therefore, the ethics of care and justice are *not* completely gender specific, but rather are conceptualized as strongly related to gender.

### **Empathic Accuracy**

Romantic relationships are a context where many developmental tasks integral to adolescent development occur. Erik Erikson (1968) believed that adolescent love was simply an “attempt to arrive at a definition of one’s identity by projecting one’s diffused self-image on another and seeing it thus reflected and gradually clarified” (p. 132). By this formulation, the formation of a stable identity is closely linked to an individual’s ability to infer the thoughts and feelings of their

romantic partner. This ability is not equally present in all people; as such, it is an individual difference. This individual difference has been conceptualized by some researchers as empathic accuracy.

Empathic accuracy is the term given to the ability of an individual (the “judge”) to accurately infer the specific content of the thoughts and feelings of another individual (the “target”) evinced during a dyadic interaction (Ickes, 1993; Ickes, Stinson, Bisonette, & Garcia, 1990). The various components of empathic accuracy represent distinct skills that contribute to the formation and maintenance of relationships.

Researchers across a number of disciplines have attempted to create valid and reliable measures to assess the accuracy of the judge’s empathic inferences. Clinical and counseling psychologists have focused primarily on assessing accuracy in the client-therapist relationship and between marital partners (Ickes, 1993). Several psychologists have focused on the link between empathic accuracy and relationship quality in dating and married adults. Early measurement techniques involved paper-and-pencil rating tasks (see Ickes & Simpson, 1997, for review of systems), which were fraught with statistical and interpretive problems and proved largely inadequate for measuring interaction in ongoing, naturalistic settings.

More than a decade ago, social psychologist William Ickes and his colleagues developed an approach to measuring empathic accuracy that allowed researchers to measure understanding in a manner more consistent with its natural occurrence in dyads. The most common paradigm for measuring empathic accuracy is one in which pairs of participants are videotaped during an unstructured interaction. They

are then moved to separate cubicles in which each views a video tape of their interaction. During the viewing of the tape, each is given a start/pause control along with a supply of standardized thought/feeling coding forms. At each point the participant remembers having had a specific thought or feeling, he or she pauses the tape and records 1) the exact time the thought/feeling occurred and 2) the specific content of that thought/feeling (answered in terms of one of two sentence stems “I was thinking:” or “I was feeling:”). After this first viewing, the tape is viewed a second time and the participant is asked to repeat exactly the same procedure, but with their *partner* as the focus. This time, however, the tape is stopped at each point their *partner* has identified a specific thought or feeling. After collecting the data, independent raters are asked to judge the similarity of the actual thoughts and feelings reported by each participant with the corresponding inferred thoughts and feelings reported by his or her partner. These similarity ratings are then aggregated to create a measure of empathic accuracy that is scaled to range from 0 (no accuracy) to 100 (perfect accuracy; for a more detailed description, see Ickes, Bisonette, et al., 1990). This approach provides the opportunity for participants to make accurate, on-line (i.e., ‘real-time’) inferences about the specific content of the successive thoughts and feelings of one’s interaction partner (see Ickes, Bisonette, et al., 1990; Ickes & Tooke, 1988).

### ***Assumptions of Empathic Accuracy***

Without a doubt, what William Ickes (1997) refers to as “the problem of other’s subjective experience” is a controversial topic (p. 1). Empathic inference is a

complex psychological process in which we engage every day and which draws on observation, memory, knowledge and reasoning. Empathic accuracy is conceptually distinct from a simple knowledge of another's more stable and enduring characteristics, such as their personality, traits and opinions (Ickes, 1993). Empathic accuracy requires an awareness of another's internal states on a moment-to-moment basis. Empathic accuracy is also distinct from the process of empathy itself. Empathy is at times seen as a process of cognitive and affective perspective-taking whereas empathic accuracy signifies the success of this endeavor (Davis, 1994). Finally, empathic accuracy does not necessitate a vicarious sharing of the other's affect. Instead, it requires recognition of the other's episodic psychological states.

### ***Stability of Empathic Accuracy Over Time and Across Relationships***

The stability of empathic accuracy over time and across situations has not been widely studied. In the few studies that do address these topics, it appears that empathic accuracy is trait-like, having some stability over a year (Thomas, Fletcher, & Lange, 1997) and across various targets (Marangoni, Garcia, Ickes, & Teng, 1995; Noller, 1981). Thomas and colleagues (1995) conducted a study assessing empathic accuracy in 74 married couples. One year later, 57 of the 74 couples returned to take part in the same empathic accuracy procedure. After controlling for the similarity of the issues discussed on the two occasions, Thomas et al. found a .40 correlation between the couples' empathic accuracy at Time 1 and Time 2, suggesting that the assessment of empathic accuracy in an individual is relatively stable over time. Another intriguing finding from this study was that couples who had been married

longer were less accurate than those whose marriages were relatively new. Thomas, Fletcher, & Lange (1997) suggest the source of this difference lay in motivation. Efforts to understand one's partner peak during the early stages of close relationships, but as relationships stabilize, partners become "complacent" and therefore, are less motivated to assess the thoughts and feelings of their partners.

Literature focusing on relational variables rather than measures of individual functioning, finds that the largest source of variance in predicting accuracy is the relationship between the judge and target, with closer relationships resulting, usually, in higher empathic accuracy scores (Kenny, 1994). Of course, there are most likely also intra-individual factors that contribute to empathic accuracy<sup>1</sup>. Marangoni and colleagues (Marangoni et al., 1995) had individuals view standardized videotapes depicting targets discussing personal issues with a therapist, all of whom were strangers. While they found stable individual differences in judges' empathic accuracy across these videotapes, they also found that the empathic accuracy of these judges improved over the course of each individual videotape.

### ***Empathic Accuracy in Close Relationships***

Perhaps the simplest prediction in research on perspective taking (e.g., empathic accuracy; Ickes & Simpson, 1997) is that individuals should be more accurate in close relationships than in those that are more distant. According to Ickes and Simpson (1997) the overarching rationale behind this prediction has three components: First, we know that people in close relationships are motivated to be

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<sup>1</sup> in addition to motivation, mentioned above

accurate and that valid perceptions should lead to increased accuracy. Second, individuals in close relationships presumably have more opportunities to observe their partner than do others. Third, individuals in close relationships may feel more willing to disclose their feelings to their partner than to others, providing the judge with more evidence on which to base their interpretations.

A number of studies, however, complicate the relationship between empathic accuracy and positive relationship outcomes. Early studies concerning the accuracy of empathic perceptions by Noller and colleagues (Noller, 1981; Noller & Ruzzene, 1991) and by Sillars and colleagues (Sillars, 1985; Sillars, Pike, Jones, & Murphy, 1984; Sillars & Scott, 1983) have qualified this normally positive relationship. In each of these studies, greater empathic accuracy was associated with poorer relationship functioning and outcomes. The authors theorize that empathic accuracy can raise awareness of irreconcilable differences, threaten benevolent misconceptions, and uncover unpleasant truths about one's partner (Sillars, 1985).

Recently, Ickes and Simpson (1997, 2001) have proposed a theoretical model to resolve these apparently contradictory findings based on an individual differences framework. They identified two exceptions to the general rule that empathic accuracy is associated with higher relationship quality. Both exceptions are presumed to occur when one or both couple members suspect that their partner is harboring thoughts and feelings that they are better off not knowing. The potentially threatening nature of the target's thoughts and feelings during an interaction serves to moderate the relationship between the judge's empathic accuracy and their perception of relationship quality (Simpson, Orina, & Ickes, 2003). The first exception to the



general rule is that when issues discussed are perceived to be threatening, partner members can spare themselves pain and injury which might result from correctly inferring the nature of their partners' thoughts and feelings by *misinfering*, or being less empathically accurate. This hypothesis is in line with well-known tendencies in healthy adult couples to see each other through rose-colored glasses (See Murray, Holmes, & Griffin, 1996, for an example).

The second exception also occurs in the context of potentially threatening thoughts and feelings by one or both partners in a relationship. Drawing on attachment theory, Ickes and Simpson (2003) propose that individuals who have a history of receiving inconsistent support and care from significant others tend to develop low self-esteem and become preoccupied with the expectation of loss or abandonment by their romantic partners. To guard against this possibility, these individuals develop a hypervigilant awareness of their partners' thoughts and feelings (Cassidy & Berlin, 1994). In short, their relationship history causes these individuals to become *more* accurate in response to potentially threatening information. They are motivated to acquire relationship-threatening information.

In separate studies, Ickes and colleagues (2003) and Simpson and colleagues (Simpson, Ickes, & Grich, 1999; Simpson, et al., 2003) tested both exceptions to the general rule. In adult married couples (Simpson et al., 2003), dating couples (Simpson et al., 1999), and undergraduates (Ickes et al., 2003), researchers found support for the conclusion that the content of a partners' thoughts and feelings moderates the relationship between the actors' empathic accuracy and their relationship quality.

Furthermore, Simpson and colleagues (Simpson et al., 1999) found that empathic accuracy is not always a good thing. Heterosexual dating couples were asked to rate slides of opposite sex people in each other's presence. Later, the researchers showed the dating partners a videotape of the rating session, and asked them to mark any point in the videotape that they remembered having had a thought or feeling, and to report that thought or feeling. The experimenters then showed the videotape to each of the partners again, stopping it where their partner had stopped it and asked the viewers to infer what the partner had been thinking at that point. An empathic accuracy score was computed and Simpson and colleagues found that individuals who tended to be anxious about relationship in general also tended to be *more* empathically accurate and attentive in situations that yielded negative information about the relationship (i.e., their partner finding another person attractive). For women who were anxious, greater accuracy was related to less closeness felt for the partner. For men, it predicted a higher likelihood of the relationship ending. Significantly, among individuals who were not anxious about their relationship, the opposite pattern was found. In reviewing this work, Hodges and Klein (2001) conclude that empathy can impose real damage on relationships and individuals.

Simpson and colleagues (2003) asked adult married couples to engage in a video-taped interaction in which they tried to resolve a problem in their marriage. When both partner members and independent raters evaluated the targets' thoughts and feelings as relationship-threatening, greater empathic accuracy on the part of the judge was associated with pre- to post-test declines in the judges' feeling of

subjective closeness. The opposite was true when the targets' thoughts and feelings were judged to *not* be relationship-threatening.

In summary, Ickes and colleagues (2003) and Simpson and colleagues (1999; 2003) found evidence for the existence of individual and relational factors which moderate the relationship between empathic accuracy and relationship quality. Specifically, when the material being communicated is potentially threatening to the relationship, greater empathic accuracy produces pain and distress in one or both partners and raises doubts about the strength and permanence of their relationship. To borrow a helpful metaphor from Simpson and colleagues (Simpson, Ickes, & Blackstone, 1995), empathic accuracy is a sharp-edged tool that can cut both ways. It can have a positive effect on relationship quality when it is used to cut through relatively trivial or benign misunderstandings that surface in any close relationships. Conversely, it can evoke intense negative feelings when it is used to uncover differences that threaten the continued existence of a relationship.

### ***Empathic Accuracy and Gender***

In a comprehensive review of the literature concerning gender and empathic accuracy, significant differences by gender were found in only 3 of 10 studies (Graham & Ickes, 1997). In these three studies, women were found to be more empathically accurate than men. Graham and Ickes (1997) surmised that the three studies in which significant differences were found were also the only three to utilize a new empathic reference reporting form that could have engaged the motivation of female perceivers to appear highly empathic, thereby enhancing their performance,

relative to men (Graham & Ickes, 1997). The new reporting form asked subjects to estimate their accuracy in inferring each and every one of the target person's thoughts and feelings, instead of inferring whether the general emotional tone was positive (+), negative (-), or neutral (0) (Graham & Ickes, 1997).

In reviewing related research traditions on gender and empathy, Graham and Ickes (1997) concluded that the limited gender differences found in empathy favor women only in nonverbal decoding. In the studies reviewed, women's advantage declined as more spontaneous or "leaky" cues were included ("leaky" typically refers to the body and tone of voice). Most of the research conducted in this area utilizes intentionally expressed ("non-leaky") facial cues as the stimulus material (Feshbach, 1982; Feshbach & Roe, 1968; Frodi & Lamb, 1978). Graham and Ickes (1997) conclude that if in fact a gender difference in empathic ability exists, it is limited to the decoding of non-verbal behavior.

### ***Empathic Accuracy with Adolescents***

There has been no published research utilizing the empathic accuracy paradigm with adolescents. The only research with individuals other than adults is an unpublished dissertation by Gleason (2004) which relates empathic accuracy to various aspects of the social lives (e.g., peer acceptance, friendship status and quality, victimization) of young adolescents (5th, 6th, and 7th graders). Gleason (2004) concluded in part that children who are more empathically accurate have better peer relationships and are less likely to experience internalizing problems than those children who are less empathically accurate.

## **Research Questions**

The purpose of this study was to test the core findings of empathic accuracy in adolescent romantic couples. To do so, the major features of empathic accuracy identified in prior research were tested. Five specific questions were addressed. First, is there a gender difference in empathic accuracy? Second, does empathic accuracy improve over the course of a relationship? Third, does empathic accuracy improve with age? Fourth, is empathic accuracy related to relationship satisfaction? Fifth, is an individual's hiding something when discussing disagreements related to a decrease in the partner's empathic accuracy?

## **CHAPTER II**

### **METHOD**

#### **Participants**

The data for this project came from the Study of Tennessee Adolescent Romantic Relationships (STARR; Welsh, 1999), an NICHD funded project (Grant No. RO1 HD39931). Couples were recruited to reflect two different age groups: middle and late adolescence, with each partner falling into those age ranges. The final sample included 102 middle adolescent couples (14-17) and 109 late adolescent couples (17-21). All couples were mixed sex and were recruited from a previous study on adolescents dating behaviors of over 2200 students attending seventeen East Tennessee High Schools. These schools were chosen to represent rural, suburban, and urban communities and to reflect the socioeconomic diversity of the area. Individuals from the high school study who indicated interest in participating in future research were contacted by telephone and provided information regarding the purpose and procedures of the couple study. Adolescents meeting the age criteria (target adolescent aged 15 or 16 and dating partner between 14-17 or target adolescent aged 18 or 19 and dating partner between 17-21) and who reported dating their current partner for at least four weeks were mailed consent forms describing the procedure and contacted one week later regarding their willingness to participate. Similar-aged partners were recruited for this study so that questions about couples at different developmental stages could be examined.

Of the target adolescents, 52% (n = 109) were female and 48% (n = 102) were male. Reasons for non-participation in the current study included the following: 27% (n = 603) were currently not dating, 26% (n = 595) were either too busy or not interested in participating in the study, 17% (n = 375) were not able to be reached, 7% (n = 169) were dating but did not meet the length of the relationship criteria, 6% (n = 142) were dating but did not meet the age criteria, and 3% (n = 73) had parents who refused to allow them to participate.

The sample for this study included 206 dating couples with partner members ranging from 14 to 22 years of age. Several couples were excluded from the analyses because of missing data. The median age of the participants in the study at the time of data collection was 17 years of age. The majority of the sample identified themselves as Caucasian (90.6%), with the remainder of the sample identifying as African-American (6.2%), Asian (1.2%), Hispanic (0.7%), Native American (0.5%), and "Other" (0.7%). Approximately half of the sample identified their neighborhoods as suburban (47.1%), followed by rural (31.9%), and urban (21%). Parental education level (the highest level of education completed by either parent) was used as a proxy measure for socioeconomic status. Slightly more than half (55%) of the participants reported that neither parent had a college degree, while almost half (45%) of the sample reported having a parent with a college degree or higher. Specifically, the highest education level completed by either parent was: some high school (4.3%), high school graduate (24.9%), technical school or some college (26.2%), college (30%), or graduate school (14.6%). The median length of time couples had been

dating was 45.8 weeks (approximately 11 months) with a range of 4 weeks to 260 weeks (approximately 5 years).

### **Procedure**

Couples came to our laboratory for a total of three hours of data collection. Data collection was scheduled at the couple's convenience and was completed in one session. Couples were told that the purpose of the project was to learn more about couple processes and adolescents' functioning in their romantic relationships. Our facility was comprised of three separate rooms within a suite so that couple members had sufficient privacy from our staff while completing the video-recording task and from each other during the questionnaire portions of the study. Couple members were offered food and beverages during the session to facilitate alertness and cooperation. Couples completed the video recall procedure described below and a series of questionnaires during their session. Couple members were paid \$30 each (\$60 per couple) for their participation.

### **Measures**

#### ***Demographic Questionnaire***

A demographic questionnaire (see Table A-1) was used to obtain background information about residence, age, race, employment, relationship length (measured in weeks), and parental education level. See Appendix C-1 for the items on this questionnaire.



### ***Relationship Satisfaction***

Levesque's (1993) 5-item Relationship Satisfaction Scale (see Table A-2) was used to assess relationship satisfaction in the context of adolescents' romantic relationships. It was developed by modifying Spanier's (1976) widely used Dyadic Adjustment Scale and is similar to Hendrick's (1988) measure of relationship satisfaction. Example items include, "compared to other people's relationships, ours is pretty good" and "our relationship has met my best expectations." Participants responded to the five items using a six-point scale (1 = strongly disagree; 6 = strongly agree). The sum of the five items from this scale was calculated to yield a total relationship satisfaction score, allowing scores to range from values of 5 to 30. The internal reliability for the relationship satisfaction scale was acceptable (males:  $\alpha = .85$ ; females:  $\alpha = .84$ ). A copy of these items for the relationship satisfaction dimension is included in Appendix C-2.

### ***Hidden/Ambiguous Information***

A 17-item scale (see Table A-1) designed to assess global thoughts and feelings concerning their conversations. A single item was used to indicate the presence of hidden or ambiguous information during the conversation: "Were you hiding something from your partner?" Response choices were a 5-point, likert-type scale, ranging from "Never" to "Always."

### ***Interaction Task and Video-Recall Procedure***

(See Table A- 2) (Welsh & Dickson, 2005): Adolescent couples participated in an interaction session consisting of three recorded conversations (Capaldi & Crosby, 1997). First, the couple members were asked to plan a party for 5 minutes. They were instructed to discuss the location of the party, the type of food and beverages served, the activities planned, the guest list, and whether adults would be present or aware of the party. We selected the first conversation as a warm-up task to allow the couple to become more comfortable with the situation. In the second and third conversations (8 min 40 sec for each of the two conversations), couples discussed issues of disagreement previously selected independently by each partner from the Adolescent Couples' Issues Checklist. The Adolescent Couples' Issues Checklist (Welsh, Grello, Dickson, & Harper, 2001) includes 21 common issues of disagreement between adolescent couple members, as well as an option to write issues not on the list. The measure was modified for our project from the Partners Issues Checklist (Capaldi & Wilson, 1992) to improve clarity and to include regionally relevant issues. The second and third conversations were counterbalanced for whether the couple discussed the male or female issue first.

For the recall procedure, each of our couple members (and later a trained outside coder) separately viewed and rated the middle 6 min 40 sec of the two conflictual issues conversations twice (a total of 13 min 20 sec rated for each viewing). In the first viewing, participants rated their own behavior and feelings and in the second viewing, they rated their partner's behavior and feelings for each 20 sec segment.

The four dimensions rated in our study were selected to represent significant affective and cognitive constructs, theoretically linked with the developmental and marital literatures, to understand adolescent romantic couples' communications (Allen, Hauser, Eickholt, Bell, & O'Connor, 1994; Powers & Welsh, 1999; Welsh, Galliher, & Powers, 1998). In addition, we included codes to capture the dimension of power, which becomes relevant in the examination of romantic interaction (Galliher, Rostosky, Welsh, & Kawaguchi, 1999; Welsh, et al., 1998). The four dimensions coded included the degree the individual being rated was feeling connected, uncomfortable, and the degree to which the individual was being conflictual, or was trying to persuade his or her partner.

We randomly selected a single conversation to display graphically in order to illustrate the nature of the data from this interaction task (Figure B-1). This particular conversation is comprised of a female (judge) rating her male partner (target) and the male rating himself on the dimension, "Conflict." It shows a strong covariance between the judges' rating of the target and targets' rating of himself, taken to mean the female is empathically accurate.

## CHAPTER III

### RESULTS

#### Descriptive Statistics

We sought to determine whether there was a significant difference between males and females in their ratings of themselves. Means and standard deviations are reported in Table A-2. A paired samples  $t$  test indicated that the average of males rating themselves on discomfort ( $M=.94$ ) was higher than the average of females rating themselves on the same dimension ( $M=.74$ ), and that this difference was statistically significant ( $t[206]=2.18, p<.05$ ).

We also sought to determine whether there was a significant difference between males and females in their ratings of their *partners*. Means and standard deviations are reported in Table A-2. A paired samples  $t$  test indicated that the average of males rating their partners on discomfort ( $M=.98$ ) was higher than the average of females rating their partners on the same dimension ( $M=.72$ ), and that this difference was statistically significant ( $t[206]=2.68, p<.01$ ). Also, a paired samples  $t$  test indicated that the average of males rating their partners on conflict ( $M=1.45$ ) was higher than the average of females rating their partners on the same dimension ( $M=1.31$ ), and that this difference was statistically significant ( $t[206]=2.36, p<.05$ ).

## Analytic Strategy

Addressing the questions regarding empathic accuracy required within-subject and between-subject analyses, suggesting a two-stage approach. In the first stage, repeated-measures data from each partner were used to estimate the covariance between that individual's perception of themselves on one of four dimensions, and their partner's perception of them on the same four dimensions, for each 20-second segment over the course of two conversations. In the second stage, individual characteristics were used to account for between-couples differences in the magnitude of the within-couples covariance. To accomplish these analyses in a way that controlled for non-independence of partner-members' responses (which violate the assumptions of techniques such as multiple regression, and thus artificially inflates error terms), data were examined with Hierarchical linear modeling (HLM; Bryk & Raudenbush, 2002). In all of the analyses described here, parameters describing partners' data were estimated simultaneously in a couple-level model, according to procedures described by Raudenbush, Brennan, and Barnett (1995). Specific scores were centered around the mean for each individual before being entered into the equation.

Thus, the first stage of the equation can be understood as a regression of each individual's perception of their partner onto his or her perception of themselves according to the following model:

$$Y_{ij} = \beta_{0j} + \beta_{1j}(\text{Rater}) + r_{ij},$$

Where  $Y_{ij}$  is the individuals' rating of their partner on a given segment;  $\beta_{0j}$  estimates the average global rating by individual  $j$  across segments;  $\beta_{1j}$  captures the covariance

between variability in the individual's rating of themselves across segments and variability in the individual's rating of their partner; and  $r_{ij}$  and is the residual variance in repeated measurements for the individual, assumed to be independent and normally distributed across individuals. Individuals' and partners' parameters were estimated simultaneously using a multivariate technique suggested by Raudenbush et al. (1995).

In the second stage of our analyses, a series of potential moderators were used to account for between-subjects differences in the magnitude of the within-subjects covariance. The first of these analyses examined whether the relationship satisfaction of couple members account for individual differences in their partner's empathic accuracy. To test this association, relationship satisfaction scores were entered into the second stage of the HLM analysis. This is a between-subjects analysis, estimating the association between partners' relationship satisfaction scores and the covariance between their perception of their partner and their partners' ratings of themselves, according to the following equation:

$$\beta_{1j} = d_{10} + d_{11}(\text{Relationship Satisfaction}) + u_j,$$

$\beta_{1j}$  is the covariation between a target's rating of themselves and their partner's rating of them for individual  $j$ ,  $d_{10}$  is the average covariance for the sample,  $d_{11}$  captures the association between relationship satisfaction and empathic accuracy, and  $u_j$  is the residual variability in the covariance that remains to be explained after controlling for relationship satisfaction. Identical analyses were conducted with the other moderator variables: age and "hiding something" from one's partner.

## **Empathic Accuracy**

The covariance between an individual's perception of their partners' thoughts and feelings and that partner's rating of themselves for both males and females was significant across every dimension at the  $p < .001$  level (See Table A-3). In short, both males and females were able to infer with a high degree of accuracy their partner's feelings of connection, conflict, discomfort and of being persuaded.

### **Is There a Gender Difference in Empathic Accuracy?**

To examine gender differences in empathic accuracy, an overall empathic accuracy score was created by taking the mean difference between rater and target across the four dimensions for each 20-second segment. For this Overall score, comparing this model to an unconstrained model revealed a significant gender difference (chi-square = 1209.52,  $p < .000$ ), such that females were more empathically accurate than males.

To determine whether there were gender differences in empathic accuracy across the four dimensions, a model was specified in which the effects of empathic accuracy were constrained to be equal for males and for females. For the dimension of Persuading, comparing this model to an unconstrained model revealed a significant gender difference (chi-square = 456.57,  $p < .000$ ), such that males were more empathically accurate than females. For the dimension of Conflict, comparing this model to an unconstrained model revealed a significant gender difference (chi-square = 668.62,  $p < .000$ ), such that females were more empathically accurate than males. For the dimension of Connection, comparing this model to an unconstrained model

revealed a significant gender difference (chi-square = 2360.52,  $p < .000$ ), such that males were more empathically accurate than females. For the dimension of Uncomfortable, comparing this model to an unconstrained model revealed a significant gender difference (chi-square = 224.93,  $p < .000$ ), such that females were more empathically accurate than males.

### **Does Relationship Length Moderate the Covariance between Individuals' Perception of Partner and Partners' Rating of Themselves?**

We then explored whether the length of individuals' relationships account for individual differences in the covariance between their ratings of their partner and their partners' ratings of themselves. Examining Table A-4 reveals that there was no significant association between the length of the relationship and empathic accuracy. Because relationship length did not contribute to empathic accuracy, it was dropped from subsequent analyses.

### **Does Age Moderate the Covariance between Individuals' Perception of Partner and Partners' Rating of Themselves?**

Next, we examined whether individuals' ages account for individual differences in the covariance between their ratings of their partner and their partners' ratings of themselves. Examining Table A-4 reveals that age was generally not associated with empathic accuracy. The single exception was that older females were more accurate at perceiving connection. There were no further significant associations. Age was controlled for in subsequent analyses.



## **Does Relationship Satisfaction Moderate the Covariance between Individuals' Perception of Partner and Partners' Rating of Themselves?**

We then conducted analyses to examine whether various individual and relational characteristics moderate empathic accuracy. First, do individuals' satisfaction with their relationship account for individual differences in the covariance between their ratings of their partner and their partners' ratings of themselves? Examining Table A-4 reveals that when controlling for age, relationship satisfaction was significantly associated with empathic accuracy for males with a significant trend for females. However, there were very different patterns of association for females and males. For both males and females, the more accurate they were at perceiving conflict, the more satisfied they were with their relationship. However, when accurately perceiving connection, the association with relationship satisfaction worked in opposite directions for males' and females' such that the more satisfied males reported being with their relationship, the *less* accurate they were at perceiving connection. Females, on the other hand, who were *more* satisfied with their relationships, were *more* likely to be accurate in their perception of connection. Females' satisfaction continued to work in a positive direction with the perception of being persuading and feeling uncomfortable. There were no further significant associations for males.

### **Do Reports of “Hiding Something” Moderate the Covariance between Individuals’ Perception of Themselves and Partners’ Rating of Them?**

Finally, we examined whether individuals’ reports of “hiding something” account for individual differences in the covariance between their ratings of themselves and their partners’ ratings of them? In other words, is there an association between reports of an individuals’ “hiding something”, and their partners’ empathic accuracy? Examining Table A-4 reveals that in general, when controlling for age, females’ reports of “hiding something” was negatively associated with males’ empathic accuracy. More specifically, females’ reports of “hiding something” was associated with a *decrease* in their males partners’ accuracy at perceiving conflict.

## **CHAPTER IV**

### **DISCUSSION**

In this study, we examined the role of empathic accuracy in adolescent romantic couples. To do so, the major features of empathic accuracy identified in prior research with adults were tested. We examined gender-linked differences in empathic accuracy and whether age, relationship length, relationship satisfaction, and an individuals' reporting of hiding something from their partner during a conversation moderated individual differences in empathic accuracy.

The results of this study paint an intriguing picture of adolescents' capacity for cognitive and behavioral perspective-taking in their romantic relationships. Descriptive analyses revealed that 1) females reported significantly lower levels of discomfort than males and 2) when compared to females, males report higher levels of conflict and discomfort in their partners. Given the significant differences between females and males perceptions of each other, how do they recognize these differences and integrate these perceptions?

First, as with adult samples, the overall ability of female and male adolescents to correctly infer their partners' thoughts and feelings was very similar, with females demonstrating a slightly higher level of empathic accuracy than males. Females were more accurate in their reporting of conflict and discomfort, while males were more accurate in their reporting of connection and trying to persuade.

We explored the development of empathic accuracy within individuals and relationships. It is somewhat surprising that relationship length was unrelated to empathic accuracy and age was only loosely associated. These findings suggest that individual and relational maturity plays a very small role in the variation of empathic accuracy in adolescent romantic relationships. It may be that other developmental indices such as number of prior relationships will be shown to have some association with empathic accuracy in future research. However, based on the findings from this study, empathic accuracy appears to be a trait-like construct, rather than a learned skill. This lends support to the few studies utilizing adult samples, which have demonstrated the stability of empathic accuracy over short periods of time and across individuals. Nonetheless, this is somewhat surprising given the strong developmental quality of skills that support empathic relating. For instance, social competence (Davis, 1983), role/perspective-taking (Underwood & Moore, 1982), and affect regulation (Dahl, 2003), have each been shown to support the development of empathy and have each been shown to be strongly associated with maturation. This raises the possibility that the conceptual overlap between empathy and empathic accuracy is smaller than proposed by Ickes and colleagues (Ickes, Stinson, Bissonnette, & Garcia, 1990). Future research should attempt to move beyond the conceptual association of empathy and empathic accuracy to actual validation of the empathic accuracy paradigm with existing self report measures of empathy to help parse this complex relationship.

We then examined the association between relationship satisfaction and empathic accuracy. Looking at the overall scores, relationship satisfaction was

positively related to empathic accuracy for both males and females. This broadly replicates research with adult samples. However, when looking at the four dimensions separately (connected, uncomfortable, conflictual, and trying to persuade), we found a much more complex relationship.

Across the four dimensions, the association between empathic accuracy and relationship satisfaction seemed to operate in opposite directions for males and females. Specifically, when females reported higher relationship satisfaction, they were more likely to accurately perceive their partners' negative feelings and behaviors (conflict, persuading, and discomfort) with a significant trend in perceiving their partners' feelings of connection. However, for males, higher relationship satisfaction was negatively associated with the accurate perception of feelings of connection and positively associated with accuracy in perceiving conflict. Although research with adult samples documents some complexity in the association of empathic accuracy with relationship satisfaction, the variation is not typically gender-linked. We found that the adolescents in this study exhibited much more gender-linked variation than is suggested by studies utilizing adult samples. However, this variation may be in part a function of different measurement protocols. In this study, we obtained empathic accuracy scores separately across four different dimensions. Prior work with the empathic accuracy paradigm has typically used a single score to represent empathic accuracy which represents an aggregate of the various thoughts and feelings of both partners over the course of their interaction. This paradigm does not allow for separate thoughts and feelings to be correlated and reported separately. It is possible that the gender-linked differences in empathic accuracy that we see in

this study with adolescent romantic couples exist in the work with adult couples, but have not been observed. Future research with empathic accuracy should include the reporting of specific thought/feeling clusters, rather than *only* overall empathic accuracy scores.

These findings suggest a kind of normative vigilance on the part of females who are satisfied with their relationships. This stands in contrast to their partners. Males seem to relax while taking advantage of the “free pass” given to them by their partner’s emotional heavy lifting. These findings are explained well by Webster and Foschi’s (1988) theoretical work on gender role stereotypes, which they argue are typically more negative for females than males. Webster and Foschi (1988) suggest that women occupy subordinate social positions and are therefore more easily influenced by others (particularly by their negative feedback). Men, conversely, are more resistant to influence. In this study, we found that males who are satisfied with the relationship have relatively little tendency to attend to their partners’ thoughts and feelings. Future research should explore the balance of empathic accuracy between the couple members (e.g., both members are highly empathically accurate, one high, one low, or both low) and how different constellations predict relational and individual outcomes.

The gender differences we found in empathic accuracy are also in line with research regarding risk-taking behaviors. Models of individual characteristics which predispose adolescent girls to increased rates of depression (compared to adolescent boys) include a moderate contribution by the girls’ tendency to have “persistent and excessive feelings of responsibility for the emotional well-being of others and

empathy for others' negative emotional experiences.” (p. 93; Keenan & Hipwell, 2005). Joyner and Udry (2000) reported that adolescents, especially young women, who became romantically involved over the course of a year experienced greater increases in depression. These young women also experienced decreases in happiness (Joyner & Udry, 2000). Future research should explore the relationship between empathic accuracy and depression in both males and females.

Although our results provide theoretical and empirical support for gender-linked differences in the association of empathic accuracy with relationship satisfaction, a large body of research indicates that the extent of gender differences can be maximized or minimized based on the social and cultural context. Gender differences in emotional expression occur only in specific cultures, among certain individuals, and in certain situations (Brody, 1997). Snodgrass (1985) suggests that the rapport of interpersonal sensitivity between two interacting people is quite variable. Therefore, variability in the ability to accurately perceive another's thoughts and feelings may be due in large part to the influence of social context (Snodgrass, 1985). Not only should future studies include more culturally and ethnically diverse samples, but serious attempts should be made to translate this paradigm in to more naturalistic settings with less structured interaction protocols. Korobov and Thorne (2006) have developed preliminary evidence in support of unforeseen levels of complexity, nuance, and contradiction in males' construction of intimacy in romantic relationship stories by recording these conversations outside of the lab, in more causal settings. Developing such protocols is challenging in many ways, but undoubtedly worth pursuing. In this study, the research protocol 'asked'

participants to do the best job they could estimating their partners' thoughts and feelings. It goes without saying that this setting is very different from that in which interaction normally occurs. In short, the results of this study represent what adolescents in romantic relationships are *capable of*, as distinguished from what they *actually do* outside of the laboratory.

Finally, we examined the relationship between one individual 'hiding' information from his or her partner and that partner's empathic accuracy. As discussed above, adult couples have been shown to engage in an 'adaptive *misinferring*' in the presence of ambiguous or hidden information. We reasoned that, because the interaction task utilized in this study is designed to induce mild conflict (by asking couple members to identify and discuss issues of disagreement), when individuals reported "hiding something" from their partner, they would perceive the hidden content to be potentially hurtful to themselves or to their partner. Overall, we found that adolescent males did become *less* accurate when their partners reported hiding something. Specifically, males were less accurate at perceiving conflict when their partner reported "hiding something." It may be that the *misinferring* happens only in relation to thoughts and/or feelings that would presumably signal relationship-threatening information. This would explain why our male participants did not become less accurate in their perception of connection. However, we did not see *any* significant relationship between females' empathic accuracy and their partners' 'hiding something.' It may be that the females' attending to the threatening thoughts and feelings of their male partners is part of their tendency to attend to others'



negative emotional experiences described by Keenan and Hipwell (2005; described above).

Although the gender differences identified in this study provide valuable information about the role of gender in romantic relationships, treating gender as a binary variable misses the range of characteristics within each gender. Kimmel (2000) notes that mean scores in gender difference research tell us something about differences between two groups but ignore the distributions themselves, the differences among males or among females. There are, for instance, large numbers of emotionally expressive men and aggressive and physically strong women. Kimmel concludes that the variation within the attributes associated with masculinity and femininity are far greater than the differences between the two (Kimmel, 2000). Perhaps most salient about this measurement paradigm is that it forces a singular, atheoretical resolution to the number of theoretical descriptions of gender that are held by adolescence researchers (Tolman, Striepe, & Harmon, 2003). These include evolutionary theory (Buss, 1996; Thornhill & Palmer, 2000), social role theory (Pleck, 1987; Spence, 1993), and social construction theory (Butler, 1993; Gergen, 1985). Future research utilizing the empathic accuracy paradigm clearly needs to include more nuanced measures of masculinity and femininity, and would ideally include a qualitative component, to provide further insight into the meaning of these gender-related differences.

## **Limitations**

While this study assists in our understanding of empathic accuracy in adolescent romantic relationships, the generalizability of our findings is limited in several ways. First, participants were predominately Caucasian adolescents in heterosexual romantic relationships who lived in regions surrounding a mid-sized southeastern city. Results, therefore, may not generalize to racial or sexual minority adolescents or to adolescents in other regions. In addition, couples that participated in this study self-identified themselves as being in a relationship lasting at least one month and were willing to be involved in a study focused on romantic relationships. This sample may differ in important ways from a general sample of individual adolescents or a sample of less committed dating partners. Our sample was also cross-sectional in design. Longitudinal designs are needed to better understand the developmental trajectory of communication and relational processes in adolescent romantic relationships.

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## **APPENDICES**

## **APPENDIX A: TABLES**

**Table A-1**

Descriptive Statistics for Moderator Variables

	Males		Females	
	M	SD	M	SD
Relationship Satisfaction	26.12	4.12	26.28	4.02
Age	17.44	1.77	16.75	1.49
Hiding Something	1.20	.48	1.17	.58

**Table A-2**

## Mean Scores and Standard Deviations

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Group	Connection		Conflict		Persuading		Uncomfortable	
	M	SD	M	SD	M	SD	M	SD
<hr/>								
Target Dimensions as a Function of Gender Rating Self								
Males	2.81	1.20	1.40	1.39	1.26	1.38	.94	1.32
Females	2.85	1.17	1.25	1.31	1.20	1.37	.74	1.14
Rater Dimensions as a Function of Gender Rating Partner								
Males	2.78	1.20	1.45	1.41	1.33	1.40	.98	1.28
Females	2.87	1.16	1.31	1.35	1.16	1.36	.72	1.13

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**Table A-3**

## Within Couple Associations between Judge and Target Ratings

	Males			Females		
	<i>Effect Size r<sup>2</sup></i>	<i>t</i>	<i>Chi Square Test of Variance</i>	<i>Effect Size r<sup>2</sup></i>	<i>t</i>	<i>Chi Square Test of Variance</i>
Connection	.33	14.25***	701.01***	.29	16.44***	460.21***
Conflict	.25	12.87***	588.45***	.24	12.56***	534.86***
Persuading	.12	6.56***	457.82***	.10	4.84***	554.86***
Uncomfortable	.14	7.06***	511.20***	.16	7.77***	496.84***
Overall	.17	11.02***	530.91***	.19	11.12***	673.97***

\*\*\* $p < .001$

**Table A-4**

Moderating Effects of Variables on Covariance between  
Judge's Rating of Target and Target's Rating of Self

	Males		Females	
	<i>Effect Size r<sup>2</sup></i>	<i>t</i>	<i>Effect Size r<sup>2</sup></i>	<i>t</i>
<b>Overall</b>				
Weeks	.00	.03	.00	.19
Age	-.00	-.11	.00	.39
Relationship Satisfaction <sup>a</sup>	.01	2.97**	.01	1.79 <sup>+</sup>
Partner Hiding <sup>a</sup>	-.07	-2.53*	.00	.03
<b>Connection</b>				
Weeks	-.00	-1.38	.00	1.90
Age	.00	.25	.03	2.17*
Relationship Satisfaction <sup>a</sup>	-.01	-1.94*	.00	.70
Partner Hiding <sup>a</sup>	-.01	-.38	.04	1.47
<b>Conflict</b>				
Weeks	-.00	-.64	.00	1.72
Age	-.00	-.47	.01	.53
Relationship Satisfaction <sup>a</sup>	.01	1.97*	.01	3.13*
Partner Hiding <sup>a</sup>	-.07	-2.70**	-.01	-.33
<b>Persuading</b>				
Weeks	-.00	-.50	-.00	-.07
Age	-.00	-.45	-.02	-1.53
Relationship Satisfaction <sup>a</sup>	.01	1.32	.01	3.34***
Partner Hiding <sup>a</sup>	-.04	.03	-.01	-.42
<b>Uncomfortable</b>				
Weeks	-.00	-.69	.00	.03
Age	.01	.70	.01	.69
Relationship Satisfaction <sup>a</sup>	.01	1.80	.01	3.18**
Partner Hiding <sup>a</sup>	-.04	-1.27	-.03	-.88

<sup>a</sup> Controlling for Age

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$

<sup>+</sup>  $p < .10$

**APPENDIX B: FIGURE**

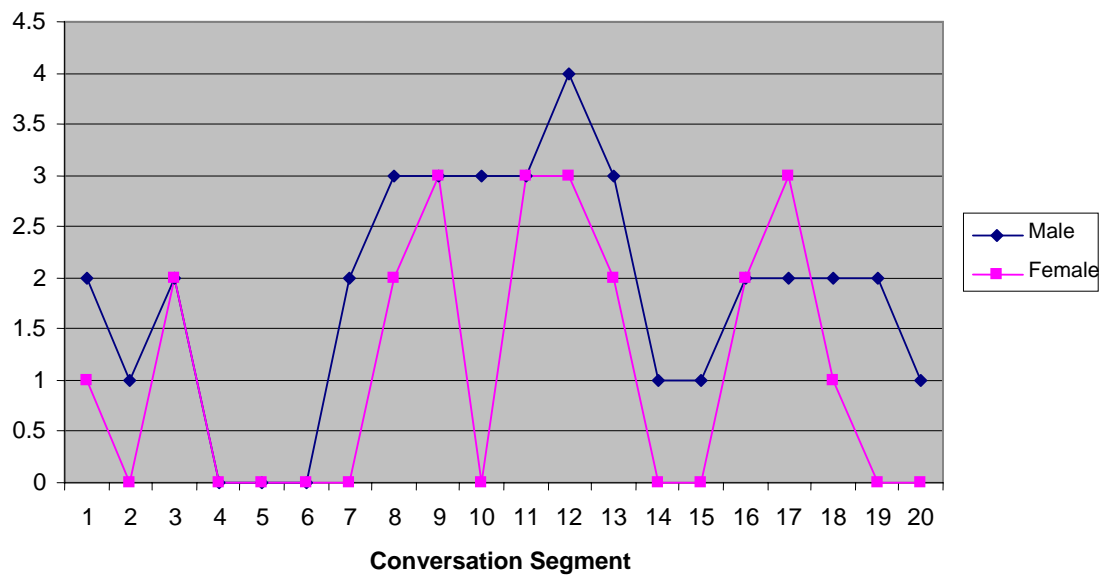


Figure B-1

A Sample Conversation: Female (Judge) Rates Male (Target) on Conflict



## **APPENDIX C: SCALES**

## APPENDIX C-1

### DEMOGRAPHIC QUESTIONNAIRE

1. Gender: \_\_\_\_\_
2. Age: \_\_\_\_\_
3. Date of Birth: (MM/DD/YY) \_\_\_\_\_
4. Which one category best describes your racial background?
5. Religious Affiliation:
6. How important is religion to you?
7. In the past 12 months, how often did you attend religious services?
8. My faith involves all of my life.
9. My faith sometimes restricts my actions.
10. Are you currently enrolled in school?
11. What grade are you currently in?
12. Which high school do/did you attend?
13. Are you currently employed?
14. How many hours per week do you work during the school year?
15. How far in school do you plan to go?
16. How would you describe where you live?
17. How long have you lived at your current residence?
18. What is your parents' marital status with each other?
19. If divorced or separated, how long have they been separated?
20. If divorced or separated, with whom do you live?
21. If divorced, has your father remarried?
22. How long ago did he remarry?
23. If divorced, has your mother remarried?
24. How long ago did she remarry?
25. How far in school did your father go?
26. How far in school did your mother go?
27. Your grade point average (GPA) is approximately:
28. How old were you when you went out on your first date?
29. How long have you been dating your CURRENT PARTNER?  
(please indicate the number of weeks) \_\_\_\_\_
30. How much longer do you think your relationship with your CURRENT PARTNER will last?
31. Do your friends like your CURRENT PARTNER?
32. Do your parents like your CURRENT PARTNER?
33. In the LAST YEAR, how many dating relationships, including your current one, have you had?
34. How long ago did your most PREVIOUS dating relationship end?  
(please indicate the number of weeks) \_\_\_\_\_
35. Have you ever taken a public or written pledge to remain a virgin until marriage?  
If yes, when did you pledge most recently? (month/year) \_\_\_\_\_  
If yes, where did you make the pledge?
36. Do you consider yourself a virgin?
37. How old were you when you first started shaving?

## APPENDIX C-2

### RELATIONSHIP SATISFACTION SCALE

On a scale of 1 (*strongly disagree*) to 6 (*strongly agree*) please rate the following statements as they relate to your current romantic partner.

#### Relationship Satisfaction

1. In general, I am satisfied with our relationship.
2. Compared to other people's relationships ours is pretty good.
3. I often wish I hadn't gotten into this relationship.\*
4. Our relationship has met my best expectations.
5. Our relationship is just about the best relationship I could have hoped to have with any body.

\* reverse coded

## VITA

Peter Tejas Haugen was born in San Francisco, California on April 9, 1972. He was raised in San Rafael, California and went to grade school at Dixie Elementary School and St. Mark's School in San Rafael, California. In 1990, he graduated from The Branson School in Ross, California. From there, he attended the University of California, Davis where he performed research with Drs. Whalen Lai and Naomi Janowitz of the Religious Studies Department. He graduated in 1995 with a B.A. in psychology and a B.A. in religious studies. After graduation, he was accepted to the masters program in liberal arts at St. John's College in Annapolis, Maryland. He graduated with a M.A. in Liberal Arts in 1997. After three years of non-profit and legal work in New York City, New York, he was accepted to the doctoral program in clinical psychology at the University of Tennessee, Knoxville in 2001. During his career there, he helped conduct the Study of Tennessee Adolescent Romantic Relationships (STARR) with Dr. Deborah Welsh and her colleagues. In 2005, Peter was accepted to a clinical psychology internship program at NYU/Bellevue in New York City, New York. He is currently completing his internship and applying for jobs in the New York City area. His doctoral degree will be conferred in August 2006.