To the Graduate Council:

I am submitting herewith a dissertation written by Renee Vickerman Galliher entitled "Predicting Relationship Quality and Longevity from Patterns of Interaction in Adolescent Romantic Relationships." I have examined the final 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 or Philosophy, with a major in Psychology.

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We have read this dissertation
and recommend its acceptance:

Accepted for Council:

Associate Vice Chancellor and
Dean of The Graduate School

PREDICTING RELATIONSHIP QUALITY AND LONGEVITY FROM PATTERNS OF INTERACTION IN ADOLESCENT ROMANTIC RELATIONSHIPS

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Abstract

This study examined the association between adolescent romantic couple members' interaction with each other and both their overall relationship quality and the stability of their relationships over time. Males', females', and trained observers' perceptions of couple interaction were used to predict couple members' commitment, intimacy, support, depth, and conflict. Both positive and negative behaviors effectively predicted several indices of relationship quality, with different patterns of association emerging for the different raters. Also, sequential patterns of interaction were associated with relationship quality. Couples who were able to manage low-intensity conflict in a reciprocal, mutually involved manner and in which males were more able to acknowledge and accept their girlfriends' positions reported higher overall relationship quality. In addition, the capacity of adolescent couples for mutually managing conflict discriminated those couples who stayed together over time from those who had broken up one year later. The developmental implications of these results are discussed and findings are contrasted with established findings from the literature on marital interaction.

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CHAPTER I

INTRODUCTION

The notion that romantic relationships are a significant and important aspect of one's social and psychological world is not new to psychology. A full and rich history of research on marital relationships testifies to the salience of these relationships. For example, much effort has been devoted to the description of communications processes in marriages (Noller & Guthrie, 1991; Weiss & Heyman, 1990; 1997) and their impact on marital satisfaction (e.g., Gottman, Coan, Carrere, & Swanson, 1998; Gottman & Krokoff, 1989; Gottman, Notarius, Markman, Bank, Yoppi, & Rubin, 1976), factors that influence the satisfaction of partners in marriages, and the process of breakdown in marriages (Fincham & Bradbury, 1991).

The nature and development of adolescent romance, on the other hand, has just begun to be addressed in the empirical literature. Although developmental theorists (Erikson, 1968; Sullivan, 1953) have long identified adolescence as an important period in the development of romantic interests and the capacity to engage in intimate relationships, the phenomenon of young love has been little studied. In addition to the theoretical attention that has been paid to the importance of romance in adolescence, pop culture and our own memories emphasize for us the importance of these early dating relationships. Anecdotally, hundreds of examples can be presented to demonstrate the power of these relationships in shaping our beliefs about romantic relationships and forming our perceptions of ourselves and our lives. Yet, despite the intuitive push to claim the meaningfulness of early romance to adolescent development, until recently, little empirical

attention had been paid. Instead, with regard to the romantic behavior of adolescents, the empirical focus has been on sexual behavior, which has been de-contextualized or studied without attention to the relationships within which most sexual behavior presumably takes place (Welsh, Rostosky, & Kawaguchi, in press). Adolescent sexual behavior has been described as a social problem whose expansion has led to widespread negative consequences including teen pregnancy, early parenting, and sexually transmitted diseases. Consequently, research and clinical efforts have almost exclusively focused on the prevention or eradication of the "problem" of adolescent sexual behavior and not on the study of romantic relationships as a context for normative development.

Recently, the pathology-oriented approach to adolescent sexuality has been expanded by researchers interested in sexual behavior as a developmental phenomenon that takes place in the context of romantic relationships (Kawaguchi, Welsh, Galliher, Rostosky, & Niederjohn, under review; Rostosky, Galliher, Welsh, & Kawaguchi, under review). While acknowledging the potential negative outcomes associated with adolescent sexuality, including teenage pregnancy, sexually transmitted diseases, and, with the onset of AIDS, death, these researchers have argued that a complete understanding of the potential problems associated with adolescent sexuality is not possible without examining the normative development of sexual behavior. Rostosky and colleagues (in press; under review) examined the association between the quality of romantic relationships, including both global measures of positive and negative relationship qualities and microanalytic measures of couple members' interaction, and a range of adolescent sexual behaviors. While the more affectionate sexual behaviors of hand-holding and

kissing were more closely associated with couple members' descriptions of the quality of their relationship, it was a combination of sexual expression and ratings of global relationship quality that predicted couples' relationship longevity, or the progression toward long-term, stable intimate relationships. Kawaguchi and colleagues (under review) specifically tested Sullivan's (1953) hypothesis that optimal development in late adolescence is marked by the integration of sexual behavior and relational intimacy, finding that those adolescents who were in fact integrating sexuality and intimacy in their romantic relationships reported higher levels of self-esteem.

These recent investigations represent part of a trend over the past several years. A burgeoning field of empirical inquiry has developed which moves beyond the study of adolescent sexual behavior and examines adolescent dating *relationships* as an important developmental context (e.g., Feiring, 1996; Furman & Wehner, 1994; Galliher, Rostosky, Welsh, & Kawaguchi, in press; Shulman & Collins, 1997; Welsh, Galliher, Kawaguchi, & Rostosky, in review). Empirical work provides support for the intuitive conclusion that romantic relationships become increasingly important and central across adolescence. While mothers and fathers were seen as the major providers of support in grade school and same-sex friends were the primary sources of support by junior high school, by college, romantic partners were at the top of the hierarchy of relationships in terms of support provision (Furman & Buhrmester, 1992). This was especially true for males; males not only saw their romantic partners as the number one source of support, while females were just as likely to turn to mothers, friends, or siblings, but males also saw their girlfriends as more supportive than females perceived their boyfriends to be (Furman &

Buhrmester, 1992). Similarly, although intimacy in same-sex relationships was reported to remain somewhat stable throughout childhood and adolescence (fluctuating up and down), intimacy in opposite-sex relationships increased dramatically (Sharabany, Gershoni, & Hofman, 1981). Additionally, by high school, adolescents reported that their romantic partners were those with whom they were the most close, defined by the highest frequency and diversity of interaction and the greatest influence (Laursen, 1996; Laursen & Williams, 1997). Qualitative work has also established the importance of dating relationships in adolescence (Feiring, 1996). When 15-year olds described their romantic relationships in semi-structured interviews, most adolescents had been or were involved in romantic relationships (88%). Although the relationships were quite short (mean=16.7 weeks), they were intense in terms of frequency of contact (almost daily), supporting the argument for the importance of the dating relationship as a developmental context in adolescence.

Consistent with the evidence suggesting an increasingly important role played across adolescence by romantic partners, other empirical work has established a connection between the quality of adolescent romantic relationships and individual measures of well-being in adolescents (Galliher, Rostosky, Welsh, & Kawaguchi, in press; Kawaguchi, Welsh, Galliher, & Rostosky, under review; Welsh, Galliher, Kawaguchi, & Rostosky, under review). As romantic partners become increasingly central providers of social support and intimacy, they are likely to impact more heavily the psychological health of individual couple members. Late adolescent couple members' perceptions of their interaction with each other, or more specifically, discrepancies in their perceptions of their interaction have been related to depressive symptoms in both adolescent males and

females (Welsh et al., under review). Boys who saw themselves as more supportive and more humorous than their girlfriends saw them reported less depression. For female adolescent couple members, perceptions of the balance of power appeared to be more salient in predicting their psychological health (Galliher et al., in press; Welsh et al., under review). Girlfriends who saw themselves as successful in getting their way in their interactions with their boyfriends and who described themselves as more powerful than their boyfriends in terms of decision making reported less depression and higher self-esteem.

The recent surge in empirical interest in romantic relationships has its foundation in both classical and more current theory regarding the developmental role of romantic relationships. These important developmental theories will be reviewed here and will be used to generate hypotheses for the current study.

Attachment theory

A conceptually appealing approach to understanding the development and nature of adolescent romance has been outlined by attachment theorists (Shaver & Clark, 1994; Shaver & Clark; 1996; Shaver & Hazen, 1993). Two premises have been developed regarding the application of attachment theory (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1973) to adult romantic relationships. First, "the experiences and behaviors associated with falling and being in love are compatible to Bowlby's conception of attachment" (Shaver & Hazen, 1993, p. 29). The components of infant attachment behavior with caregivers are: 1) proximity seeking, 2) using the attachment figure as a secure base from which to explore the world, and 3) using the attachment figure as a safe

haven during periods of stress or anxiety. The extent to which these components of attachment are sought by the child and delivered by the caregiver determine an infant's "attachment style" (secure, anxious, avoidant). Similarly, attachment behavior in adulthood can be described by efforts to maintain proximity to the loved one, relying on the loved one's availability and ability to comfort, and becoming distressed when the relationship is threatened or terminated. The extent to which one seeks and receives these attachment components from romantic partners can be said to describe a romantic attachment style much like the styles in infancy (secure, anxious, avoidant).

A second premise in the application of infant attachment theory to adult romantic relationships draws on the concept of "internal working models," which are comprised of our beliefs and expectations about our selves and others. Theoretically, these models are created through our early interactions with caregivers and are carried forth into each new relationship, shaping our perceptions of our social world. Thus, the perception formed in an early relationship with responsive, supportive parents that "other people are caring, loving, and trustworthy" should translate to the perception in adulthood that romantic partners should be loving and trustworthy.

The assumption that the infant's attachment relationship with his or her parents shifts by adulthood to an attachment relationship with a romantic partner necessitates a discussion of the developmental trajectory of this shift. How and why do we move from attachment with parents to attachment with romantic partners? Childhood and adolescence have been identified as the age during which the attachment shift is typically negotiated. Since the shift in primary attachment figures can be seen as a major

developmental milestone and since the process of moving from what has been the most important relationship in one's life toward another less well-explored relationship is obviously a risky and overwhelming one, it is unreasonable to assume that the shift in attachment might occur rapidly or easily. Shaver and Hazen (1993) hypothesized that the shift in attachment figures occurs gradually through childhood and adolescence and that not all attachment functions are shifted to the new relationship simultaneously. The secure base function of attachment would be the last to be transferred to the new relationship as the parents provide the secure base from which relationships with peers are explored.

Shaver and Hazen (1993) tested the hypothesis that attachment functions would shift at different times during development by creating interview assessments for each of the attachment components and administering them to children ranging in age from five years to 17 years and to a group of adults. For the youngest children, distress over separation, comfort seeking, and safe haven functions overwhelmingly applied to parents rather than peers. Already, however, a slight majority of these 5-7 year olds preferred proximity to peers over parents. Increasingly, as children aged through childhood and into adolescence, larger majorities of the samples reported preferences for peer proximity over parent proximity, although parents continued as the primary providers of emotional support and security. By the time late adolescence was reached (17 year olds), the majority of the respondents named peers (mostly romantic partners) as both the primary source of support and the person with whom they most like to be. Most, however, still reported that their parents provided the base of security. It was not until adulthood that peers were reported to perform all three of the attachment functions. In the overwhelming

majority of adult cases, the attachment figure was a romantic partner. Shaver and Hazen concluded that the transition from parents as primary attachment figures to romantic partners as primary attachment figures began soon after the original attachment relationship was established and continued into adulthood. Parents continued to serve as a secure base well into adolescence. It was not until the establishment of stable, intimate relationships in late adolescence or early adulthood that the third function of attachment (security) was expected to shift to the romantic partner.

Duemmler and Burland (1997), using a sample of college dating couples, replicated the findings regarding the gradual transfer of attachment functions to romantic partners, also reporting that the level of commitment displayed during an interaction task was greater for those individuals who had transferred the secure base function to the romantic partner. In addition, the level of assertiveness that partners displayed during a conflict/problem solving task was associated with the amount of commitment demonstrated. The authors concluded that the increase in commitment to the relationship coincided with the transfer of all three functions of attachment to the relationship (greater reliance on the relationship was generated). With the increase in the level of commitment (presumably mutual commitment), members were more confident to express themselves and their differing opinions openly. The increased commitment appeared to render the relationship more stability.

Thus, adolescent romantic relationships are theorized to serve as transitional relationships as individuals learn to transfer the attachment functions previously served by parents and peers to romantic partners. Drawing on the concept of internal working

models, interactions, behaviors, thoughts, and emotions in these early romantic relationships should bear some resemblance to both earlier peer relationships and later marital relationships. Although research in the area of romantic attachment continues to flourish, the extent to which the literature examining the significance and nature of early peer or later marital relationships is applicable to adolescent romantic relationships is unclear.

Harry Stack Sullivan

Sullivan theorized the importance and impact of social relationships on development at a point in history when intrapsychic theories held center stage in psychology (Muuss, 1996; Sullivan, 1953). He described a developmental phenomenon whereby different types of relationships (e.g., parent-child, peer, etc.) play central roles in shaping personality and behavior at different points during the life-cycle. He described the self as an ever-changing product of interpersonal relations. Thus, an individual's success or failure in early relationships would be expected to impact his or her ability to enter into new relationships later in life.

Sullivan's juvenile era (middle childhood) marks the ascendance of peer relationships in influencing development. During middle childhood and pre-adolescence, Sullivan described children's need to develop strong same-sex friendships, while simultaneously engaging in rigid stereotyping and intolerance of the opposite sex. Eventually, children develop intense, intimate relationships (chumships) with one same-sex friend. This relationship marks a qualitative leap in the development of relationships. For the first time, according to Sullivan, children experience true intimacy, characterized by

mutuality and depth of caring. This important relationship sets the groundwork for the development of romantic relationships later in adolescence. Sullivan describes the chumship as the context in which children learn how to be in intimate relationships, and without this experience they are at a disadvantage in future relationships.

With the onset of adolescence, Sullivan introduces the integration of intimacy and sexuality as the primary developmental task. Early adolescence is marked by anxiety, with the adolescent's initial attempts to satisfy the needs for sexual gratification and intimacy in the context of insecurity and inexperience in the dating relationship. The task of adolescence is accomplished when the individual integrates the capacity for reproduction and the needs for intimacy and connection in a mature interpersonal relationship. Thus, for Sullivan, adolescents use the styles of relating and social skills learned in earlier family and, especially, peer relationships to begin to explore romantic relationships. He describes the development of sexual romantic relationships in adolescence as both normative and essential to healthy development, a view that stands in striking contrast to the popular pathology-oriented approach to studying adolescent sexuality.

Wyndol Furman

Drawing on the contributions of Sullivan and attachment theory, Furman and Wehner (1994) presented a more contemporary theoretical conceptualization of the role of adolescent romantic relationships in development. First, a number of assets associated with romantic attachment theory were recognized. Attachment theory argues from an evolutionary perspective, providing an explanation for the developmental phenomenon rather than simply a description. Also, Furman described a link between experiences in

early relationships and the quality of later relationships as intuitively and conceptually appealing. One striking limitation of romantic attachment theory was noted, however. While romantic relationships bear many similarities to parent-child relationships, such as proximity seeking, emotional security, and caretaking, there are many ways in which the two types of relationships are very different. Attachment theory does not account for the more egalitarian nature of romantic relationships. "Characteristics such as collaboration, affiliation, and symmetrical interchanges are central features of romantic relationships and cannot be readily explained in terms of attachment and caretaking" (Furman & Wehner, 1994, p.172). The role of early friendships was considered to be critically important in the development of romantic relationships, for it is there that children learn aspects of reciprocity and mutuality in relationships.

In order to address the gap in romantic attachment theory, Furman and Wehner (1994) invoked Sullivan's theory of social needs. Sullivan's stages of interpersonal relationships development described children as motivated to form friendships with peers in order to fulfill social needs for acceptance or security and intimacy, learning the skills necessary to engage in mutual, reciprocal relationships and providing the foundation for adult friendships and romantic relationships. Sullivan contributed to Furman's thinking with his description of the adolescent's attempt to integrate the previously important needs for intimacy and acceptance (which have been satisfied in "chumships") with the newly developed need for sexual gratification by targeting potential romantic partners as the preferred source of need fulfillment.

The merging of attachment theory and Sullivan's social needs theory resulted in the conceptualization of four behavioral systems (Furman & Wehner, 1994). By adolescence, the primary motivation in social interactions was thought to be the fulfillment of the needs of these four behavioral systems: attachment, caregiving, affiliation, and sexual/reproduction. The behavioral systems were described as evolutionary in foundation, serving adaptive functions for individuals. In Western society, romantic partners were identified as the primary source of fulfillment for all of the four systems.

One focus of the model developed by Furman and Wehner (1994) was the concept of "views." Again, drawing on attachment theory, the description of views was much like the internal working models described earlier, with some important distinctions. Like the concept of internal working models, views consist of beliefs and expectations about relationships that are based not only upon experiences in past relationships, current relationships, and ideas about ideal relationships, but also on cultural and sex role expectations. An important difference between the concept of internal working models and the concept of views is that views were described as unique to particular relationships rather than the more global beliefs represented by internal working models. Although views are certainly influenced by experiences in previous relationships, the experiences within each relationship and with each interaction partner are thought to be very salient in determining the view of that particular relationship. Thus, views were described as more specific to particular relationships and more malleable than the internal working models described by attachment theorists.

Furman and Wehner (1994) contended that, although moderate consistency should exist between views of different types of relationships, greater consistency in views should be found within types of relationships than between types of relationships. For example, if an individual has been in a series of rejecting and unsupportive romantic relationships, then that person's beliefs and expectations about romantic relationships might be that they are dangerous, painful, and doomed to failure. These beliefs could be expected to influence interpretations of events that take place within romantic relationships in such ways as to reinforce the view or belief system. This continuation of a negative view from one romantic relationship to the next could easily occur in an individual whose perceptions about family relationships or friendships are that they are loving and supportive and who carries forth a positive view about those types of relationships from one to the next.

In addition, rather than focusing strictly on beliefs and expectations about relationships, views incorporate all of the four behavioral systems. In an example illustrated by Furman and Wehner (1994), preoccupied views are expressed by accepting the partner's wishes or decisions over your own, caregiving in an overdone and poorly timed manner, engaging in sexual behavior in order to augment your own self worth, and by worrying excessively about the partner's availability during times of distress. In essence, the manner in which the partner is expected to fulfill the needs of all four of the behavioral systems describes an individual's view; the view incorporates both beliefs and thoughts about the relationship and patterns of interaction and behaviors within the relationship. Of course, in each relationship, different behavioral systems may be more salient. In close platonic friendships, for example, the needs of the affiliative system might

be stressed while the functioning of the sexual reproductive system or attachment system is minimized.

Developmentally, Furman and Wehner asserted that early experiences in relationships with different people in the child's social system contribute independently to the formation of views of romantic relationships as these relationships come to the forefront during adolescence. Parent-child relationships appear to be the setting in which children learn about the attachment and caregiving functions of relationships. Thus, Furman predicted that early parent-child experiences would have a stronger influence in dictating how adolescents use romantic partners to satisfy those functions. Peer relationships, however, were described as the primary context in which children learn about affiliation and companionship. Therefore, it was predicted that the quality of early same-sex friendships would more strongly predict the use of romantic partners as companions (Furman & Wehner, 1994). Of course, since many aspects of romantic relationships are completely new and unique to that relationship type and since each new relationship partner brings different qualities to the relationship, there was no expectation that romantic relationships would be a simple re-creation of these past familial and peer relationships.

Other developmental issues play important roles in the formation of views about romantic relationships (Furman & Wehner, 1994). First, a hierarchy of attachment, affiliative, and caretaking figures for each person was assumed. Those at or near the top of the hierarchy would more likely to be sought out for the need fulfillment. As children mature into adolescence, romantic figures were predicted to increasingly move up in the

hierarchy of key figures. Second, romantic partners were not expected to simultaneously become key figures in all of the four behavioral systems. The ability to use a romantic partner as a secure base or a safe haven in times of stress was described as a learned skill gained by practice participating in relationships. It was predicted that romantic partners first move into the roles of affiliative and sexual figures during early adolescence before becoming attachment figures or objects of caretaking efforts in later adolescence.

This change in the status of the romantic partner relative to the four behavioral systems coincides with changes in dating life. A four-step sequence of dating was described by initial mixed-sex group interchanges, followed by casual dating (relationships usually lasting days to a few weeks), followed by stable relationships, and concluding with a committed relationship that is likely to end in marriage or some other permanent arrangement. By the final phase of the dating sequence it was predicted that the romantic partner would be a key figure in each of the four behavioral systems. As adolescents work through the process of finding a place in their lives for romantic relationships, they gain experiences, opinions, and beliefs about the nature and significance of romance. Their views about romantic relationships should, therefore, become richer and more articulated as they progress through adolescence and into adulthood.

Taken together, the theoretical work of Sullivan (1953), attachment theorists (Shaver & Hazen, 1993), and Furman and Wehner (1994) describes a developmental trajectory in which relationships with romantic partners become more salient as individuals move through adolescents into young adulthood. The styles of relating learned in early relationships with parents and peers serve as a foundation for interactions in early

romantic relationships, and these early romantic relationships create the framework for building long-term adult intimate relationships. Thus, although romantic relationships offer a unique developmental context with new challenges and different needs, these romantic relationships are expected to serve similar social functions to those served by earlier peer and later marital relationships. In addition, behaviors, thoughts, and emotions expressed in adolescent romantic relationships might be expected to resemble those expressed in other important developmental relationships.

The notion that interactions and behaviors in adolescent romantic relationships should resemble those in earlier peer relationships and in later marital relationships is supported by empirical investigations that have specifically examined continuity across important relationships. Peer competency in middle childhood has been found to predict the quality of romantic relationships in adolescence (Collins, Hennighausen, Schmit, & Sroufe, 1997). Children who were rated as more socially competent and who were able to maintain a mutual friendship with another child at age 10 described their romantic relationships at age 16 as more secure and intimate.

In another study (Furman & Wehner, 1997), adolescents reported moderate continuity in the quality of friendships and romantic relationships throughout early and late adolescence, and reported similarity between relationships with parents and with romantic partners in late adolescence. This was consistent with Furman and Wehner's (1994) argument that the affiliative relational characteristics learned in early peer relationships are more central in early adolescence. However, the caretaking and attachment elements of relationships, learned in relationships with parents, are not expected to be central in

romantic relationships until late adolescence when romantic partners assume the pivotal role in all four of the behavioral systems described by Furman and Wehner. Thus, one would expect views of romantic relationships in early adolescence to more closely resemble views of peer relationships. By late adolescence, romantic relationships are expected to take on more of the characteristics of later marital relationships. With the increasing importance of the romantic partner in fulfilling the needs of all four behavioral systems, both the beliefs and expectations learned in interactions with peers and those central to relationships with parents would be incorporated fully into adolescents' views of the romantic relationships. Some qualitative support for this conclusion was offered by Feiring's (1996) interview study. In middle adolescents' descriptions of their relationships, companionship was the most often cited advantage of being in a romantic relationship, while "too much commitment" was the most often cited disadvantage, suggesting that these earlier romantic relationships were characterized more by affiliation than by attachment.

Thus, a review of the empirical literature examining continuity across important relationships suggests that the skills necessary for establishing and maintaining early peer relationships generate those used to establish more intimate romantic relationships later in life (Collins et al., 1997). Possibly, romantic relationships in early adolescence bear greater resemblance to friendships, while the characteristics of adult marital relationships might be expected to emerge more forcefully by late adolescence (Feiring, 1996; Furman & Wehner, 1997).

These studies have relied largely on questionnaire and self-report methodologies in

their efforts to understand adolescent romantic relationships and their connection to other important relationships. To date, few studies have provided an analysis of interaction in adolescent couples (Capaldi & Crosby, 1997; Welsh, Galliher, Kawaguchi, & Rostosky, in review). Examining interaction between relationship partners provides the advantage of knowing what people actually *do* in their relationships, rather than relying on what they can say *about* the relationship. Studies of interaction in other important relationships, such as peer and marital relationships, have found that the quality of interaction is consistently related to overall ratings of relationship quality (e.g., Gottman and Parker, 1986; Weiss & Heyman, 1990; 1997). Given the theoretical (Furman & Wehner, 1994) and empirical (Furman & Buhrmester, 1992; Shulman & Collins, 1997) evidence that peer relationships provide the foundation for adolescent romantic relationships, which in turn develop into long-term intimate relationships, these bodies of literature provide a good basis for forming hypotheses about the association between interaction and relationship quality in adolescent romantic relationships.

The vast majority of the research that has examined interaction in families, among peers, and in married couples has involved the coding of conversations or play situations by trained, independent coders (e.g., Gottman, 1979; Gottman & Parker, 1986). This approach assumes that trained observers are better able to capture the essence or the truth of the interaction, presumably because they are not biased by involvement in the interaction. Recently, however, theorists and researchers have begun to challenge this reliance on the observations of outsiders in understanding interaction in important relationships (Gergen, 1994a; 1994b; Hoffman, 1990; Powers, Welsh, & Wright, 1994;

Welsh, Galliher, Kawaguchi, & Rostosky, under review; Welsh, Galliher, & Powers, 1998). Stemming from the arguments of social construction theory, these theorists and researchers acknowledge the existence of multiple perspectives, each of which may be useful in understanding relationships. Empirical work drawing on this position has found that adolescents' and parents' perceptions of their conversations were useful in predicting adolescent psychological functioning (Powers, Welsh, & Wright, 1994; Welsh, Galliher, & Powers, 1998) and that adolescent couple members' perceptions of their interaction were also associated with their psychological health (Welsh, Galliher, Kawaguchi, & Rostosky, under review). In the current study, adolescent male and female couple members' and trained adult observers' perceptions of couple conversations were each used to predict overall relationship quality as reported by the couple members, providing a more complete understanding of couple members' interaction.

Patterns of interaction in childhood peer relationships

Interaction in platonic peer relationships has been studied quite extensively (e.g., Gottman & Parker, 1986). Generally, researchers have been interested in identifying behavioral styles or patterns of interaction associated either with higher sociometric status or with the progression towards friendship between two interacting children (i.e., "hitting it off"). Since the cultivation of friendships and peer acceptance have been described as critical skills for children to attain (Putallaz & Heflin, 1986), researchers have used observational methodology to differentiate socially competent children from those who struggle in their peer relationships, working toward intervention strategies that will help children improve their relationships with peers.

Several researchers (Gottman, 1986; Putallaz & Gottman, 1981) described higher overall rates of "agreement" as predictive of children's "hitting it off". Essentially, "agreement", which encompasses such supportive behaviors as agree, approve, acknowledge, praise, and compliment, reliably discriminated interactions among best friends and strangers and predicted the progression toward friendship in previously unacquainted dyads. In terms of patterns of positive interaction, some evidence has suggested that positive reciprocity, or interaction in which one partner's positive behavior is contingent upon the positive behavior of the other partner, is associated with greater relationship satisfaction in friendships (Murstein, Cerreto, & MacDonald, 1977). In contrast, evidence from the marital (Gottman, 1979) and family literatures (Haley, 1964) has suggested that positive reciprocity represents relationships that are too rigid and tightly linked and is associated with poorer relationship quality. Gottman (1986) argued that positive reciprocity may be functional and productive in the early stages of relationships, but may be associated with difficulties at later stages.

In addition to the higher rates of positive behaviors observed in more socially competent children, lower rates of "disagreement," or conflictual behaviors such as non-compliance, disapproval, criticism, insults, and teasing, predicted better social status (Gottman, 1986). Furthermore, children who were more socially competent were able to resolve conflict quickly by de-escalating conflict situations. For example, they were more likely to offer reasons with their demands and to use softer, polite forms of requests. Thus, the conversations of socially competent young children contained shorter sequences of negative behavior and were less likely to escalate into long back-and-forth squabbles.

Patterns of interaction in marital relationships

A strong research literature has accumulated examining interaction in marital couples (see Weiss & Heyman, 1990; 1997 for reviews). Typically, couples have been videotaped having problem-solving conversations or discussions about areas of conflict and the nature and pattern of their interaction have been used to predict the overall relationship quality and stability. Couples' interaction has usually been coded by trained observers using a microanalytic coding system (e.g., Gottman & Krokoff, 1989). Behaviors were coded as they occurred during the conversation so that researchers could not only assess overall base rates of particular behaviors, but also patterns of interaction using sequence analysis techniques. In most studies, specific behaviors have been collapsed into either positive or negative behaviors for analysis. Positive behaviors included approval, agreement, humor/laugh/smile, assent, compromise, or physical affection, while typical negative behaviors were complain, criticize, put down, interrupt, or negative physical contact. An alternative method for analyzing interaction assessed partners' subjective understandings of the conversation (Markman, 1979; 1981). This "talk table" approach involved having couple members rate their partners' intentions and the felt impact of the interaction after each statement made during the conversation. Partners were rated on a Likert scale from "super negative" to "super positive."

As might be predicted, these studies have typically found that couples who showed high rates of positive behaviors during their interactions reported higher levels of satisfaction with the marriage, both concurrently and at follow-up (Margolin & Wampold, 1981; Markman, 1979; 1981). Also, some studies reported that higher rates of negative

behaviors were associated with decreased marital satisfaction (Hooley & Hahlweg, 1989), although, as will be discussed below, others contended that the picture is much more complicated (Gottman & Krokoff, 1989).

Sequential analyses provide a more complex appraisal of marital interaction and have yielded some consistent patterns of results. Researchers have typically linked negative reciprocity, or the increased likelihood that negative behavior by one spouse will elicit negative behavior from the partner, with poorer marital satisfaction and stability (Filsinger & Thoma, 1988; Margolin & Wampold, 1981). In addition, positive reciprocity has been found to be associated with poorer marital outcomes (Filsinger & Thoma, 1988). Researchers described a "tit-for-tat" approach to managing relationships characteristic of distressed couples, in which partners are locked in to each other's behaviors in a rigid and inflexible manner. This inflexibility contributed to the greater likelihood of negative escalation in distressed couples (Hooley & Hahwleg, 1989), defined as a continuous sequence of negative behaviors in the interaction. In other words, distressed couples engaged in longer back-and-forth sequences of negative interactions than non-distressed couples.

Gottman and his colleagues (Gottman, Coan, Carrere, & Swanson, 1998; Gottman and Krokoff, 1989) have developed a more complicated approach to understanding patterns of interaction in married couples. In their longitudinal work (Gottman & Krokoff, 1989), they identified patterns of husband-wife interaction that, although they predicted poorer marital functioning at time 1, were associated with improvement in marital satisfaction longitudinally. Specifically, expression of anger by husbands was

associated with current dissatisfaction with the relationship, but predicted improvement in the relationship quality over time. Defensiveness, stubbornness, and withdrawal on the part of the husband, however, predicted both current dissatisfaction and deterioration of the marriage over time. Regarding wives' behaviors, a different pattern emerged. Positive behavior and compliance by wives were associated with current satisfaction, but predicted long-term dissatisfaction. Essentially, stubbornness and withdrawal on the part of husbands appeared to be the most damaging to marriages longitudinally, and compliance and positivity by wives yielded short-term benefits for the marriage but was associated with deterioration over time. Recommendations for marriages based on these results were that wives should confront disagreements and express anger in their relationships as long as conflicts could be negotiated in a manner that did not include defensiveness, stubbornness, or withdrawal on the part of the husband.

Recent work by Gottman and his colleagues (1998) has begun to reconceptualize the analysis of husband-wife interaction in terms of interpersonal power. Couples who reported deterioration in the marriage over time evidenced a pattern in which low-level negativity by the wife triggered defensive negative behavior by the husbands. This pattern was interpreted as husbands' unwillingness to accept influence from their wives. Thus, reluctance to share interpersonal power with wives was predictive of marital distress. Conversely, in couples that wound up stable and happy, both husbands and wives engaged in higher levels of positive behaviors and husbands were able to de-escalate conflict by responding to their wives' low-level negative behavior with neutral, non-conflictual behavior.

Taken together, the bodies of literature examining interaction in peer relationships and marriages provide a picture of interaction predictive of relationship quality. Base rates of both positive and negative behavior appear to be important in predicting relationship satisfaction, although different patterns may appear over time. Additionally, patterns of negative and positive interaction between interaction partners seem relevant, with evidence from the marital literature suggesting that spouses' ability to manage conflict in a manner that provides equal engagement and shared interpersonal power is of particular importance.

Hypotheses for the current study

The current study examined the link between adolescent couple members' or independent observers' perceptions of couples' video-taped conversations and couple members' current reports of relationship quality and relationship stability over one year. The literature examining these associations in peer relationships and marital relationships has generally relied on the ratings of trained observers. As no previous empirical work has compared the perceptions of observers and participants themselves, questions pertaining to differences between couple members and observers in terms of predictive utility remained exploratory. The associations between interaction and relationship quality were examined separately for girlfriends, boyfriends, and trained observers.

Based on the research on interaction in other important relationships, the following hypotheses were tested.

1) Base rates of various couple members' behaviors were used to predict current relationship quality. Both positive behaviors, including support and humor, and negative

behaviors, including conflict and frustration, were included in the analyses. It was hypothesized that higher rates of support and humor in video-taped conversations would be associated with higher relationship quality, while higher rates of conflict and frustration would be associated with poorer relationship quality.

2) Negative reciprocity, which occurred when couple members' conflictual behavior was followed in the next segment of video-tape by partners' conflictual behavior, was expected to predict current dissatisfaction with the relationship.

3) Positive reciprocity, in which supportive behavior by one couple member evoked supportive behavior from the partner in the next segment, was expected to be related to relationship outcome. Predictions stemming from the peer literature offered different expectations than those stemming from the marital literature. Positive reciprocity has been associated with poorer relationship quality in marriages (Filsinger & Thoma, 1988), while it has been associated with greater satisfaction in friendships (Murstein, Cerreto, & MacDonald, 1977). Thus, questions regarding the role of positive reciprocity in adolescent romantic relationships remained exploratory.

4) De-escalation of conflict was described by Gottman et al., (1998) as couple members' ability to respond to their partners' conflictual behavior with neutral behavior. It was expected that de-escalation, particularly boyfriends' de-escalation, would be associated with current satisfaction with the relationship.

5) Boyfriends' ability to accept influence from girlfriends, or their sharing of interpersonal power, was expected to be associated with current relationship satisfaction. Specifically, it was predicted that when girlfriends' efforts to persuade their boyfriends were more

likely to be followed, in the next segment of video-tape, by boyfriends' being persuaded, relationship quality would be greater.

Hypotheses predicting the association between the preceding variables and relationship longevity in these adolescent couples remained exploratory. Although these variables are clearly related to adult couples' capacities to maintain their relationships over time, the extent to which these findings apply to young couples is unclear. The goal of romantic relationships at this developmental stage may not necessarily be long-term pair bonding. Couple members may learn the skills necessary to establish a lasting intimate relationship over the course of several shorter relationships across adolescence. The extent to which these patterns of interaction are related to young couples' progress toward long-term romantic relationships is an important question that was addressed in an exploratory manner in the current study.

CHAPTER II

METHODS

Participants

Participants for this project were sixty-one target adolescents and their romantic partners. Target adolescents were 18 or 19 years of age and were recruited either through high school yearbooks and newspaper listings of recent high school graduates (n=37) or through freshman level psychology courses (n=24). Couples were invited to participate if the romantic partner was between 16 and 20 years and the couple had been dating for a minimum of four weeks. The age range was considered to be broad enough not to restrict the number of couples that would be eligible and the length of relationship requirement ensured that couples were in a somewhat committed relationship. The length of dating relationships ranged from four weeks to five years (median=eight months). Couples contacted through high school yearbooks or graduation announcements were paid $60. Participants contacted through college courses received extra credit for their participation.

Most of the participants lived with two parents (72% of girls and 57% of boys). Although many of the participants held part-time jobs (49% of girls and 28% of boys), almost all were enrolled in either high school or college (80% of girls and 74% of boys). The couples in the sample were primarily European-American (90% of girls and 93% of boys), with the remainder being comprised of approximately 2-3% each of Native American, Asian, African American, and Hispanic individuals.

Procedures and measures

Couples came to our laboratory for a total of 4 ½ hours of data collection. They did this in either one or two sessions depending upon their schedules. Our lab consists of a suite of three separate rooms so that couples had privacy from our staff during the video-taping portion and from each other during the video-recall and questionnaire portions of our study. Couples were offered juice, soft drinks, and snacks during their sessions to facilitate attentiveness and cooperation. They completed the video recall procedure described below and a series of interview and questionnaire measurements used in a larger study.

Video-recall Procedure.

Couples were video-taped for twenty-two minutes having two conversations about issues designed to elicit engaging conversation from adolescent couples. In the first conversation, couples were asked to imagine that it was 20 years in the future and they were married to each other and had adolescent children of their own. They were instructed to discuss how they would parent their adolescent children, what they would like their relationship with each other to be like, and how their imagined family would be similar to or different from their own families of origin. For the second conversation, couples were asked to discuss a hypothetical dilemma that has been developed and used by others (Gilligan, Kohlberg, Lerner, & Belenky, 1971) and was modified only slightly to fit within contemporary adolescent language norms. The dilemma involved a high school female whose parents were out of town for the weekend. While she was home alone, her boyfriend unexpectedly visited. A series of questions asked about how she

should behave under a variety of circumstances. For each discussion, couples were given instructions and a written description of the conversation topic and were left alone to have the conversation.

Immediately following their conversation, each member of the couple separately viewed their discussion using a video-recall procedure. Participants first rated their own behavior during the two conversations and then watched both conversations a second time to rate their partners' behavior. For each viewing, the tape was divided in to 25-second intervals. The tape was paused automatically to allow the participants to rate themselves or their partners on six different dimensions using a five-point Likert-type rating scale (Powers, Welsh, & Wright, 1994). The six dimensions included the degree to which the individual being rated was supportive, conflictual, humorous, frustrated, giving in, or trying to persuade his or her partner. Data were immediately recorded by the computer to avoid error associated with experimenter data entry. After participants chose their answers to the final behavioral dimension for each segment, the next 25-second segment was played. Participants rated their own behavior and their partners' behavior for a total of 15 minutes each (the middle 7 ½ minutes of each conversation), allowing two minutes for couples to become engaged in each conversation before coding began.

Two female graduate student coders (aged 25 and 44) also rated the videotapes. The coders spent four months (at 10 hours/week) learning the coding system and obtained adequate levels of inter-rater reliability. Intra-class correlation coefficients for the aggregated mean ratings of behavior were .74 for conflict, .76 for support, .80 for humor, .85 for trying to persuade, .54 for frustration, and .51 for conceding. Reliability was

also calculated at the segment level, yielding intra-class correlation coefficients of .62 for support, .68 for conflict, .68 for humor, .70 for persuading, .55 for frustration, and .44 for conceding. Frustration and conceding had extremely low frequencies of occurrence which markedly reduces the likelihood of achieving high levels of reliability. The coders used the same six codes and the same technical procedure as the couple members, except that they watched the tape once before coding it rather than participating in the conversation before coding it. See Appendix for the coding manual used by the trained observers.

To determine base rates for each behavior, participants' ratings for themselves and for their partner were separately aggregated and a mean score was calculated for each behavior. Using the unaggregated sequence data, conditional probabilities were computed to address each of the hypotheses regarding patterns of interaction in the conversations. The conditional probabilities were transformed, using Allison and Liker's (1982) *z*-score of sequential connection, in order to correct for differences in the base rates of the behaviors. The *z*-scores were then used to predict each of the indices of global relationship quality.

Assessing Relationship Quality.

Quality of Relationships Inventory (QRI). Couple members completed the 25-item Quality of Relationships Inventory (Pierce, 1996; Pierce, Sarason, & Sarason, 1991). The QRI has demonstrated good psychometric properties and has correlated with general measures of social support. The QRI yields three sub-scales; Support, Depth, and Conflict.

Dimensions of Commitment Inventory (DCI). The 45-item DCI (Adams & Jones, 1997), developed to assess the degree to which an individual intends to maintain his or her marriage, was modified for use with unmarried couples. The modified version has demonstrated good psychometric properties (Rostosky, Welsh, Kawaguchi, & Vickerman, in press) and assesses an individual's intention to maintain his or her romantic relationship in three primary ways: a) as an individual's devotion to and satisfaction with his/her partner (Commitment to the Partner Scale), (b) an individual's belief in the sanctity of the romantic relationship and a personal sense of obligation to honor his/her relationship (Commitment to the Relationship Scale), and (c) an individual's desire to avoid financial or social penalties that might result from breaking up (Feelings of Entrapment Scale).

Miller Social Intimacy Scale (MSIS). Developed by Miller and Lefcourt (1982), the MSIS is a 17-item ten-point Likert-type scale that results in one score measuring intimacy in the couple's relationship. The MSIS has good psychometric properties and positively correlates with other measures of intimacy, negatively correlates with measures of loneliness, and differentiates distressed married couples from non-distressed married couples. The scale is designed to measure intimacy emphasizing mutual self-disclosure, acceptance, and affection.

Follow-up.

Relationship stability was assessed using two different methods. Couple members were contacted through the mail approximately one year after their initial participation in the project. Participants were asked to complete a short questionnaire and

return it in an enclosed self-addressed envelope. First, couple members were asked if they were still dating the partner with whom they had participated in the study, yielding a dichotomous variable which identifies couples who were broken up and those who were still together. Second, if the couple had broken up, participants were asked to report the date of the break-up. Longevity was calculated as the number of weeks the couple continued to date after their initial participation in our study. Longevity of couples who had not broken up was calculated to the day of follow-up. Follow-up data were received from 43 couples.

T-tests were performed to compare those couples who participated in the follow-up portion of the study to those who did not on all global relationship quality measures and all interaction variables. Differences were found between the two groups on only one of the fourteen global measures of relationship quality. Girlfriends in couples who did not participate in the follow-up reported lower commitment to their partners at time 1. Differences were found between the two groups on three of the 72 interaction variables. Observers rated girlfriends in couples who did not participate in follow-up as more frustrated than those who did participate. Also, observers' rated males in couple who participated in follow-up as more likely to accept influence from their girlfriends, while males who rated themselves as more likely to accept influence from their girlfriends were less likely to participate in follow-up.

CHAPTER III

RESULTS

Preliminary analyses

Table 1 presents means and standard deviations for males', females', and observers' ratings of both couple members on each of the six behavioral dimensions coded in the interactions. Table 2 presents means and standard deviations for males' and females' scores on the three subscales of the Quality of Relationships Inventory, the three scales of the Dimensions of Commitment Inventory, and on the Miller Social Intimacy Scale.

Predicting relationship quality from perceptions of interaction

Predicting relationship quality from mean ratings of interaction.

Table 3 presents correlations between couple members' global ratings of relationship quality on the QRI, DCI, and MSIS and ratings of interaction by all three raters (males, females, and trained observers). Several patterns of correlation stand out. First, both males' and observers' ratings of support in the conversations were highly related to several measures of global relationship quality. Specifically, 15 of 28 possible correlations between ratings of support and relationship quality were significant for both males and observers. In contrast, only one of 28 correlations predicting relationship quality from females' ratings of support were significant.

Females' ratings of conflict in the interactions were much more likely to be related to global measures of relationship quality. Twelve of 28 possible correlations between females' ratings of conflict and global relationship quality were significant.

Table 1

Means and Standard Deviations for Behaviors for Males, Females, and Observer

Coded dimension Rater	Ratings of Male $\bar{x}$	 (SD)	Ratings of Female $\bar{x}$	 (SD)
Support				
Male	2.72	(.96)	2.54	(1.06)
Female	2.59	(.66)	2.73	(.59)
Observer	2.29	(.25)	2.27	(.26)
Conflict				
Male	.74	(.69)	.79	(.79)
Female	.86	(.69)	.97	(.67)
Observer	.84	(.46)	.85	(.45)
Humor				
Male	1.34	(.77)	.97	(.65)
Female	1.23	(.76)	1.37	(.72)
Observer	1.15	(.45)	1.21	(.42)
Trying to Persuade				
Male	1.37	(.94)	1.45	(1.00)
Female	1.84	(.90)	1.70	(.86)
Observer	1.99	(.42)	1.94	(.46)
Conceding				
Male	.96	(.78)	.99	(.85)
Female	1.40	(.77)	1.29	(.73)
Observer	.38	(.22)	.49	(.27)
Frustration				
Male	.15	(.25)	.24	(.43)
Female	.30	(.38)	.33	(.38)
Observer	.04	(.08)	.07	(.16)

Table 2

Means and Standard Deviations for Global Ratings of Relationship Quality

	Males $\overline{X}$ (SD)	Females $\overline{X}$ (SD)
Intimacy (MSIS)	143.45 (19.63)	150.57 (15.01)
Depth (QRI)	3.36 (.59)	3.52 (.52)
Support (QRI)	3.35 (.44)	3.38 (.38)
Conflict (QRI)	1.76 (.47)	1.84 (.59)
Commitment to Partner (DCI)	58.75 (11.12)	60.19 (10.42)
Commitment to Relationship (DCI)	42.55 (9.70)	41.41 (8.46)
Feelings of Entrapment (DCI)	25.85 (7.16)	25.53 (9.23)

Table 3

Correlations Between Mean Ratings of Interaction and Global Relationship Quality

	Intimacy		Depth		Support		Conflict		Commitment to Partner		Commitment to Relationship		Feelings of Entrapment	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Support														
Males' ratings														
Male	.40**	.34*	.37*	.21	.41**	.31*	-.26*	-.15	.42**	.36**	.25	.30*	.09	.25
Female	.34*	.28*	.28*	.24	.29*	.36*	-.19	-.20	.39**	.34**	.19	.22	.03	.15
Females' ratings														
Male	.15	.23	.21	.07	.09	.17	-.15	-.30*	.20	.18	.23	-.07	.00	.04
Female	.06	.05	.01	.09	.00	.18	-.01	-.04	.04	.07	.06	-.15	-.16	.00
Observers' ratings														
Male	.39**	.14	.35**	.19	.32*	.31*	-.14	-.21	.42**	.32*	.31*	.12	.14	.15
Female	.44**	.32*	.53**	.26*	.42**	.32*	-.04	-.08	.44**	.32*	.21	.18	.18	.04
Humor														
Males' ratings														
Male	-.16	-.08	-.17	-.19	-.03	-.11	-.06	.16	-.12	-.15	-.23	-.16	-.18	.08
Female	.03	-.25	-.17	-.12	-.15	-.04	-.07	-.07	-.08	-.08	-.16	-.14	-.13	-.04
Females' ratings														
Male	-.13	-.24	.01	-.29*	-.06	-.40**	.04	.03	-.16	-.35**	-.15	-.17	-.16	-.02
Female	-.23	-.21	-.01	-.19	-.07	-.29*	.05	.02	-.15	-.27*	-.15	-.09	-.07	.13
Observers' ratings														
Male	.06	.13	.05	.01	-.05	-.17	-.15	-.07	.03	-.06	-.14	-.34**	-.39**	-.32*
Female	-.04	-.02	-.05	-.05	-.11	-.19	-.28*	-.16	-.01	-.09	-.19	-.42**	-.42**	-.38**

Note: * $p < .05$, ** $p < .01$

Table 3 continued

Correlations Between Mean Ratings of Interaction and Global Relationship Quality

	Intimacy		Depth		Support		Conflict		Commitment to Partner		Commitment to Relationship		Feelings of Entrapment	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Conflict														
Males' ratings														
Male	-.11	-.28*	-.14	-.27*	.00	-.19	.35**	.39**	-.11	-.34**	-.14	-.10	.00	.13
Female	-.17	-.19	-.14	-.18	-.14	-.14	.26	.36**	-.13	-.24	-.13	-.07	-.05	.10
Females' ratings														
Male	-.21	-.44**	-.19	-.38**	-.13	-.49**	.26*	.25	-.29*	-.45**	-.21	-.05	.00	.08
Female	-.30*	-.45**	-.21	-.36**	-.18	-.46**	.23	.24	-.26*	-.43**	-.17	.01	-.02	.11
Observers' ratings														
Male	.14	.13	.08	.08	.03	.10	.18	.19	.08	.04	-.04	-.21	-.12	-.14
Female	.08	.04	.02	-.01	.00	-.04	.12	.21	.03	-.07	-.07	-.27*	-.15	-.18
Frustration														
Males' ratings														
Male	-.25	-.20	-.12	-.26*	-.12	-.09	.25	.32*	-.22	-.28*	-.20	-.35*	.03	-.23
Female	-.20	-.03	-.20	-.11	-.12	.03	.08	.15	-.23	-.11	-.14	-.22	-.03	-.15
Females' ratings														
Male	-.18	-.29*	-.06	-.28*	-.01	-.34**	.15	.42**	-.15	-.41**	-.21	-.04	-.04	.13
Female	-.24	-.20	-.10	-.19	-.09	-.23	.27*	.42**	-.25	-.34**	-.25	-.15	-.08	-.07
Observers' ratings														
Male	.13	.02	-.05	-.10	.09	.03	.05	.18	.15	-.01	.27*	.03	.30*	.15
Female	.01	.03	.06	-.01	.08	.01	.12	.29*	.04	-.02	.19	.17	.12	.07

Note: * $p < .05$, ** $p < .01$

Table 3 continued

Correlations Between Mean Ratings of Interaction and Global Relationship Quality

	Intimacy		Depth		Support		Conflict		Commitment to Partner		Commitment to Relationship		Feelings of Entrapment	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Persuading														
Males' ratings														
Male	-.28*	-.14	-.29*	-.12	-.21	.00	.26*	.09	-.34**	-.18	-.24	-.18	.01	-.15
Female	-.33*	-.10	-.09	-.06	-.14	.02	.22	.17	-.20	-.11	-.17	-.13	.00	-.15
Females' ratings														
Male	-.16	-.25	-.28*	-.18	-.12	-.02	.02	.15	-.27*	-.22	-.44**	-.14	-.16	-.16
Female	-.15	-.11	-.08	-.07	-.09	.01	.03	.25	-.14	-.11	-.25	-.10	-.08	-.07
Observers' ratings														
Male	.31*	.28*	.16	.15	.14	.24	.01	-.11	.22	.26*	.10	-.02	-.02	-.11
Female	.10	.08	.23	.14	.22	.09	.05	.09	.18	.04	.13	.01	.08	.07
Being Persuaded														
Males' ratings														
Male	-.37**	-.12	-.11	-.08	-.14	.04	.10	.07	-.27*	-.09	-.21	-.09	.02	-.06
Female	-.24	-.08	-.15	-.09	-.15	.03	.05	-.09	-.26*	-.05	-.18	-.11	.03	-.11
Females' ratings														
Male	-.13	-.17	-.15	-.07	-.08	.00	-.05	.13	-.09	-.12	-.27*	-.13	-.09	-.13
Female	-.21	-.19	-.14	-.12	-.13	-.01	.01	.06	-.16	-.14	-.28*	-.09	-.04	-.11
Observers' ratings														
Male	.16	.07	.11	.20	.05	.31*	.11	.18	.16	.04	.06	-.26	-.02	-.13
Female	.06	.06	.12	.10	.06	.16	.27*	.29*	.05	.00	.02	-.11	.02	-.09

Note: * $p < .05$, ** $p < .01$

Males' ratings of conflict were less likely to be related to global reports of relationship quality (6 out of 28 significant correlations) and observers' ratings of conflict were not at all related to couple members' questionnaire scores. Similar patterns of correlation were found for ratings of frustration in the conversations. Thus, while observers' and males' perceptions of supportive behavior in the conversations were useful in predicting couple members' global relationship quality, females' perceptions of conflictual behavior and frustration were more salient.

Interesting patterns of correlations emerged for perceptions of humorous behavior in the conversations. For females, perceptions of humor (both their own and their boyfriends') were negatively related to several dimensions of global relationship quality. This finding held for observers' perceptions of humorous behavior (particularly with regard to the association between humor and commitment), but males' ratings of humor were not related to global relationship quality at all.

The few significant correlations between ratings of persuading and being persuaded in the conversations suggested that both males and females who saw more persuading and giving in reported poorer relationship quality. Observers' ratings of persuading, however, were positively associated with some dimensions of relationship quality, suggesting systematic differences between couple members and observers in the manner that persuading behavior was perceived.

In order to better test the hypotheses that base rates of both positive and negative behavior in couples' interaction would be associated with global relationship quality, a series of forced entry multiple regression analyses were also performed. Observers' and

couple members' mean ratings of support, humor, conflict, and frustration were used to separately predict both males' and females' scores on the various global measures of relationship quality. Table 4 presents a summary of the significant regressions predicting both males' and females' scores on the QRI, DCI, and MSIS from males' ratings of themselves in the conversations. Table 5 presents a summary of the significant regressions predicting relationship quality from males' ratings of their girlfriends. The overall R^2 including all predictors and individual significant betas can be found in the tables. All regressions and betas not listed in the tables were non-significant. Consistent with the bivariate correlations, males' ratings of support in the conversations were most likely to be related to global relationship quality in the regression analyses. Also, males' ratings of conflict and frustration were related negatively to females' commitment, and, not surprisingly, microbehavioral ratings of conflict in the conversations were related to global ratings of conflict in the relationship.

Significant regressions predicting global relationship quality from females' mean ratings of both themselves and their boyfriends are found in Table 6. Females' perceptions of conflict and frustration in the conversations were highly related to their own reports of global intimacy, support, depth, conflict, and commitment. Interestingly, girlfriends' perceptions of humor were also significantly associated with their global scores on support and commitment to their partners. Females who saw their boyfriends as more humorous reported less overall support in their relationships and less commitment to their boyfriends. Females' ratings of the interaction were not related to any of their boyfriends' scores on the global measures of relationship quality.

Table 4

Significant Regressions Predicting Relationship Quality from Males' Ratings of Themselves

	R^2	F	beta	t
Males' Relationship Quality				
Intimacy (MSIS)	.19	3.20*		
Support			.37	2.88**
Support (QRI)	.17	2.79*		
Support			.41	3.17**
Depth (QRI)	.16	2.58*		
Support			.37	2.83**
Conflict (QRI)	.22	3.82**		
Conflict			.38	2.67**
Humor			-.26	-1.92^
Commitment to Partner	.20	3.21*		
Support			.40	3.10**
Females' Relationship Quality				
Intimacy (MSIS)	.17	2.59*		
Support			.29	2.19*
Conflict (QRI)	.19	3.05*		
Conflict			.32	2.21*
Commitment to Partner	.22	3.75**		
Support			.30	2.37*
Conflict			-.25	-1.79^
Commitment to Relationship	.18	2.97*		
Support			.24	1.85^
Frustration			-.30	-2.07*
Feelings of Entrapment	.16	2.30*		
Frustration			-.30	-2.06*

Note: ^ $p < .10$, * $p < .05$, ** $p < .01$

Table 5

Significant Regressions Predicting Relationship Quality from Males' Ratings of Females

	R^2	F	beta	t
Males' Relationship Quality				
Intimacy (MSIS)	.19	3.12*		
Support			.35	2.63*
Humor			-.27	-2.00*
Commitment to Partner	.17	2.72*		
Support			.37	2.74**
Females' Relationship Quality				
Support (QRI)	.20	3.21*		
Support			.44	3.28**
Frustration			.29	1.95^
Conflict (QRI)	.21	3.42*		
Conflict			.47	3.16**
Commitment to Partner	.18	2.86*		
Support			.37	2.77**
Conflict			-.26	-1.71^

Note: ^ $p < .10$, * $p < .05$, **$p < .01$

Table 6

Significant Regressions Predicting Relationship Quality from Females' Ratings of Interaction

	R^2	F	beta	t
Females' Ratings of Themselves > Males' Relationship Quality				
Intimacy (MSIS)	.21	3.56*		
Conflict			-.47	-2.97**
Support (QRI)	.23	3.98**		
Conflict			-.37	2.37**
Depth (QRI)	.13	2.08^		
Conflict			-.32	-1.98*
Conflict (QRI)	.21	3.51*		
Frustration			.43	3.04**
Commitment to Partner	.24	4.33**		
Conflict			-.30	-1.99*
Frustration			-.26	-1.88^
Females' Ratings of their Boyfriends > Females' Relationship Quality				
Intimacy (MSIS)	.21	3.54*		
Conflict			-.36	-2.18*
Support (QRI)	.30	5.74**		
Conflict			-.33	-2.15*
Humor			-.26	-2.09*
Depth (QRI)	.18	2.93*		
Conflict (QRI)	.20	3.38*		
Frustration			.36	2.24*
Commitment to Partner	.27	5.08**		
Humor			-.23	-1.39^

Note: ^ $p < .10$, * $p < .05$, ** $p < .01$

Tables 7 and 8 contain a summary of significant regressions predicting couple members' global relationship quality from observers' ratings of the conversations. Observers' ratings were successful in predicting several measures of both males' and females' global relationship quality. Observers' ratings of couple members' supportive behavior predicted both males' and females' reports of intimacy, depth, support, and commitment in their relationships. Interestingly, observers were the most effective at predicting couple members' scores on two of the scales of the Dimensions of Commitment Inventory. Observers' ratings of support, humor, and frustration in the conversations predicted scores on the Commitment to the Relationship Scale and the Feelings of Entrapment Scale. Support was positively related to commitment for both males and females. However, while frustration was positively related to Commitment to the Relationship and Feelings of Entrapment for males, humor was negatively related to these two scales for females.

Predicting relationship quality from sequential patterns of interaction. Several steps were taken to test the hypotheses that couple behavior at the level of conversation segments would be associated with global relationship quality. First, the ratings for each segment of conversation were recoded as dichotomous data. The means for each behavior were used to indicate a cut-off point for occurrence of the behavior. Ratings above the mean were coded as 1 to indicate occurrence of the behavior and ratings below the mean were recoded as 0 to indicate non-occurrence. For example, mean ratings of support by both couple members and observers were between two and three. Thus, in recoding support into a dichotomous variable, ratings of 3 or 4 were recoded as 1 and

Table 7

Significant Regressions Predicting Relationship Quality from Observers' Ratings of Males

	R^2	F	beta	t
Males' Relationship Quality				
Intimacy (MSIS)	.18	2.84*		
Support			.39	3.11**
Depth (QRI)	.14	2.15^		
Support			.35	2.77*
Commitment to Partner	.19	3.13*		
Support			.41	3.31**
Commitment to Relationship	.20	3.31*		
Support			.30	2.42*
Frustration			.32	2.34*
Feelings of Entrapment	.29	5.39**		
Humor			-.36	-2.88**
Frustration			.37	2.85**
Females' Relationship Quality				
Support (QRI)	.17	2.62*		
Support			.33	2.59*
Humor			-.27	-1.97^
Commitment to Relationship	.15	2.37^		
Humor			-.30	-2.18*
Feelings of Entrapment	.16	2.58*		
Humor			-.30	-2.16*

Note: ^ $p < .10$, * $p < .05$, ** $p < .01$

Table 8

Significant Regressions Predicting Relationship Quality from Observers' Ratings of Females

	R^2	F	beta	t
Males' Relationship Quality				
Intimacy (MSIS)	.21	3.54*		
Support			.45	2.69**
Support (QRI)	.22	3.64*		
Support			.46	3.67**
Depth (QRI)	.31	6.06**		
Support			.57	4.89**
Commitment to Partner	.20	3.40*		
Support			.46	3.37**
Commitment to Relationship	.14	2.22^		
Support			.28	2.13*
Frustration			.27	1.78^
Feelings of Entrapment	.18	2.99*		
Females' Relationship Quality				
Support (QRI)	.16	2.42^		
Support			.35	2.69*
Commitment to Relationship	.26	4.58**		
Support			.25	2.03*
Humor			-.35	-2.63*
Feelings of Entrapment	.20	3.38*		
Support			.23	1.86^
Humor			-.36	-2.58*

Note: ^ $p < .10$, * $p < .05$, ** $p < .01$

ratings from 0 to 2 were recoded as 0. Ratings of 1 or higher for conflict, frustration, and boyfriends' being persuaded were recoded as 1, and ratings on those behaviors of 0 were left as 0. For girlfriends' efforts to persuade their boyfriends, ratings of 2 or higher were recoded as 1 to indicate occurrence of persuading and ratings of 0 or 1 were recoded as 0.

Conditional probabilities were computed for each of the sequential hypotheses from each raters' perspective. From the perspectives of observers, girlfriends, and boyfriends, the following conditional probabilities were computed. Males' sequential positive reciprocity was computed as the occurrence of male support given female support in the previous segment. Females' sequential positive reciprocity was computed as the occurrence of female support given male support in the previous segment. Humor was not included in the computation of positive reciprocity as originally planned because preliminary correlational analyses indicated that it did not operate as a connecting, positive behavior as hypothesized. The probability of males' sequential negative reciprocity was computed as male conflict or frustration given female conflict or frustration in the previous segment. Females' sequential negative reciprocity occurred when female conflict or frustration followed male conflict or frustration. De-escalation (computed for both males and females) was calculated as one partners' non-conflictual behavior (i.e., conflict score of 0) given conflictual behavior by the partner in the previous segment. Finally, males' accepting influence was computed as the probability of males' being persuaded given females' trying to persuade in the previous segment. The conditional probabilities were transformed into *z*-scores of sequential connection

using the formula presented by Allison and Liker (1982). "The *z*-score measures the direction and gain in prediction of the consequent code's occurrence given knowledge that the antecedent code has occurred" (Gottman & Krokoff, 1989, p. 49).

Table 9 presents bivariate correlations between the *z*-scores and global measures of relationship quality. Regarding males ratings, perceptions of their own accepting influence from their girlfriends were significantly correlated with the most indices of relationship quality. In couples where males saw themselves as more persuaded by their girlfriends efforts to persuade, both members saw less global conflict and more intimacy, females reported more depth, and males reported more commitment. In addition, males' perceptions of positive reciprocity were negatively correlated with some measures of relationship quality, both for themselves and their girlfriends. Females' ratings of negative reciprocity, on the other hand, were more likely to be related to relationship quality. Girlfriends' ratings of both their own and their boyfriends' negative reciprocity were correlated with more intimacy, support, depth, and commitment. Observers' ratings of negative reciprocity by both members were also positively correlated with several indices of relationship quality, but their ratings of de-escalation were the most salient in predicting couple members questionnaire scores. Observers' ratings of both couple members' de-escalation were negatively correlated with many measures of relationship quality.

A series of forced entry multiple regressions was performed to further test the hypotheses that specific sequential patterns of couple interaction would be associated with relationship quality. Males', females', and observers' z-scores for the various

Table 9

Correlations Between Sequential Patterns of Interaction and Global Relationship Quality

	Intimacy		Support		Depth		Conflict		Commit. to Partner		Commit. to Relation.		Feelings of Entrapment	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Males Rating Males														
Pos. Reciprocity	-.42**	-.27	-.10	-.07	-.26	-.13	.07	.16	-.36*	-.29	.21	-.38*	-.20	-.27
Neg. Reciprocity	.13	.04	.22	.19	.33*	.06	-.22	-.09	.15	.20	.00	-.17	-.13	-.13
De-escalation	-.07	.06	.01	-.10	-.06	.06	.12	.05	-.08	.12	.10	.27	-.02	.10
Accept Influence	.47**	.32*	.22	.17	.23	.29*	-.34*	-.29*	.33*	.26	.13	.18	.06	.13
Males Rating Females														
Pos. Reciprocity	-.34*	-.14	.01	-.11	-.06	.04	.12	.03	-.34*	-.20	.19	-.20	-.18	.27
Neg. Reciprocity	.09	-.06	.08	.17	.17	-.01	-.05	-.01	.11	.18	.12	-.07	.06	-.07
De-escalation	-.14	-.03	-.16	-.12	-.29*	-.03	.01	-.07	-.21	-.19	-.22	-.07	-.23	-.10
Females Rating Males														
Pos. Reciprocity	.08	.11	.19	.21	-.05	.17	.18	.14	-.02	-.08	-.18	-.05	-.09	-.08
Neg. Reciprocity	.37**	.37**	.57**	.24	.48**	.26	.20	.01	.29*	.32*	.11	.27	.27	.22
De-escalation	-.14	.03	-.24	.01	-.21	.00	-.16	-.15	-.08	.05	-.05	-.10	-.16	-.19
Accept Influence	.06	.11	.11	.05	.05	-.01	.13	.02	-.12	.07	-.02	-.01	.08	.05
Females Rating Females														
Pos. Reciprocity	-.02	.01	.19	.07	.02	-.05	.03	.14	-.07	-.03	-.20	-.02	-.09	-.10
Neg. Reciprocity	.47**	.30*	.46**	.26	.33*	.18	.02	-.17	.31*	.21	.10	.02	.11	.05
De-escalation	-.18	.07	-.12	-.01	.02	.06	-.11	.09	-.02	.20	.10	.18	.05	.07

Note: * $p < .05$, ** $p < .01$

Table 9 continued

Correlations Between Sequential Patterns of Interaction and Global Relationship Quality

	Intimacy		Support		Depth		Conflict		Commit. to Partner		Commit. to Relation.		Feelings of Entrapment	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Observers Rating Males														
Pos. Reciprocity	.06	.00	.06	.16	.07	-.14	.12	.07	-.03	.00	-.13	.02	.12	-.07
Neg. Reciprocity	.17	.16	.18	.27*	.25	.22	-.07	-.09	.18	.30*	.16	.35*	.16	.12
De-escalation	-.30*	-.32*	-.24	-.26	-.31*	-.30*	.06	.03	-.31*	-.39*	-.28*	-.32*	-.12	-.10
Accept Influence	.01	.08	.22	.19	.34*	.06	-.22	-.09	-.10	.08	-.08	.06	.00	-.09
Observers Rating Females														
Pos. Reciprocity	.07	.16	-.01	.06	.10	.03	.04	.00	.09	.20	-.01	-.03	-.01	-.15
Neg. Reciprocity	.36**	.21	.38**	.25	.28*	.06	-.19	.25	.32*	.20	.29*	.27*	.21	.06
De-escalation	-.45**	-.29*	-.41**	-.27*	-.31*	-.17	.14	.25	-.49**	-.28*	-.36*	-.17	-.15	-.01

Note: * $p < .05$, ** $p < .01$

patterns of interaction were entered into separate equations predicting each index of relationship quality. One of the regressions using males' perceptions of patterns of interaction to predict relationship quality was marginally significant. Males' ratings of their own contingent behavior in the conversations tended to predict their own reports of intimacy ($R^2 = .23$, $F(4,31) = 2.30$, $p < .10$).

Females' perceptions of both their own and their boyfriends contingent behavior, however, were highly related to relationship quality. Table 10 presents a summary of significant regressions predicting relationship quality from girlfriends' perceptions of sequential patterns of interaction. Girlfriends' perceptions of both their own and their boyfriends' negative reciprocity predicted both couple members' commitment, intimacy, depth, and support. Interestingly, girlfriends' reports of their own de-escalation also tended to be positively related to their own commitment and intimacy and to their boyfriends' experience of depth in the relationship.

Table 11 contains a summary of significant regressions predicting relationship quality from observers' perceptions of sequential interaction. Observers' ratings of males' de-escalation predicted several measures of females' relationship quality, while their ratings of females' de-escalation predicted several measures of males' relationship quality.

Predicting Relationship Longevity from Perceptions of Interaction

When couple members were contacted for follow-up approximately one year after their original participation, two methods were used to measure relationship longevity.

Table 10

Significant Regressions Predicting Relationship Quality from Females' Perceptions of Sequential Patterns of Interaction

	R^2	F	beta	t
Females Rating Males				
Males' Relationship Quality				
Support (QRI)	.35	5.25**		
Negative Reciprocity			.49	2.73*
Depth (QRI)	.26	3.40*		
Negative Reciprocity			.52	2.71*
Females' Relationship Quality				
Commitment to Partner	.20	2.34^		
Negative Reciprocity			.47	2.39*
Intimacy (MSIS)	.22	2.70*		
Negative Reciprocity			.50	2.57*
Females Rating Females				
Males' Relationship Quality				
Commitment to Partner	.14	2.39^		
Negative Reciprocity			.45	2.61*
Intimacy (MSIS)	.28	5.57**		
Negative Reciprocity			.58	3.69**
Support (QRI)	.30	6.18**		
Negative Reciprocity			.58	3.71**
Positive Reciprocity			.24	1.90^
Depth (QRI)	.18	3.25*		
Negative Reciprocity			.52	3.10**
De-escalation			.29	1.71^
Females' Relationship Quality				
Commitment to Partner	.21	3.90*		
Negative Reciprocity			.49	2.92**
De-escalation			.31	1.84^
Intimacy (MSIS)	.17	2.88*		
Negative Reciprocity			.48	2.95**
De-escalation			.51	3.08**

Note: ^ $p < .10$, * $p < .05$, ** $p < .01$

Table 11

Significant Regressions Predicting Relationship Quality from Observers' Perceptions of Sequential Patterns of Interaction

	R^2	F	beta	t
Observers Rating Males				
Females' Relationship Quality				
Commitment to Partner	.18	2.69*		
De-escalation			-.38	-1.86^
Intimacy (MSIS)	.15	2.04^		
De-escalation			-.48	-2.29*
Support (QRI)	.16	2.32^		
Observers Rating Females				
Males' Relationship Quality				
Commitment to Partner	.26	6.22**		
De-escalation			-.57	-3.29**
Commitment to Relationship	.14	2.70^		
De-escalation			-.33	-1.76^
Intimacy (MSIS)	.22	4.81**		
De-escalation			-.43	-2.41*
Support (QRI)	.20	4.19**		
De-escalation			- .32	-1.74^
Depth (QRI)	.12	2.33^		

Note: ^ $p < .10$, * $p < .05$, ** $p < .01$

Couple members were asked to report whether they were still dating the partner with whom they originally participated and, if they weren't, to report the date of break-up. Longevity was calculated as the number of weeks the couple continued to date after participation or the number of weeks until follow-up if they were still dating. Bivariate correlations were computed between all interaction variables and this continuous length-of-relationship variable. None of the bivariate correlations between couple members' or observers' ratings of interaction and length of relationship were significant.

A second method for examining the relationship between couple interaction and relationship stability involved comparing couples who had broken up at time 2 to those who were still dating. A series of Multivariate Analyses of Variance (MANOVAS) was performed comparing the two groups of couples on each pattern of interaction. For each MANOVA, all raters' (observers, males, and females) perceptions of a particular pattern of interaction were entered as dependent variables, with couple dating status at follow-up as the independent variable. One MANOVA comparing the two groups of couples on sequential patterns of interaction was significant. Couples who broke up differed from those who stayed together in the amount of negative reciprocity displayed in the conversations ($\underline{F}$ (6, 25) = 3.42, $\underline{p} < .05$). Follow-up univariate analyses revealed that those couples in which females perceived more negative reciprocity from their boyfriends were more likely to stay together.

CHAPTER IV

DISCUSSION

The current study demonstrated a quite strong association between adolescent couple members' interaction and their reports of relationship quality. As hypothesized, couple members' and trained observers' perceptions of both positive and negative behaviors predicted adolescents' reports of intimacy, overall support, depth, commitment, and overall conflict in the relationship. Also, perceptions of sequential patterns of couple interaction were associated with adolescents' relationship quality. Interesting differences emerged between couple members and observers in the patterns of association between interaction and relationship quality. These differences provide support for the premise that understanding the meaning that individuals make of their own interactions provides valuable information not supplied by relying solely on the perceptions of trained observers.

Predicting relationship quality from couple members' behavior

Our efforts to predict couple members' overall relationship quality from their positive and negative behaviors in their conversations yielded several striking findings. First, systematic differences were found between males, females, and observers in the manner in which their perceptions of the interactions were related to couple members' relationship quality. Also, differences emerged in the types of behaviors that were predictive of different indices of relationship quality. Similar behaviors predicted the globally positive relationship qualities of intimacy, support, depth, and commitment to partner, while different patterns of association emerged for the two measures of

relationship quality that capture an individual's sense of obligation to the relationship and fear of social sanctions associated with leaving the relationship. These findings are discussed below.

Generally, the positive behavior of support was related to adolescents' higher reports of intimacy, support, depth, and commitment to their partners, while the negative behaviors of conflict and frustration were negatively related to these relationship qualities. Thus, males', females', and observers' perceptions of couple behaviors in the conversations were all related to relationship quality in predicted directions. However, there were interesting differences in the patterns of association. For both males and trained observers, perceptions of supportive behavior by both couple members were most salient in predicting positive relationship quality. In those couples perceived as more supportive in their conversations by males and observers, males reported more intimacy, global support, depth, and commitment and females reported more intimacy, support, and commitment. In contrast, females' perceptions of frustration and conflictual behavior in the conversations were more likely to be related to relationship quality. When females saw more conflict in the conversations, couple members were likely to report less intimacy, support, depth, and commitment.

This pattern of results is intriguing and warrants further exploration. In our previous work (Welsh et al., under review), we examined differences between couple members and observers in their ratings of the conversations. There were no differences between the three raters in the level of conflict observed in the interactions and, although there were systematic differences in the levels of support and frustration perceived, the

differences were not such that males and observers consistently saw more support while females saw more frustration. Thus, the differences in patterns of association can not be attributed to males and observers perceiving more supportive behavior and females perceiving more negative behaviors. As our two trained observers were females, we also can not attribute the different patterns of association to gender.

Previous work examining adolescents', parents', and trained observers' perceptions of family interaction has found that adolescents perceptions of family interaction more closely resemble observers' perceptions than their parents' ratings (Callan & Noller, 1986). The authors concluded that adolescents' similarity to observers indicated that they took a more objective position in interpreting the conversations. It may be that boyfriends in this sample were more removed from the conversation than their girlfriends, thus adopting a position more similar to the observers.

Differences also emerged in the types of behaviors that predicted the various indices of relationship quality. The general positive relationship qualities of intimacy, support, depth, and commitment to partner clearly grouped together. These qualities were predicted most effectively by males' and observers' perceptions of more support and by females' perceptions of less conflict. Two of the dimensions of commitment, which encompass a couple member's sense of obligation to stay in the relationship and fear of social sanctions for leaving the relationship, however, were predicted by different behaviors. Specifically, when observers saw couple members as more frustrated, males reported feeling more obligated to and trapped in the relationship. Also, when males saw themselves as more frustrated, females reported greater feelings of being tied to the

relationship. These findings are consistent with Feiring's (1996) conclusion that too much commitment in early romantic relationships is perceived as undesirable and suggests that feeling obliged to stay in a romantic relationship at this developmental stage may place a strain on the relationship that is evident at the level of interaction.

Perceptions of humor were also more relevant in predicting commitment conceptualized as an obligation or responsibility. When observers rated couples as more humorous, couple members (especially females) reported feeling less obligated and trapped. Humor has been characterized in previous literature as a connecting, positive behavior (Capaldi, Forgatch, Crosby, 1994; Gottman & Krokoff, 1989). However, not only was humor negatively related to commitment in these couples, it was negatively related to males' reports of intimacy and conflict and females' reports of global support.

We turned to the transcripts of couples' conversations to try to make sense of these findings. In these interactions, couple members appeared to be using humor as a distancing behavior rather than as a basis for connection and expression of affection. By using humor, couples seemed to avoid discussion of intimate and potentially difficult topics. For example, one couple was struggling with the moral issue of premarital sex. Although the couple was sexually active, the girlfriend clearly perceived premarital sex as wrong and sinful, while the boyfriend seemed less concerned. After struggling with the issue for a few turns of conversation, the boyfriend began to joke about his sexual prowess and to proclaim his pity for his girlfriend's future husband who he predicted would always feel sexually inferior to her first lover. Both couple members laughed and tension appeared to lessen. However, discussion of a difficult issue with clear relevance

to the couples' relationship was essentially cut off. Thus, perhaps humor allowed females to avoid feeling trapped in their relationships, but it also may have prevented couple members from feeling truly intimate with one another. The use of humor may allow adolescents to carefully manage the level of involvement and commitment they invest into their romantic relationships as they explore this new relationship domain. Of course, these analyses are correlational and provide no basis for drawing causal conclusions. However, they suggest that the use of humor in adolescent couples may need to be conceptualized differently than it has been in other important relationships and provide an interesting direction for future research.

One other finding stands out and deserves further mention. Males' ratings of their girlfriends' frustration in the interactions tended to predict females' reports of more support in the relationship. This pattern of association is the opposite of the hypothesized relationship. Perhaps an explanation for this result can be found in an analysis of gender roles in relationships. Feminist authors (Gilligan, 1982; Jordan, Kaplan, Miller, Stiver, & Surrey, 1991) have described the traditional feminine role in relationships as requiring women to sacrifice their own needs and desires for the good of others and in the service of strengthening relationships. These theorists assert that girls learn to give up their own opinions and to give in to others in order to preserve relationships. Boys, on the other hand, are taught to value independence and standing up for themselves. If the couple members in our sample ascribed to these socialized gender scripts, perhaps the same behaviors exhibited by girlfriends that were perceived by males as frustrated may have been perceived by females as supportive. Of course, this finding is preliminary and

caution should be taken against over-interpreting a single result.

Predicting relationship quality from sequential patterns of interaction

In addition to the usefulness of base rates of positive and negative behaviors in predicting relationship quality in these adolescent couples, examining sequential patterns of interaction was a fruitful avenue for predicting relationship quality. Most striking about the analyses examining sequential patterns of interaction and relationship quality were the findings regarding the patterns of de-escalation and negative reciprocity. The literatures on marital and peer interaction led us to predict that de-escalation, or responding to conflictual behavior from the partner with non-conflictual behavior, would be associated with better relationship quality and negative reciprocity, or responding to the partner's negative behavior with negative behavior, would be associated with poorer relationship quality. Instead, what emerged was an interesting constellation of results based on the different patterns of association for each rater. Females perceptions of both their own and their boyfriends' negative reciprocity in the conversations were clearly associated with higher reports of relationship quality for both couple members. Observers' ratings of both couple members' de-escalation, however, were associated with lower relationship quality.

These findings appear counter-intuitive. Recall, however, that the mean ratings for conflict and frustration in these couples were less than one. This sample of non-clinical couples engaged in very little high-intensity conflict. Rather, the conflictual behavior exhibited in the conversations would best be characterized as disagreement or debate as opposed to hostility or aggression. Given that the conflict displayed was

generally of low-intensity, engagement in a back and forth dialogue may not be perceived as particularly aversive and may actually contribute to a greater sense of closeness and understanding. In contrast, when one partner refuses to participate in a dialogue about issues of dissension, the behavior might be characterized as withdrawal from important discussion and might be related to more distance in the relationship. Alternatively, couples who experience greater intimacy, support, depth, and commitment in their relationships may be better equipped to mutually engage in these difficult and sometimes challenging discussions. Again, our correlational data preclude drawing causal conclusions.

In addition to the findings regarding the association between de-escalation and negative reciprocity and relationship quality, there was some suggestion that, as predicted by recent marital literature (Gottman et al., 1998), when boyfriends saw themselves as more able to accept influence from their girlfriends, couple members reported better relationship quality. Taken together with the findings on observers' perceptions of de-escalation and females' perceptions of negative reciprocity, a more complete picture emerges. Those couples who were able to manage low-level conflict in a reciprocal, mutually engaged manner and in which males were able to accept their girlfriends efforts to persuade them experienced greater commitment, intimacy, support, and depth in their relationships. This conclusion is consistent with research on marital relationships (Gottman et al.,1998; Gottman & Krokoff, 1998) which has found withdrawal and stubbornness, especially on the part of husbands, to be extremely detrimental to relationship satisfaction. These researchers described couples' capacities to express anger

and negotiate conflict in a non-defensive manner as predictive of relationship satisfaction and stability.

Girlfriends in our sample did appear to see a more complicated picture than other raters, however. Although their perceptions of negative reciprocity were strongly related to positive relationship quality, their perceptions of de-escalation also tended to be positively related to their own perceptions of relationship quality. Thus, the association between de-escalation and relationship quality was different for girlfriends and trained observers. In addition, both negative reciprocity and de-escalation were associated with positive relationship quality for females. Perhaps girlfriends discriminated between interactions in which responding to conflict reciprocally was considered to be appropriate and those in which withdrawing from conflict was related to better global perceptions of the relationship. Of course, caution should be taken in interpreting these findings as the results for de-escalation were largely of marginal significance. However, these findings do provide further support for the need to examine participants' own understandings of their interactions.

Limited support was found for the hypothesis that positive reciprocity would be related to relationship quality. Males' perceptions of both their own and their girlfriends' positive reciprocity were negatively correlated to some measures of relationship quality, while there was trend for females' perceptions of their own positive reciprocity to predict their own reports of support in the relationship. Thus, in contrast to the marital literature (Filsinger & Thoma, 1988), there was a generally weak association between positive reciprocity and relationship quality. These couples did exhibit high rates of overall

positivity; they were perceived by both couple members and observers as generally very supportive. In addition, their overall rates of supportive behavior were related to relationship quality. The general supportiveness of the interactions was more salient in predicting relationship quality for these couples than were the specific patterns of supportive behavior.

It is interesting to note, however, that the relatively few correlations between males' perceptions of positive reciprocity and relationship quality were consistent with predictions from the marital literature (Filsinger & Thoma, 1988) that positively reciprocity would be associated with poorer relationship quality. The one marginally significant finding from females' perceptions of positive reciprocity, on the other hand, supported predictions from the peer literature (Murstein, Cerreto, & MacDonald, 1977) that positive reciprocity would be associated with better relationship quality. These findings are too preliminary and sparse to interpret strongly, but they do raise speculation about gender differences in the roles played by these early romantic relationships.

Other differences were found between raters in the utility of their perceptions of contingent behavior in predicting relationship quality. Males' ratings of sequential interaction were minimally associated with couple members' relationship quality. Relatively few of the correlations between males' perceptions of sequential patterns and relationship quality were significant and only one of the regressions predicting relationship quality from males' perceptions of patterns of interaction was marginally significant. Females' and observers' ratings of contingent behavior, however, were highly associated with many indices of relationship quality. It appears that for males, the

overall perception of positive behavior was the overriding factor in predicting relationship quality, while for females and observers, a more complicated picture emerged that included both overall positive or negative behaviors and patterns of interaction. These differences between couple members in the association between their interaction and their relationship quality deserve further investigation. Understanding differences between males and females in the meaning that they make of their interactions with each other has implications both for the development of romantic relationships and for planning interventions with distressed couples.

One final noteworthy finding regarding the prediction of relationship quality from sequential patterns of interaction merits mentioning. In predictions made from observers' perceptions of contingent behavior, males' behaviors were clearly most useful in predicting females' reports of relationship quality, while perceptions of females' contingent behavior were clearly associated with males' relationship quality. The obvious relationship between one partners' behavior and the others' relationship quality was not found in the analyses from females' or males' perspectives. Perhaps because observers' were viewing the conversations from outside the relationship, they focused more on behavior that has an obvious impact on others, while couple members were able to attend to both the intended impact of the behavior and the felt impact of the behavior. Once again, these findings argue for the use of multiple perspectives in understanding the meaning of interaction.

Predicting relationship length and stability

Measures of couple members' interaction with each other were less effective in predicting the length of these adolescents' relationships after initial participation. None of the base rates of behavior nor any of the *z*-scores of sequential connection were correlated with the number of weeks couples continued to date after Time 1. In addition, only negative reciprocity in the conversations significantly discriminated those couples who stayed together from those who broke up. This lack of overwhelming findings is not necessarily surprising, given the developmental level of the participants. These late adolescents may not necessarily be seeking long-term committed relationships and may not be developmentally prepared to engage in them. These relatively early relationships may provide more of a practice ground in which late adolescents acquire the skills necessary to eventually develop long-term relationships.

The one interaction variable that was associated with relationship stability was the level of negative reciprocity exhibited. It appeared that those couples who were better able to reciprocally engage in disagreement were more likely to stay together. This finding supports predictions based on social exchange theory (Laursen, 1996). As individuals become more invested in a relationship and more committed to maintaining that relationship over time, they are expected to be more able and willing to manage conflict. When relationships are in more preliminary stages (i.e., are less intimate, deep, and committed), conflict is seen as too threatening to the relationships and is avoided. Adolescents involved in relationships where couple members are able to mutually manage conflict may have made more progress toward achieving the ultimate goal of

creating lasting intimate relationships.

Summary and limitations

The establishment of a committed, intimate relationship has been described as the major developmental task of adolescence (Sullivan, 1953). The current study provides evidence that a micro-behavioral examination of adolescent couples' conversations with each other predicts the extent to which couples are making progress toward this goal. Generally, couples in which males and trained observers saw more supportive behavior and females saw less conflictual behavior reported more positive global relationship qualities and commitment. In addition, sequential analyses of patterns of couple interaction suggest that couples who mutually engaged in reciprocal disagreements or debates and in which boyfriends were able to acknowledge and accept their girlfriends' positions reported higher relationship quality. This capacity for managing low-level conflict also discriminated couples who broke up over the year following participation in the study from those who didn't.

Several limitations of the current study provide directions for future research. The participants in this study were primarily Caucasian and all couples were male-female couples. Issues of generalizability of our findings to ethnic and sexual minority couples can not be addressed. The extent to which the interpersonal processes identified as important in these couples are applicable to minority couples and to gay, lesbian, and bi-sexual couples remains an important research question. In addition, our sample consisted primarily of non-clinical or low-risk adolescents. Individual adolescents evidenced fairly low levels of psychological distress and the couples generally described their

relationships as happy and healthy. Previous work studying the romantic relationships of high-risk adolescents (Capaldi & Crosby, 1997) revealed a much higher level of conflictual and aggressive behavior than was seen between couple members in this sample. Interpersonal processes in the relationships of behaviorally troubled youth may look vastly different; specifically examining the interactions of these couples may yield fruitful information for planning interventions.

One final concern addresses a methodological issue. Couple members and observers rated 25-second segments of conversation. Much interaction takes place during 25 seconds of conversations and many of the nuances of back and forth conversation may have been lost. This is a difficult issue to address. It was important for us to be able to examine couple members' own subjective understanding of their conversations. In order to do this, the coding system must be simple enough for participants to use without extensive training and practice. Future efforts could be aimed at developing a coding system that would be simple enough for participants to use easily, yet allow for the more detailed examination of sequences of interaction.

This project is considered preliminary, as the microbehavioral examination of adolescent couples' interaction is a new area of research. These results provide initial support for the notion that examining adolescent couples' interaction is a useful avenue for understanding their relationships with one another and for the premise that examining couple members' own perceptions of their conversations, rather than relying solely on the observations of trained coders, provides important information.

REFERENCES

Adams, J. M. & Jones, W. H. (1997). The conceptualization of marital commitment: An integrative analysis. Journal of Personality and Social Psychology, 72, 1177-1196.

Allison, P. D. & Liker, J. K. (1982). Analyzing sequential categorical data on dyadic interaction: A comment on Gottman. Psychological Bulletin, 91(2), 393-403.

Ainsworth, M.D.S., Blehar, M., Waters, E., & Wall, S. (1978). Patterns of attachment. Hillsdale, N.J.: Erlbaum.

Bowlby, J. (1973). Separation. New York: Basic Books.

Callan, V.J. & Noller, P. (1986). Perceptions of communicative relationships in families with adolescents. Journal of Marriage and the Family, 48, 813-820.

Capaldi, D. & Crosby, L. (1997). Observed and reported psychological and physical aggression in young at-risk couples. Social Development, 6, 184-206.

Capaldi, D.M., Forgatch, M.S., & Crosby, L. (1994). Affective expression in family problem-solving discussions with adolescent boys. Journal of Adolescent Research, 9(1), 28-49.

Collins, W.A., Hennighausen, K.C., Schmit, D.T., & Sroufe, L.A. (1997). Developmental precursers of romantic relationships: A longitudinal analysis. In S. Shulman & W.A. Collins (Eds.), New Directions for child development, no. 78. Romantic relationships in adolescence: Developmental perspectives (pp.69-84). San Francisco: Jossey-Bass.

Duemmler, S.L. & Burland, A.S. (1997, April). The transition from parent to romantic attachment: Implications for commitment and conflict in dating couples. Poster

presented at the Biennial Meeting of the Society for Research on Child Development, Washington, D.C.

Erikson, E.H. (1968). Identity: Youth and crisis. New York: W.W. Norton.

Feiring, C. (1996). Concepts of romance in 15-year-old adolescents. Journal of Research on Adolescence, 6(2), 181-200.

Filsinger, E.E. & Thoma, S.J. (1988). Behavioral antecedents of relationship stability and adjustment: A five-year longitudinal study. Journal of Marriage and the Family, 50, 785-795.

Fincham, F.D. & Bradbury, T.N. (1991). Cognition in marriage: A program of research on attributions. Advances in Personal Relationships, 2, 159-203.

Furman, W. & Buhrmester, D. (1992). Age and sex differences in perceptions of networks of personal relationships. Child Development, 63, 103-115.

Furman, W. & Wehner, E.A. (1994). Romantic views: Toward a theory of adolescent romantic relationships. In R. Montemayor, G.R. Adams, & T.P Gullotta (Eds.), Personal Relationships During Adolescence, (pp.168-195). Beverly Hills, CA: Sage.

Furman, W. & Wehner, E.A. (1997). Adolescent romantic relationships: A developmental perspective. In S. Shulman & W.A. Collins (Eds.), New Directions for child development, no. 78. Romantic relationships in adolescence: Developmental perspectives (pp. 21-36). San Francisco: Jossey-Bass.

Galliher, R.V., Rostosky, S.S., Welsh, D.P., & Kawaguchi, M.C. (In press). Power and psychological well-being in late adolescent romantic relationships. Sex Roles.

Gergen, K.J. (1994a). Realities and relationships. Cambridge, MA: Harvard University Press.

Gergen, K.J. (1994b). Exploring the postmodern: Perils or potentials? American Psychologist, 49, 412-416.

Gilligan, C. (1982). In a different voice: Psychological theory and women's development. Cambridge, MA: Harvard University Press.

Gilligan, C., Kohlberg, L., Lerner, J., & Belenky, M. (1971). Moral reasoning about sexual dilemmas. Technical Report of the Commission on Obscenity and Pornography (Vol. 1). Washington, D.C.: U.S. Government Printing Office.

Gottman, J.M. (1979). Marital interaction: Experimental investigations. New York: Academic Press.

Gottman, J.M. (1986). The observation of social process. In J.M. Gottman & J.G. Parker, (Eds.), Conversations of friends: Speculations on affective development (pp. 51-100). Cambridge, MA: Cambridge University Press.

Gottman, J.M., Coan, J., Carrere, S., & Swanson, C. (1998). Predicting marital happiness and stability from newlywed interaction. Journal of Marriage and the Family, 60, 5-22.

Gottman, J.M. & Krokoff, L.J. (1989). Marital interaction and satisfaction: A longitudinal view. Journal of Consulting and Clinical Psychology, 57(1), 47-52.

Gottman, J.M. & Parker, J. G. (1986). Conversations of friends: Speculations on affective development. Cambridge, MA: Cambridge University Press.

Gottman, J.M., Notarius, C., Markman, H., Bank, S., Yoppi, B., & Rubin, M.E.

(1976). Behavior exchange theory and marital decision making. Journal of Personality and Social Psychology, 34, 14-34.

Haley, J. (1964). Research on family patterns: An instrumental measurement. Family Process, 3, 41-65.

Hoffman, L. (1990). Constructing realities: An art of lenses. Family Process, 29, 1-12.

Hooley, J.M. & Hahlweg, K. (1989). Marital satisfaction and marital communication in German and English couples. Behavioral Assessment, 11, 119-133.

Jordan, J. V., Kaplan, A. G., Miller, J. B., Stiver, I. P., & Surrey, J. L. (1991). Women's growth in connection: Writings from the Stone Center. New York: Guilford.

Kawaguchi, M.C., Welsh, D.P., Galliher, R.V., Rostosky, S.S., & Neiderjohn, D.M. (Under review). Integrating sexual behaviors and intimacy in late adolescence: An investigation of Sullivan's interpersonal theory.

Laursen, B. (1996). Closeness and conflict in adolescent peer relationships: Interdependence with friends and romantic partners. In W.M. Bukowski, A.F. Newcomb, & W.W. Hartup, (Eds.), The Company They Keep: Friendship in Childhood and Adolescence. Cambridge University Press.

Laursen, B. & Williams, V.A. (1997). Perceptions of interdependence and closeness in family and peer relationships among adolescents with and without romantic partners. In S. Shulman and W.A. Collins (Eds.), New directions for child development (no. 78). Romantic relationships in adolescence: Developmental perspectives (pp. 3-20), San Francisco: Jossey-Bass.

Margolin, G. & Wampold, B.E. (1981). Sequential analysis of conflict and accord in distressed and nondistressed marital partners. Journal of Consulting and Clinical Psychology, 49(4), 554-567.

Markman, H.J. (1979). Application of a behavioral model of marriage in predicting relationship satisfaction of couples planning marriage. Journal of Consulting and Clinical Psychology, 47(4), 743-749.

Markman, H.J. (1981). Prediction of marital distress: A 5-year follow-up. Journal of Consulting and Clinical Psychology, 49(5), 760-762.

Miller, R. S., & Lefcourt, H. M. (1982). The assessment of social intimacy. Journal of personality assessment, 46, 514-518.

Murstein, B.I., Cerreto, M., & MacDonald, M.G. (1977). A theory and investigation of the effect of exchange-orientation on marriage and friendship. Journal of Marriage and the Family, 39, 543-8.

Muuss, R. E. (1996). Theories of adolescence. New York: McGraw Hill.

Noller, P. & Guthrie, D. (1991). Studying communication in marriage: An integration and critical evaluation. Advances in Personal Relationships, 2, 233-267.

Pierce, G.R. (1996). The quality of relationships inventory: Assessing the interpersonal context of social support. In B.R. Burlseson & T.L. Albrecht (Eds.), Communication of social support: Messages, interactions, relationships, and community (pp. 247-264). Thousand Oaks, CA: Sage Publications.

Pierce, G.R., Sarason, I.G., & Sarason, B.R. (1991). General and relationship-based perceptions of social support: Are two constructs better than one? Journal of

Personality and Social Psychology, 61, 1028-1039.

Powers, S. I., Welsh, D. P., & Wright, V. (1994). Affect in families of adolescents: Investigating the meaning of behavior. Journal of Research on Adolescence, 4, 585-600.

Putallaz, M. & Gottman, J.M. (1981). Social skills and group acceptance. In S.R. Asher &J.M. Gottman (Eds.), The development of children's friendships. Cambridge, MA: Cambridge University Press.

Putallaz, M. & Heflin, A.H. (1986). Toward a model of peer acceptance. In J.M. Gottman & J.G. Parker (Eds.), Conversations of friends: Speculations on affective development (pp. 292-314). Cambridge, MA: Cambridge University Press.

Rostosky, S.S., Galliher, R.V., Welsh, D.P., & Kawaguchi, M.C. (Under review). Sexual behaviors and relationship qualities in late adolescent couples.

Rostosky, S.S., Welsh, D.P, Kawaguchi, M.C., & Vickerman, R.C. (In press). Commitment and sexual behaviors in adolescent dating relationships. In W. Jones & J. Adams (Eds.), Handbook of interpersonal commitment and relationship quality. New York: Plenum.

Sharabany, R., Gershoni, R., Hofman, J. E. (1981). Girlfriend, boyfriend: Age and sex differences in intimate friendship. Developmental Psychology, 17(6), 800-808.

Shaver, P.R. & Clark, C.L. (1994). The psychodynamics of adult romantic attachment. In J.M. Masling & R.F. Bornstein (Eds.), Empirical perspectives on object relations theory: Vol. 5. Empirical studies of psychoanalytic theories (pp. 105-156). Washington, D.C.: American Psychological Association.

Shaver, P.R. & Clark, C.L. (1996). Forms of adult romantic attachment and their cognitive and emotional underpinnings. In G.G. Noam & K.W. Fischer (Eds.), Development and vulnerability in close relationship: The Jean Piaget symposium series (pp. 29-58). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Shaver, P.R & Hazen, C. (1993). Adult romantic attachment: Theory and evidence. Advances in Personal Relationships, 4, 29-70.

Shulman, S. & Collins, W.A. (1997). New Directions for child development (no. 78). Romantic relationships in adolescence: Developmental perspectives.. San Francisco, Jossey-Bass.

Sullivan, H.S. (1953). The Interpersonal Theory of Psychiatry. New York: Norton.

Weiss, R.L. & Heyman, R.E. (1990). Observation of marital interaction. In F.D. Fincham & T.N. Bradbury (Eds.), The psychology of marriage: Basic issues and applications (pp. 87-117). New York: Guilford.

Weiss, R.L. & Heyman, R.E. (1997). A clinical-research overview of couples interactions. In W. K. Halford & H. J. Markman (Eds.), Clinical handbook of marriage and couples interventions, (pp. 13-41). New York: John Wiley & Sons, Ltd.

Welsh, D.P., Galliher, R.V., Kawaguchi, M.C., Rostosky, S.S. (in review). Discrepancies in adolescent romantic couples' and observers' perceptions of couple interaction and their relationship to mental health.

Welsh, D.P., Galliher, R.V., & Powers, S. (1998). Divergent realities and inequalities: Adolescents', mothers', and observers' perceptions of family interactions

and adolescent psychological functioning. Journal of Adolescent Research, 13, 377-402.

Welsh, D.P., Rostosky, S.S., Kawaguchi, M.C. (In press). A normative perspective of adolescent girls' developing sexuality. In C. B. Travis & J. S. White (Eds.), Sex, Culture, and Feminism: Psychological Perspectives on Women. Washington, D.C.: APA.

APPENDIX

CODING MANUAL FOR TRAINED OBSERVERS

SUPPORT

*** Score based on quality of verbalizations, voice tone, and behavioral indicators (e.g., gestures, facial expressions).

QUALITIES MEASURED: Encouraging, acknowledging, facilitating

SCORE

0 Code 0 if no support is demonstrated during the segment.

1 **a) tone:** mild/neutral **content:** negotiating or inquiring

Offering a deal or option; asking the other for his/her preference, opinion, or guidance in a connecting manner; responding to a request

Eg., *What do you think?*
How many kids are we going to have? Compromise?

b) tone: mild/subtle **content:** indirect acknowledgment or encouragement

Mild encouragement with a mild tone.

Behavioral example: *eye contact, smiling*

2 **a) tone:** interested **content:** facilitating, deferring, agreement

Encouraging in a more positive, genuine tone.

Eg., *That's a good question.*; *You're right, mm hm*
Behavioral example: *nodding head in agreement, moving closer/leaning toward*

b) tone: enthusiastic **content:** expanding, elaborating

Continuing the partner's story line, adding to the partner's thought

3 **a) tone:** positive **content:** direct praise/affirmation

Kind praise of other's specific action or quality.

Eg., *That's a really good idea;*
You're good at sports so our kids will probably be athletes.
Behavioral example: *light touching in a positive manner*

b) tone: positive **content:** self-disclosing

Encouraging acknowledgment of other through self revelation with positive tone.

Eg., *Using an example from one's own family to support the partner's position on child rearing.*

c) tone: positive/excited **content:** reciprocal positive escalation

Back and forth enthusiastic exchange to create and build an idea.

E.g., *Female: We want to have a fun relationship. Male: Yeah-we'll go on dates. Female: We'll go dancing. Male: Yeah-ballroom dancing. (All said with happy and excited voices and laughter).*

4 **a) tone:** positive **content:** direct, affirming

Direct affirmation of other as a whole person (not just praise of action or deed) or praise of the couple as a unit.

Eg., *I love you.; You're going to make a great mom/dad.*
I think we'll be great parents.

Behavioral example: *big gestures of physical affection (e.g., moving very close and grabbing and holding both hands)*

CONFLICT

*** Score based on quality of verbalizations, voice tone, and behavioral indicators (e.g., gestures, facial expressions).

QUALITIES MEASURED: disagreeing, devaluing, expression of anger

SCORE

0 Code 0 if no conflict is demonstrated during the segment.

1 **a) tone:** mild **content:** disagreement

Disagreement over the truth value of a statement or disagreement with the other's stated opinion or position without negative affect.

Eg., *I don't agree with that.*; *That is not the way my mom is.*
Behavioral examples: *shaking head, frowning.*

2 **a) tone:** invested **content:** disagreement

Backing up a disagreement with additional evidence, elaboration, or support.

E.g., *We should too have a curfew for our kids. They need to have some rules. I don't want my kids to end up like (a friend of the couple).*

b) tone: medium **content:** provocative

Statement or gesture whose intention is to irritate or provoke the other. Do not code any criticism or negative comment that devalues the other.

E.g., *mimicking in a teasing tone; making sexist comments or comments about the other's family*

c) tone: medium **content:** reaction

Reaction to 2b.

E.g., *Don't say things like that.*
Behavioral example: *crossing arms and leaning away, challenging stare*

E.g., *Don't say things like that.*
Behavioral example: *crossing arms and leaning away, challenging stare*

3 **a) <u>tone:</u>** medium/high **<u>content:</u>** argument

Active back and forth arguing. The disagreement escalates quickly with both members actively promoting their sides.

4 **a) <u>tone:</u>** high **<u>content:</u>** insulting, devaluing

Mean direct affront to the other in a high, harsh tone; devaluing of the other as a whole person.

Eg., *You are so stupid sometimes.*

b) tone: yelling, screaming **content:** opposition, anger

Opposing or arguing with a raised voice.

Behavioral example: *pushing*

HUMOR

*** Score based on quality of verbalizations, voice tone, gestures, or behaviors

QUALITIES MEASURED: amusement, joking, laughter-humor serves to enhance connection - Do not code mean spirited humor directed at the partner.

SCORE

0 Code 0 if no humor is demonstrated during the segment.

1 **a)** Spontaneous nervous giggling/smiling which is not in response to other's statement.

b) Nervous or obligatory giggling/smiling in response to the other's unfunny comment

c) Shared nervous giggling/smiling in response to a situation or awkward moment

2 **a)** A comment, facial expression, gesture, or behavior that is not intended as a joke but that generates genuine, shared amusement for the couple.

b) Spontaneous genuine laughter or smiling generated by 2a. Do not code humor if the laughter is an inappropriate response to a comment that the other clearly does not consider funny (e.g., laughter in response to an intimate disclosure/resulting in anger or hurt feelings).

3 **Mild to Medium tone humor:** Humor is intended and purposeful-tone is mild to medium and laughter or smiling that it generates is fairly subdued.

a) Actual attempt at making a joke, verbal imitation of others, or efforts at physical humor (e.g., facial expressions, gestures).

b) Genuine laughter in response to a joke that qualifies for a score of 3.

4 **High tone humor:** Humor is intended and purposeful- tone is higher and laughter that it generates it more vigorous/boisterous.

a) Actual attempt at making a joke, verbal imitation of others, or efforts at physical humor (e.g., facial expressions, gestures).

b) Laughter in response to a joke that qualifies for a score of 4.

PERSUADING

*** Score based on quality of verbalizations and voice tone.

QUALITIES MEASURED: influencing, convincing, coaxing.

SCORE

0 Code 0 if individual does not attempt to persuade during the segment.

1 **a) tone**: mild **content:** explanation

Relating own perspective or opinion in a matter of fact manner.

Eg., *I think we should raise our kids to have good values but I don't want to force them to agree with me.*

2 **a) tone:** mild/medium **content**: imploring

Asking other to see own view-point in a mild or medium imploring tone.

Eg., *Don't you see what I mean?*

b) tone: mild/medium **content:** comparative/competitive clarification

Directly comparing own perspective to that of the other in an attempt to establish superiority of own perspective.

Eg., *Three kids? I was thinking four or five would be better?*

3 **a) tone:** medium **content:** convincing/lecturing

More emphatic attempt to make the other agree with own perspective. Supplying evidence for own position through examples or self disclosure.

E.g., *I'd like to be able to talk to my kids about anything. I want them to trust me. My mom treats me like I'm five and it drives me crazy.*

b) tone: medium **content:** commanding/ordering

Directly ordering the other to perform a task or take a position.

E.g., *You hold the card and read the questions. I'll do the talking.*

4 **a) tone:** high **content:** demanding

Demanding that other agree with own perspective in a intense, emotional tone.

E.g., *Just <u>listen</u> to me. You have to understand what I'm saying.*

b) tone: high **content:** pleading

Begging or pleading with other to accept own point of view in a high emotional tone.

E.g., *Please, can you just agree with me for once.*

BEING PERSUADED

*** Score based on quality of verbalizations and voice tone.

QUALITIES MEASURED: perspective taking; surrendering, giving in

* The code for being persuaded is unique in that it is somewhat dependent on the behavior of the partner. There must be an opinion or position that the individual is being persuaded to (i.e., the partner is trying to persuade). Also there is the assumption that the two partners are starting with opposite opinions and the ratee is moving towards agreement with the partner. If both participants start with the same position, support is the more likely code.

SCORE

0 Code 0 if individual is not giving in or taking the other's perspective at all during the segment.

1 **a) tone:** neutral/negative **content:** acknowledging

Begrudging or perfunctory acknowledgment of other's perspective.

E.g., *I guess I can see that.*

b) tone: neutral/negative **content:** surrendering

Surrendering a little bit with a begrudging or resentful tone.

E.g., *Alright-whatever you say.*

2 **a) tone:** mild positive **content**: acknowledging; backing off

More genuine or amiable acknowledgment of other's perspective, but not full acceptance of other's view.

E.g., *Yes, but....*

3 **a) tone:** genuine **content:** acknowledging; affirming

Completely genuine acknowledgment of the other's perspective with a surrendering or conceding quality.

E.g., *Yeah-I see. That actually makes sense.*

4 **a) tone:** conciliatory **content:** adoption of the other's perspective

Genuine endorsement of the other's perspective, forsaking own perspective.

E.g., *You're right. That makes more sense than what I was saying.*

FRUSTRATION

*** Score based on quality of verbalizations and voice tone, gestures, behaviors, and facial expressions. *Code only frustration with the partner-Do not code frustration with the task or the situation.*

QUALITIES MEASURED: discouragement, misunderstanding, obstruction of goal/desires

SCORE

0 Code 0 if no frustration is demonstrated during the segment.

1 **a) tone:** mild/subtle **content:** misunderstanding/disappointment/annoyance

Demonstration of dissatisfaction or sense of being misunderstood in a mild tone or expression of same with subtle gestures, behaviors, or expressions.

Eg., *Really? I'm surprised you'd say that.*
I don't understand what you're trying to say.

Behavioral example: *rolling eyes, shaking head lightly, turning away*

2 **a) tone:** medium **content:** more emphatic misunderstanding/ disappointment/annoyance

Eg., *You're not listening to me!*

Behavioral example: *throwing up hands, big sigh*

b) tone: medium **content:** interruption

Either continuous interruption of the other (not allowing partner to complete thought or opinion) or a frustrated response to being interrupted. Do not code Frustration during periods of excited escalation (e.g., back and forth interruptions

as both partners build an idea, finish each others sentences, etc.)

Eg., *Would you let me talk?*

3 **a) tone:** high **content:** misunderstanding/disappointment/annoyance

E.g., *How many times do I have to tell you!*

Behavioral example: Big obvious gestures-combination of facial expression (e.g., raised eyes) and body language (e.g., throwing up arms or crossing arms)

b) tone: sarcastic **content:** moderate to high annoyance

Sarcastic response to other's comment.

Eg., *Whatever!*
Oh, I'm sure you could do much better.

c) tone: medium/high **content:** interruption/change of subject

Abrupt change of subject that reflects discouragement or frustration with current topic.

E.g., *I don't want to talk about this anymore. What's the next question?*

4 **a) tone:** very hot **content:** misunderstanding/disappointment/annoyance

Extreme expression of frustration with very high intensity of voice tone, raised voice, or very obvious gestures or expressions.

b) tone: biting sarcasm **content:** extreme annoyance

Mean or cruel sarcasm (resulting from frustration) seen as a direct attack on the other.

VITA

Renee Vickerman Galliher was born in Kalispell, MT on June 11, 1969. After moving to Wyoming at the age of six, she attended public grammar school and junior high in Big Horn County and moved to Laramie, WY for high school. She graduated from Laramie High School in 1987. Renee earned a Bachelor of Science degree in psychology from the University of Wyoming in May, 1991. She entered a Master's program in psychology at Idaho State University in August, 1992, receiving a Master of Science in 1994. She worked for a year with developmentally disabled adults in a residential facility in Pocatello, ID before returning to school at the University of Tennessee for her Doctorate of Philosophy in psychology. The doctoral degree will be received December, 2000 following completion of her pre-doctoral clinical internship.

Renee is currently preparing to begin her one year internship in Albuquerque, NM. She will be providing therapy, assessment, and consultation services with the Indian Health Service, Albuquerque Veteran's Administration, and the University of New Mexico Medical Center.