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Convergence and Divergence among Multiple Methods for Assessing Adolescent Romantic Relationships

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Abstract

The problem solving conversations of 92 adolescent romantic couples were analyzed using two innovative techniques for capturing the meaning-making processes in couples' interactions. Couples were coded using the narrative coding system developed by the Family Narrative Consortium (Fiese & Sameroff, 1999), yielding measures of narrative coherence for each couple member and an assessment of couples' capacity to engage in the interaction in a coordinated and mutually respectful manner. In addition, a video-recall procedure captured couple members' own subjective understanding of their own and their partners' behaviors during the interaction. Moderate associations were observed between trained coders', boyfriends', and girlfriends' perspectives, with more consistent links in some domains between girlfriends' ratings and observers' codes. In addition, indices of the quality of the interaction were linked to couple member global self reports of both positive and negative relationship quality, with many associations between observed interaction and global self reports of relationships quality achieving moderate effect sizes.

Researchers from varying methodological traditions have devoted much effort over the past decade to improving understanding of developmental processes, significance, and functioning in adolescent romantic relationships (e.g., Florsheim, 2003; Furman, Brown, & Feiring, 1999). Many prominent adolescent romantic relationship researchers have roots in the study of family and peer relationships (Laursen & Collins, 2004; Powers & Welsh, 1999; Rosén, Furman, & Hartup, 1988; Shulman, & Ben-Artzi, 2003; Welsh, Galliher, & Powers, 1998), and have adapted both theory and methods for the purpose of understanding the development and salience of romantic relationships during adolescence. A rich history of the use of observational methodologies to understand relationship processes in the family, peer, and marital literatures has served as a foundation for much of the developing body of knowledge regarding adolescent romance (e.g., Aspland & Gardner, 2003; Gottman, Swanson, & Swanson, 2002; Goudena & Vermande, 2002; Noller & Feeney, 2002; Patterson, Dishion, & Bank, 1984). Observational procedures have generated a wealth of information about behaviors, and patterns of behavior, associated with optimal individual and relationship functioning, both concurrently and over time.

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The current study attempts to describe relationship functioning in adolescent romantic couples using a range of methodologies that capture the perspectives of both couple members and trained observers. This project builds on the growing body of literature, using two innovative methods for understanding problem-solving interactions among adolescent romantic couples, and examining links between these observational strategies and adolescent self-reports of global relationship quality. First, the narrative coding system developed by the Family Narrative Consortium (Fiese & Sameroff, 1999) was adapted for use with videotaped interactions of adolescent romantic couples; jointly constructed narratives of couples and families have been found to provide powerful insight into meaning-making processes in family interaction and predict important aspects of family or couple functioning. Second, young couple members' subjective interpretations of their interactions were assessed using a video-recall method developed for use with adolescent couples (Galliher, Welsh, Rostosky, & Kawaguchi, 2004; Welsh & Dickson, 2005; Welsh, Galliher, Kawaguchi, & Rostosky, 1999). The use of different observational assessments of couple communication allows for the examination of links between couple members' and external observers' perceptions of interaction, comparison of boyfriends' and girlfriends' behavior assessed from multiple perspectives, and assessment of links between observed interaction and couple members' self-reported global relationship quality.

Narrative Analyses

The narrative coding system adapted for the current study (Fiese & Sameroff, 1999) was grounded in a long theoretical and empirical history focused on understanding individual experience and meaning (e.g., McAdams, 1993; Murray, 1938). Individual narratives, or life stories, have been conceptualized as windows to the cognitive processes and interpretations of experience that provide meaning and essence to life. Although the terms "narrative" and "story" are often used interchangeably, narrative researchers distinguish the two by noting that narratives provide the form, while stories provide the content (Fiese & Sameroff, 1999). The study of narratives refers to the "mode of thinking" (Fiese & Sameroff, p. 7) and assesses how memories are formed and organized or how experiences are structured. The capacity to generate a coherent account or "story" regarding one's life and relationships has been linked to improved functioning in interpersonal relationships (e.g., Main & Goldwyn, 1984), and more specifically, to the quality of marital relationships over time (Veroff, Sutherland, Chadias, & Ortega, 1993).

Fiese and colleagues broadened the construct of narrative to address the meaning-making processes embedded within relationship contexts and interactions. Through interviews with families, narrative analyses capture families' beliefs about relationships, views of the world, and their expectations for one another. The Family Narrative Consortium (Fiese & Sameroff, 1999) brought together family and relationship researchers from different specialty areas, working with different populations, in an effort to develop a reliable and valid methodology for understanding the meaning-making processes in families and relationships. All contributing research programs had interview data collected from couples and families at different developmental stages and facing different life stressors, challenges, or changes. Consortium members tested hypotheses about patterns of association between family narratives and various indices of adjustment, including patterns of family interaction, marital satisfaction, or child adjustment.

Three dimensions of the study of family narratives were outlined by Fiese and colleagues, two of which are relevant to the current study – narrative coherence and narrative interaction. Narrative coherence is coded at the level of the individual and reflects each relationship partner's capacity to organize a consistent, well-defended, sensible story or argument. Traditional definitions of narrative coherence focus on the individuals' capacity to present a

story as a unified whole, present a story that makes sense, and present a story in such a way that the content of the story matches the teller's affect and demeanor (Fiese & Sameroff, 1999). In our work, adolescent couples were video-taped responding to standardized sets of questions asking them to discuss and solve a relationship problem or issue (without the presence of an interviewer to whom the story would be told). The salient aspects of narrative coherence in this context were couple members' ability to present well-defended, unified positions or arguments, to defend their arguments consistently in a way that makes sense, and to discuss the problem with their partners in such a way that the content of the argument or discussion matches their affect or demeanor.

The second narrative dimension, narrative interaction, describes the style in which couples engage in the narrative process (Fiese & Sameroff, 1999). This includes an analysis of how well the couple works together to address an issue or "co-create" their story, including their willingness to share information, recognize one another's perspectives, and validate each other's opinions. This narrative dimension is particularly relevant in gauging how young couples manage stressful relationship issues or areas of probable conflict. Those who approach these potentially volatile conversations from an open, tolerant, and respectful standpoint are demonstrating interpersonal maturity that is likely associated with greater relationship success.

Wamboldt (1999) used the Family Narrative Consortium coding system to examine the narrative qualities of conjoint interviews with adult engaged or "seriously attached" couples. Levels of narrative coherence and the quality of the narrative interaction were both generally high in these couples, with means for all scales above the mid-points. Generally, measures of the quality of the narrative interaction were more strongly correlated with couple members' reports of relationship satisfaction and stability than were scores on the narrative coherence scales. Wamboldt created couple-level relationship quality variables calculated as the mean of the relationship satisfaction and relationship instability scores reported by male and female couple members, predicting their combined self-reported global relationship quality from narrative dimensions. Given evidence for gender specific experiences in adolescent romantic relationships (e.g., Bentley et al., 2006; Galliher et al., 2004; Shulman & Scharf, 2000), we felt it was important to examine unique associations between narrative codes and self-reported relationship quality for boyfriends and girlfriends, hypothesizing that different aspects of narrative quality might be linked to couple members' overall evaluation of their relationships.

Video Recall Methodology

In addition to observers' perceptions of couples' ability to generate a coordinated and coherent account of their relationship challenges, we were interested in couple members' subjective interpretations of the quality of their interactions. Video-recall procedures allow researchers to assess participants' subjective understanding of their interactions by asking them to review and rate their own behaviors, experiences, or intentions. Rooted in a relatively long history of theoretical and empirical interest in the processes by which individuals construct their realities (Margolin, 1987; McNamee & Gergen, 1992; Sanders & Dadds, 1992), recent technological advancements have enhanced the feasibility and quality of video-recall techniques, rendering them more viable for both researchers and participants (Welsh & Dickson, 2005).

The video-recall method used in the current study was developed to assess adolescent couple members' own interpretations of their problem solving interactions with their partners. Couple members rate themselves and each other on multiple behavioral and affective dimensions selected to capture both positive and negative communication, as well as behaviors associated with the negotiation of interpersonal power (Galliher et al., 2004; Galliher, Rostosky, Welsh, & Kawaguchi, 1999; Welsh et al., 1999; Welsh & Dickson, 2005). These dimensions of interaction have been found to be linked to other indices of relationship quality in previous research (e.g., Galliher et al.; Gurung, Sarason, & Sarason, 1997) and the assessment of couple

members' own perspectives of these behaviors has the potential to contribute a broader understanding of developing relationship processes.

Previous studies using this methodology examined patterns and relationships among boyfriends', girlfriends', and trained observers' views of the video-taped interaction, observing systematic differences between couple members' and observers' ratings (Welsh et al., 1999). Further, discrepancies between boyfriends and girlfriends in their views of the conversations were linked to individual psychological functioning, such that boyfriends who viewed themselves more favorably than their girlfriends viewed them reported fewer depressive symptoms and girlfriends who perceived more inequalities between themselves and their boyfriends reported more depressive symptoms. Other analyses examined links between couple members' views of their interaction and their global reports of conflict and support in the relationship (Galliher et al., 2004). Behaviors and patterns of behavior that have been found to link closely to relationship adjustment in child or adolescent peer relationships and in adult marital relationships were examined in relation to adolescent couple members' global reports of relationship quality. In these analyses, girlfriends' ratings of their boyfriends' conflictual behavior and girlfriends' views of the balance between conflict and support displayed by their boyfriends were linked to their own global reports of conflict and support. In contrast, only boyfriends' ratings of their own supportive behavior and their own willingness to acquiesce to their girlfriends' efforts to persuade them were positively linked to boyfriends' global relationship quality. These findings supported predictions from the feminist literature (Gilligan, 1982), suggesting that girls may be socialized to attend more closely to relationship partners' behaviors and experiences when they are evaluating the overall quality of their relationships.

Global Self Reports of Relationship Quality

In this study, we assessed adolescent couple members' self-reports of a range of positive and negative relationship experiences in an effort to capture the overall quality of relationships from a global perspective. Qualities of connectedness, intimacy, and support have been described as essential features of romantic relationships in general, and adolescent romantic relationships specifically (Barber & Eccles, 2003), and the processes by which couples manage conflict and the negotiation of individual versus couple needs and wants are theorized to be essential to the development of optimal relationship functioning (Shulman, 2003; Tuval-Mashiach & Shulman, 2006). We asked adolescents to report globally on their experiences of emotional support, painfulness, and humiliation as indices of general relationship quality. Emotional support captures adolescents' expectations that they and their partners' will nurture one another, comfort one another, and be there for one another during times of need (Levesque, 1993). Painfulness encompasses experiences of conflict, disappointment, and emotional hurt in their relationships (Levesque, 1993). The humiliating experience is one of being shamed, denigrated, or debased by another for reasons of the other's pleasure or desire to exert social power (Gilbert, 1998; Miller, 1996). In both the adolescent and adult literature, these relationship experiences have been linked to other negative outcomes, such as dating aggression and victimization (e.g., Bentley, Galliher, & Ferguson, 2007; Linder, Crick, & Collins, 2002).

Summary and Hypotheses

The current study used two observational coding systems and measures of global self reported relationship quality to capture multiple aspects of relationship functioning from the perspectives of both couple members and trained observers. We hypothesized that observer ratings of couple members' capacity to engage in problem solving discussions in an organized, coherent, and collaborative manner would be associated with more positive global self-reports of couple member relationship quality. Additionally, couple members' own ratings of the

interactions were expected to link to global relationship quality, such that perceptions of more connecting behaviors, fewer negative interactions, and less submissive behavior would be associated with better overall ratings of relationship quality. We were also able to examine associations between observers' ratings and couple members' own views of the conversations, as well as gender differences in behavior, perceptions of behavior, and links among the various indices of relationship functioning.

Method

Participants

Participants were 92 heterosexual dating couples. Couple members were between 14 and 18 years of age and couples were required to have dated exclusively for at least one month to ensure some degree of mutual relationship experience. The average length of relationship was 55 weeks, and ranged from approximately one month to 6 years. Seventy-five percent of the couples had been dating for less than a year and a half. Individuals under the age of 18 were required to have written parental consent in addition to providing written assent. Each participant was compensated with \$30 (\$60 per couple).

Couples were recruited via two strategies. First, target adolescents were randomly selected for telephone recruitment from school directories in two rural high schools in Utah ($n = 74$). Interested and eligible target adolescents were sent letters describing the study and copies of the informed consent form for both couple members via US mail. Follow-up phone calls were made one week after the packet was sent to confirm both partners' eligibility and willingness to participate, and to schedule a data collection session. Second, as part of a larger study assessing the role of race/ethnicity in understanding relationship development, Native American target adolescents and their partners were recruited from a public high school located near the border of a southwestern American Indian reservation ($n = 18$). School personnel assisted in the recruitment and scheduling of couples recruited through the high school.

Partners represented a range of ethnic and racial backgrounds: girlfriends - 61% Non-Hispanic White, 16% Latino/Hispanic, and 20% Native American, 2% African American, 1% Asian; boyfriends - 57% Non-Hispanic White, 21% Latino/Hispanic, and 21% Native American, 1% African American. The average age of the girlfriends was 16.55 years and of boyfriends was 17.10 years. Because of the geographical location of data collection, 59.8% of girlfriends and 58.7% of boyfriends belonged to the Church of Jesus Christ of Latter Day Saints (LDS). The majority of participants' parents were still married to each other (girlfriends: 63%; boyfriends: 71%). Couple members came from families representing a range of socioeconomic and educational backgrounds. Approximately 50% of both couple members' parents had completed high school or less. Approximately 30% of parents had a college degree or graduate degree; the remainder had completed some college or technical school. Roughly 60% participants' mothers worked as homemakers, in unskilled labor (e.g., factory work), or in the service industry (e.g., store clerk, housekeeper, daycare), while the rest were in skilled labor or professional positions. About 25% of fathers were business owners or professionals, about 30% were in skilled craftsman positions, and the remainder were in unskilled labor, service industry, or were unemployed.

Survey Measures

Demographic information—Participants completed a demographic information form that assessed age, gender, race, religious affiliation, educational history and aspirations, employment, parents' marital status, and parents' education and occupations.

Levesque Romantic Experiences Questionnaire—The Levesque Romantic Experience Questionnaire (LREQ; Levesque, 1993) was developed to assess a number of romantic relationship qualities. The original 6-point Likert scale was modified to a 5-point scale (1 = strongly disagree, 5 = strongly agree), in order to fit with the computer survey system used in the current study. Two subscales were selected from the LREQ to broadly capture adolescents' positive and negative experiences in their relationships. The 6-item emotional support subscale assesses perceptions of mutual concern, nurturing, and comfort (e.g., I help him/her through difficult times; She/he comforts me when I need comforting). The 6-item painfulness scale assesses experiences of anger and hurt (e.g., She/he sometimes gets angry at me; She/he can really hurt my feelings). Cronbach's alphas were good for both couple members for both the emotional support (boyfriends: $\alpha = .96$; girlfriends: $\alpha = .89$) and painfulness scales (boyfriends: $\alpha = .89$; girlfriends: $\alpha = .90$).

Humiliation—Seven items were adapted for use with adolescent participants from the Others as Shamer Scale (OAS; Goss, Gilbert, & Allan, 1994) to assess perceptions of shaming and humiliating behaviors by the partner. Items assessed the degree to which couple members perceived their partners to hold disrespectful or disparaging attitudes (e.g., "My partner sees me as not measuring up to him/her" "My partner sees me as defective as a person"). Items were endorsed on a Likert-type scale from 1-5 (never, seldom, sometimes, frequently, almost always). Because items were adapted from an existing measure, principal components analyses (PCA) were conducted to assess internal consistency of the new scale. The PCA yielded one factor for both boyfriends and girlfriends. For boyfriends, the factor accounted for 71.92% of the variance and yielded an eigenvalue of 5.03. For girlfriends, the factor accounted for 61.18% of the variance and yielded an eigenvalue of 4.56. Item loadings ranged from .63 to .92. Additionally, Cronbach's alphas of .90 for girls and .93 for boys indicated good internal consistency.

Interaction Task

Couples were digitally recorded having three brief conversations adapted from previous work with adolescent couples (Capaldi & Crosby, 1997). For the 5-minute warm up conversation, participants were instructed to plan a party, discussing the location of the party, who to invite, planned activities, what to provide their guests, and whether or not adults would be invited. For the remaining two 8-minute conversations, each couple member selected items from a common issues checklist prior to recording. The checklist included 21 common dating issues, with such items as "My partner doesn't call or show up when s/he says s/he will." and "Our parents don't want us to be together". Participants were instructed to identify 2-3 issues, including alternate selections in case they were not able to converse on the first topic for the entire eight minutes. If there were not enough that applied, or if they did not want to select from the provided topics, individuals could provide their own issues. Participants were instructed to discuss each issue and come up with a solution or solutions. Instructions for each conversation task were automated so that research assistants simply started the interaction task and then left the room. Recorded, standardized instructions were delivered by computer while researchers waited next door.

Video recall ratings—A video recall procedure was administered directly following recording in which couple members provided ratings of their own and their partners' behaviors during the conversations (Galliher et al., 2004; Welsh & Dickson, 2005; Welsh et al., 1999). Each couple member watched the two issues conversations twice; once to rate his or her own behavior and a second time to rate the partner's behavior. Each problem solving conversation was divided into 20 20-second segments. The computer played a segment, stopped the video for the couple member to provide ratings, and then resumed the video for the next 20-second segment. Following each segment, participants responded to seven statements on the computer,

asking them to rate either their own or their partners' thoughts or behavior on seven dimensions. Behaviors were selected to capture both positive and negative aspects of the interactions (i.e., connecting behaviors, conflictual behaviors, sarcasm, and putting down), aspects related to the negotiation of interpersonal power (i.e., giving in to the partner and trying to persuade the partner), and skillfulness in problem solving (i.e., feeling uncomfortable). For example, in response to the statement "I was feeling very connected (or close) to my partner", the participant would click on the radial button that most closely fit his or her experience during that segment. The ratings were provided on a Likert-type scale ranging from 0 (not at all) to 4 (very much). Mean ratings of each behavior were calculated across the 40 intervals for boyfriends' and girlfriends' ratings of themselves and their partners.

Narrative coding—Following completion of data collection with the couples, a team of two trained observers (one male and one female – both in early 20s) used the Family Narrative Consortium coding system to globally code the two problem solving conversations on two dimensions of narrative quality. First, Narrative Coherence, coded separately for male and female couple members, captures an individual's capacity to integrate different aspects of experience into a sensible, consistent whole. The four qualities that contribute to Narrative Coherence are 1) the relative consistency of the narrative, which is characterized by adequate detail, synthesizing explanations, and a consistently defended point of view, 2) the organization of the narrative, marked by the use of orienting statements and a clear sense of order in the couple members' arguments 3) flexibility or the capacity for exploring new ideas and integrating multiple perspectives, and finally, 4) congruence of affect and content, characterized by a clear "fit" between actions or statements and expressed emotions. Second, Narrative Interaction captures the couples' capacity to jointly construct the narrative in a mutually respectful, engaged, and productive manner. The three aspects of Narrative Interaction were 1) coordination – the couple's capacity to work together and their willingness to develop shared solutions 2) boyfriend confirmation/disconfirmation – ranging from overtly disconfirming or dismissing comments to acknowledgement and endorsement of the partner, and 4) girlfriend confirmation/disconfirmation. Each of the narrative dimensions was coded from 1 (no observed instances of the coded behavior or quality) to 5 (high levels of the coded behavior or quality). All conversations were first transcribed and observers coded by following the transcription and making notes as they viewed the tapes.

Coder training involved initial review and discussion of the training manual available by request from Fiese and colleagues (1999). Following review and discussion, coders rated five couples independently and then discussed each code to consensus. Once adequate inter-rater reliability was achieved, observer drift was controlled by reviewing additional couples together over the course of coding after coders had independently rated each couple. In total, 10 couples were reviewed together following coding and 25 couples were coded by both raters for the purpose of calculating inter-rater reliability. Intraclass correlation coefficients indicated adequate to good inter-rater reliability across codes: internal consistency – boyfriends = .89; internal consistency – girlfriends = .90; organization – boyfriends = .78; organization – girlfriends = .75; flexibility – boyfriends = .70; flexibility – girlfriends = .75; congruence – boyfriends = .55; congruence – girlfriends = .58; coordination = .84; confirmation/disconfirmation – boyfriends = .86; confirmation/disconfirmation – girlfriends = .90.

Procedures

Data collection for this project took place as part of a larger study examining relationship processes in adolescent romantic relationships. The data collection procedure took approximately 3 hours per couple. Participating couples were provided beverages and snacks throughout the session to maintain concentration and interest. Couples were digitally taped having problem-solving conversations during the first hour of participation and then alternated

between completing the video-recall procedure and a collection of questionnaire measurements. The video-recall procedure and the questionnaire measures were both completed on lap top computers in separate rooms, providing couple members with privacy from research staff and each other. While one couple member engaged in the video-recall procedure, the other completed the questionnaire. To avoid order effects, couples alternated the gender order that the recall and questionnaire were administered with each session. The packet of questionnaires and the video-recall procedure each required approximately one hour to complete.

Results

Descriptive Statistics and Preliminary Analyses

Table 1 displays means and standard deviations for males and females for all video-recall and narrative codes, as well as measures of relationship quality. Initial bivariate correlations indicated that girlfriends' ratings of their own behavior and their boyfriends' behaviors were highly correlated for each of the seven behavioral dimensions (range of $r = .60$ to $.93$; mean = $.80$). The same was true for boyfriends' ratings of themselves and their partners (range of $r = .72$ to $.92$; mean = $.84$). Because girlfriends and boyfriends appeared to view their own and their partners' behaviors similarly and may have been rating the quality of the joint interaction, scores for self and partner ratings were averaged to create one rating of each behavior by each couple member. In contrast, boyfriends' and girlfriends' ratings of each dimension were more moderately correlated, ranging from $r = .24$ for putting down to $r = .50$ for connectedness. Dependent samples t -tests indicated that the scores of boyfriends and girlfriends were significantly different only for coders' ratings of Congruence between Affect and Content, $t(87) = -4.68, p < .001$, and couple members' ratings of giving in, $t(90) = -3.19, p = .002$.

Associations among Narrative Codes and Video-recall Ratings

Bivariate correlations among couple members' ratings of their interactions and observers' narrative codes are presented in Table 2. Small to moderate correlations were observed among couple members' ratings of the interactions and external raters' codes. A series of chi square tests of independence was conducted to examine whether the proportion of statistically significant correlations with narrative codes was different for boyfriends' vs. girlfriends' video recall ratings. The proportion of significant correlations between observer ratings of boyfriends' narrative coherence and video recall codes demonstrated a significant gender difference, $\chi^2(1) = 10.78, p = .001, \Phi = -.44$. Specifically, 60.7% of correlations with girlfriends' video recall codes were statistically significant, while only 17.9% of correlations between boyfriends' video recall codes and observer ratings of boyfriend narrative coherence were significant. There were no significant gender differences in the proportion of statistically significant correlations between couple members' video recall scores and observer ratings of girlfriend narrative coherence or observer ratings of narrative interaction. Thus, relatively strong and consistent links were observed between observers' ratings of the conversations and couple members' self-ratings; however, girlfriends' video recall codes were more consistently significantly associated with observer ratings of boyfriend narrative coherence than were the boys' own video recall codes.

Associations among Narrative Codes and Self Reported Global Relationship Quality

Table 3 presents bivariate correlations among the observers' narrative quality codes and couple members' global relationship quality scores. Several significant correlations were found between global reports of relationship quality and boyfriend narrative coherence, but not for girlfriend narrative coherence. Chi square tests were calculated to assess for gender differences in the proportion of statistically significant correlations between global reports of relationship quality and narrative codes. The gender difference in the number of significant correlations

between boyfriends' narrative coherence and survey responses approached significance with a medium effect size, $\chi^2(1) = 3.00, p = .083$, $\Phi = -.35$. Two of the twelve correlations were significant between boyfriend narrative coherence and boyfriends' global self reports of relationship quality, while six of twelve were significant for girlfriends. Thus, observer ratings of girlfriend narrative coherence were not linked with global self reports of relationship quality for both couple members, but observer ratings of boyfriend narrative coherence *may* be more closely linked to girlfriend global relationship quality than boyfriends' own global relationship quality. Finally, small to moderate correlations emerged between observer ratings of narrative interaction and global relationship quality for both couple members.

Associations among Video-recall Codes and Relationship Quality

Table 4 presents bivariate correlations among couple members' ratings of the interaction and their reports of general relationship quality. Girlfriends' reports of emotional support were significantly correlated with all of their own ratings of the interaction and most of boyfriends' ratings. In contrast, boyfriends' reports of emotional support were significantly associated with only their own reports and not those of their girlfriends. Both boyfriends' and girlfriends' ratings of several behaviors during the interaction, however, were significantly related to negative aspects of global relationship quality (i.e., painfulness and humiliation) for both couple members. Thus, the video recall ratings by both couple members were fairly consistently linked with global relationship quality indices for both couple members, and many correlations achieved moderate effect sizes.

Data Reduction

Selection of demographic control variables—In order to refine the variables to be included in subsequent primary regression analyses, a series of preliminary multiple regression analyses examined associations between demographic factors and global reports of self reported relationship quality, determining the need to control for these factors in subsequent analyses. Boyfriends' and girlfriends' reports of emotional support, painfulness, and experiences of humiliation were predicted from age, race (white vs. non-white), religious affiliation (LDS vs. non-LDS), and the length of the relationship in weeks (calculated as the average of the length reported by the two couple members – $r = .89$), with each couple member's demographic data predicting that couple member's global relationship quality. Demographic factors were not significant predictors of either couple members' reports of emotional support (p -values for both overall F -statistics and for all individual betas $> .05$). Demographic factors did significantly predict males' reports of painfulness and the individual variables that emerged as significant were age, $\beta = -.22, t = -2.04, p = .044$, and relationship length, $\beta = .42, t = 3.99, p < .001$ (overall $F(4, 80) = 5.74, p < .001$). For girlfriends, relationship length, $\beta = .24, t = 2.29, p = .025$, and race, $\beta = -.26, t = -2.22, p = .029$, were both significantly associated with painfulness, overall $F(4, 78) = 5.35, p = .001$. Finally, while the overall F test was significant predicting boyfriends' reports of humiliation from demographic factors, $F(4, 80) = 3.42, p = .012$, none of the individual betas were significant with an alpha of .05. However, both age, $\beta = -.25, t = -2.42, p = .018$, and race, $\beta = -.37, t = -3.12, p = .003$, were significant predictors of girlfriends' reports of humiliation, $F(4, 78) = 4.96, p = .001$. For both painfulness and humiliation, non-Hispanic White girlfriends reported lower levels than ethnic minority girlfriends. A follow-up one-way ANOVA with Scheffe posthoc tests indicated that the difference was observed for both Latina and Native American girlfriends, painfulness: $F(2, 84) = 8.01, p = .001$; humiliation: $F(2, 84) = 7.97, p = .001$. Thus, in subsequent analyses, relationship length and age were included in analyses predicting boyfriends' reports of painfulness, relationship length and race were included in analyses predicting girlfriends' painfulness, and age and race were included in all analyses predicting girlfriends' humiliation.

Refinement of observational codes—Examination of the correlation matrices in Tables 2 through 4 suggested that many of the interaction codes might be linked to global relationship quality in similar ways. Further, intercorrelations among the interaction codes (both observers' ratings and couple members' ratings) suggested that problems with multicollinearity would emerge if all codes were entered together in to regression models. Thus, the first step involved data reduction efforts for both observer ratings and couple member ratings.

Correlations among the four narrative coherence variables ranged from $r = .33$ to $r = .75$ for boyfriends and from $r = .31$ to $r = .72$ for girlfriends – all correlations were statistically significant. A principal components analysis was conducted for each set of narrative coherence variables, yielding one factor for female narrative coherence (Eigenvalue = 2.34; 58.37 % of variance accounted for; all factor loadings $> .65$) and one factor for male narrative coherence (Eigenvalue = 2.45; 61.32 % of variance accounted for; all factor loadings $> .66$). Similarly, correlations among the three narrative interaction variables ranged from $r = .60$ to $r = .71$, and a principal components analyses revealed one factor with an Eigenvalue of 2.28. The one factor accounted for 76.07% of the variance and all factor loadings were higher than .83. Thus, three summary scores were computed for narrative quality by calculating 1) the average of the four narrative coherence scores for girlfriends, 2) the average of the four narrative coherence scores for boyfriends, and 3) the average of the three narrative interaction codes. Cronbach's alphas for the three newly created summary scores ranged from .76 to .83.

Additional bivariate correlations among the video recall ratings yielded a range of significant intercorrelations among the ratings of different behaviors for both girlfriends (-.43 to .82) and boyfriends (-.43 to .83). Again, principal components analyses were conducted in an effort to guide data reduction efforts. The analysis yielded two factors for boyfriends. The first factor yielded an eigenvalue of 3.67 and accounted for 52.41% of the variance; conflict, sarcasm, persuading, giving in, and putting down all loaded most heavily on this factor (factor loadings ranged from .57 to .89). The second factor yielded an eigenvalue of 1.27 and accounted for an additional 18.20% of the variance; factor loadings were less clear, as connection loaded at -.81 and discomfort loaded at +.83. A somewhat similar pattern emerged for girlfriends. The principal components analyses yielded two factors. The first yielded an eigenvalue of 3.71 and accounted for 52.98% of the variance. The same five variables loaded most heavily on this factor for girlfriends, with factor loadings ranging from .76 to .88. The second factor yielded an eigenvalue of 1.18 and accounted for an additional 16.88% of the variance. Factor loadings were again less clear though, as connection loaded at +.65 and discomfort loaded at -.55. Thus, for both boyfriends and girlfriends, a summary score for "conflict-disparagement" was calculated as the average of scores on conflict, sarcasm, persuading, giving in, and putting down. However, as connection and feeling uncomfortable were conceptually distinct codes with unique meanings and opposite factor loadings, they were retained as separate scores.

Hierarchical multiple regression analyses

Table 5 presents a summary of multiple regression analyses predicting boyfriends' and girlfriends' global reports of relationship quality from narrative codes. The demographic variables outlined above were entered in an initial block for the relevant criterion variables. Then the summary scores for boyfriend and girlfriend narrative coherence and interaction were entered in simultaneously. For boyfriends, only emotional support was associated with the narrative codes – observer ratings of boyfriend coherence were positively linked to self-reported emotional closeness. For girlfriends, narrative codes were significantly linked to all measures of global relationship quality. Their reports of emotional support and humiliation were associated with observer ratings of boyfriends' narrative coherence, and painfulness was negatively linked to the quality of the narrative interaction.

Table 6 presents a summary of the multiple regression analyses predicting global relationship quality from the video recall codes. In each analysis predicting emotional support, painfulness, and humiliation for boyfriends and girlfriends, demographic variables were controlled in a first step as outlined above (for relevant variables), partner ratings for connection, feeling uncomfortable, and the aggregated conflict-disparagement variable were entered next, and self ratings for the three video recall variables were entered last. R^2 change statistics and significant betas for individual variables are presented in the table. The conflict-disparagement variable, as rated by both self and partner, overwhelmingly emerged as the most powerful correlate of global relationship satisfaction. Both self and partner ratings of conflict-disparagement were strongly associated with girlfriends' emotional support and boyfriends' humiliation experiences. One exception was the significant negative association between boyfriends' ratings of connection and girlfriends' global reports of painfulness. Self ratings of the video recall were unrelated to scores on the painfulness scale for both couple members, and boyfriends' emotional support scores were not linked to the video recall.

Discussion

This study was designed to capture salient aspects of adolescent couples' relationship functioning from multiple perspectives, assessing convergence and divergence across informants and methods. There were both similarities and differences between couple members' and observers' views of the interaction, providing evidence for some consistency across raters, but highlighting once again the fact that each individual observes interaction from his or her own unique perspective. We also observed associations in predicted directions between couple members' interactions, rated both by trained observers and by couple members themselves, and couple members' survey measures of relationship quality.

Generally, both girlfriends and boyfriends viewed their interactions as harmonious and positive, despite the fact that the conversation topics had the potential to be very difficult or conflictual. Both couple members rated themselves and their partners as highly connected and observed very low levels of all negative or unpleasant behaviors. In addition, the dimensions designed to capture negotiation of power or the experience of powerlessness in the conversations (giving in and persuading) received lower ratings. This is consistent with previous research using this methodology (Galliher et al., 2004; Welsh et al., 1999) and also with developmental theory. Social exchange theorists posit that relationships function as a cost-benefit analysis – when the costs of remaining in a relationship become too high relationship dissolution is likely, especially if continued involvement in the relationship is voluntary (Laursen & Jensen-Campbell, 1999). Adolescent romantic partners are less likely to feel trapped in their relationships by economic constraints or social prohibitions against relationship dissolution, and those who do not feel positively about their interactions with their partners will simply end the relationship. Alternatively, it may be that the conversation instructions did not generate the difficult, problem solving discussions that we anticipated they might. Couple members had the option to choose any topic, including ones not on the list. They may have purposefully chosen topics that were less challenging in an effort (conscious or unconscious) to avoid conflict. Further, the conversations were not monitored. Couples were videotaped in privacy while research assistants waited in another room. Couples had the liberty to regulate their conversations, by transitioning back and forth from the problem topic to other, less challenging topics, and a review of the transcripts suggests that at least some couples did exactly that.

We also noted very high correlations for both partners between ratings of self and ratings of partner, which is also consistent with other research using the video-recall methodology (Welsh & Dickson, 2005). Welsh and Dickson interpreted the high correlations between self and other ratings as reflecting the process of projection, such that couple members project their own

experiences on to their partners during the interaction. It may also be true that couple members are simply rating the overall tone of the interaction at any given point, rather than attempting to differentiate their own and their partners' behaviors in a meaningful way. In contrast to ratings of self and partner, however, more moderate correlations were observed between boyfriends and girlfriends for each dimension. Thus, while there was considerable evidence of a "shared reality" for couple members and there were few significant differences between girlfriends' and boyfriends' ratings of the interaction, it is clear that couple members came to the interaction with unique perspectives and viewed the conversations through different lenses.

Somewhat more surprising were the ratings of narrative quality by trained observers; ratings of coherence and narrative interaction were almost all above the midpoint on the scales, reflecting adolescent couples' substantial skill at organizing and coordinating the problem solving discussions. Given that adolescence is described as a "training ground" for the development of romantic relationships, we might have expected less coherent and validating interactions from these young and inexperienced couples. Of course, it is also true that couples in our sample were approaching late adolescence (mean age around 17) so our participants may have come to the study with a fair amount of relationship experience. Also, the constraint that couples be dating for one month and the fact that participation required considerable coordination and commitment on the part of couples may have resulted in a sample of relatively more mature or skilled couples.

Links between Narrative Quality and Video-recall Ratings

Bivariate correlations yielded small to moderate associations among observers' ratings of narrative quality and couple members' own views of the interactions. With regard to specific ratings, the strongest relationships were observed between both couple members' ratings of connection and conflict and observers' ratings of narrative interaction. This is consistent with hypotheses, in that couple members who viewed more conflict and less connection in their interactions were also rated by observers as less coordinated and less confirming. Interestingly, the domains of couple rated behavior that might be theorized to link more closely with the disconfirming and invalidating dimensions of narrative interaction, "putting down" and "sarcasm" were not as strongly linked to observers' ratings of coordination or disconfirmation. It is important to note that the ranges for sarcasm and putting down were very constricted, with most couples reporting very low levels of those behaviors. Young couple members may not be willing to endorse behaviors with such negative connotations, or they may work very hard to limit the intensity of negative exchanges. Tuval-Mashiach and Shulman (2006) noted that adolescent couple members appear to be less willing than young adult couples to acknowledge disagreement and engage in conflict. Developmentally, young couples, who are less experienced and comfortable with the task of relationship maintenance, may feel compelled to "protect" their relationships by minimizing anger and hostility in their interactions. These findings present an argument for using more simple and straightforward language in assessing couple members' perceptions. At least with regard to links to the ratings of external observers, the terms we viewed to be more emotionally laden did not emerge as more salient. This is particularly relevant, given the results of our principal components analyses, which supported collapsing across the "negative" dimensions of behavior. In the interests of limiting participant burden, it is important to refine the dimensions of behavior for which couples' ratings provide the most meaningful and powerful assessment of interaction.

While there were few gender differences in the consistency with which couple members' video recall codes were significantly correlated to observer ratings, the differences do warrant some discussion. Girlfriends' ratings were more likely to be significantly correlated with observers' ratings of boyfriend narrative coherence than were boyfriends' own ratings. Previous theory and research (Gilligan, 1982; Shulman & Scharf, 2000) has described socialization practices

that may render females more likely to attend to the needs and behaviors of relationship partners, relative to males. Since couple members' ratings of the conversations were collapsed across both couple members, this suggests that girlfriends' ratings of the conversations may have been driven more strongly by their boyfriends' observable behaviors than their own. These gender differences are not particularly powerful, given the larger number of non-significant gender differences. However, they do provide additional information about the unique perspectives that male and female couple members bring to their interactions.

Associations among Interaction Codes and Global Self Reported Relationship Quality

Moderate, significant correlations in expected directions were found between global relationship quality and observers' ratings of narrative interaction and boyfriend narrative coherence, especially for the negative relationship experiences of painfulness and humiliation. Interestingly, however, observer ratings of girlfriend narrative quality were not powerfully associated with survey scores for either gender. While there were no significant gender differences in the patterns of correlation, there was some suggestion (a marginally significant trend) that girlfriends' global relationship quality scores may be more consistently linked with observer ratings of their boyfriends than were boyfriends' own survey responses. The bivariate analyses were supported by regression analyses controlling for demographic variables as necessary. Boyfriend narrative coherence or narrative interaction predicted each global measure of girlfriend relationship quality, while only emotional support was significantly linked to narrative codes for boyfriends in the regression analyses. Again, gender differences should be interpreted cautiously, but this is another suggestion that females may be socialized to attend to relationship behaviors and processes in a way that more closely mirrors the analytic process engaged in by the observers.

Almost all of the behavioral dimensions rated by couple members yielded some moderate associations with at least one aspect of global relationship quality, and there was considerable crossover in terms of one partner's ratings of the interaction correlating significantly with the other partner's global responses. Thus, both couple members are able to capture salient aspects of one another's general positive and negative relationship experience in their "in the moment" ratings of interaction. However, the collapsed "conflict-disparagement" variable that captured the range of negative conflict behaviors coded by couple members was clearly the most important correlate of poorer global relationship quality. It is interesting that the dimensions of behavior designed to capture the negotiation of interpersonal power (persuading and giving in) loaded heavily on to the same factor as sarcasm, conflict, and putting down. This suggests that the negotiation of interpersonal power may be inextricably linked to experiences of conflict and degradation for these young couple members, suggesting a potential point of intervention. Developing an equitable process of "give and take" is theorized to be an important feature of healthy romantic functioning (e.g., Frieze & McHugh, 1992), and young couples may need to learn to negotiate power decisions in a mutually respectful and solution-focused manner.

Summary and Limitations

A multi-method approach for describing adolescent romantic relationship functioning yielded important information about associations between couple members' and observers' views of the interaction, as well as links with global reports of romantic relationship functioning. Although these findings do make a clear contribution to the literature, several limitations provide directions for future research. First, the rural, relatively conservative nature of the majority of the sample suggests that these findings may not apply broadly to youths from urban or other diverse contexts. Further research clarifying subpopulation distinctions will refine our understanding of developmental and cultural influences on relationship development. Our preliminary analyses suggested that several demographic and relationship characteristics are linked to relationship processes, although sample size limitations precluded careful exploration

of the direct and interacting influence of these factors. Second, as might be expected with a non-clinical, community sample, interactions were generally positive and affirming and couples' global reports of relationship quality were generally high. Replication with higher risk samples might provide a different picture of the nature of couple interaction and the associations among indices of relationship quality. Finally, little is known about relationship processes in same sex couples and research examining relationship development among sexual minority youth is needed. Our ongoing research aims to address these remaining important issues.

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Table 1
Means and Standard Deviations for Video Recall Ratings, Relationship Quality Variables, and Narrative Codes

	Boyfriends Mean (SD)	Girlfriends Mean (SD)	Observed Range
Video Recall Ratings (possible range = 0 - 4)			
Connection [^]	3.01 (0.76)	2.84 (0.95)	0.30 – 4.00
Conflict	1.33 (1.03)	1.22 (0.97)	0.00 – 3.79
Sarcasm	0.94 (0.84)	0.79 (0.77)	0.00 – 3.20
Persuading	1.12 (0.85)	1.06 (0.88)	0.00 – 4.00
Giving in [*]	0.92 (0.87)	0.64 (0.64)	0.00 – 3.96
Feeling uncomfortable	0.78 (0.82)	0.73 (0.80)	0.00 – 3.69
Putting down	0.24 (0.46)	0.32 (0.55)	0.00 – 3.20
Narrative Coherence (possible range = 1 – 5)			
Internal Consistency	3.33 (1.29)	3.44 (1.09)	1 - 5
Organization	3.22 (1.19)	3.27 (1.10)	1 - 5
Flexibility	2.92 (1.21)	3.06 (1.14)	1 - 5
Congruence [*]	3.99 (1.01)	3.44 (1.10)	1 - 5
Narrative Interaction (possible range = 1 – 5)			
Confirmation/disconfirmation	3.59 (1.05)	3.57 (1.03)	1 - 5
Coordination (couple level variable)		2.20 (0.78)	1 - 4
Levesque Relationship Qualities (possible range = 1 – 5)			
Emotional Support	4.37 (0.77)	4.36 (0.68)	1.17 – 5.00
Painfulness	3.14 (0.95)	2.91 (1.03)	1.00 – 5.00
Humiliation (possible range = 1 – 5)	1.89 (0.96)	1.63 (0.79)	1.00 – 5.00

[^] difference between boyfriends and girlfriends significant with alpha = .10

^{*} difference between boyfriends and girlfriends significant with alpha = .05

Table 2
Associations among Narrative Codes and Video Recall Ratings

	Girlfriends' Narrative Coherence			Boyfriends' Narrative Coherence			Narrative Interaction					
	Intern. Cons.	Organization	Flexibility	Congruence	Intern. Cons.	Organization	Flexibility	Congruence	Coord.	Girlfriend Conf/Disc	Boyfriend Conf/Disc	
Girlfriend Ratings	Connection	.30**	.31**	.26*	.16	.24*	.15	.31*	.28**	.41**	.35**	.39**
	Conflict	-.11	-.10	-.36**	-.25*	-.31**	-.12	-.34**	-.29**	-.36**	-.45**	-.42**
	Sarcasm	-.15	-.06	-.07	-.32**	-.23*	-.16	-.20^	-.22*	-.17	-.16	-.18^
	Persuading	-.02	.00	-.23*	-.21^	-.15	.05	-.23*	-.28**	-.25*	-.32**	-.26*
	Giving In	-.06	-.02	-.21*	-.10	-.26*	-.10	-.29**	-.31**	-.15	-.18^	-.20^
	Discomfort	-.19	-.10	-.23*	-.23*	-.28**	-.12	-.16	-.14	-.12	-.17	-.12
	Put Down	-.02	.03	-.18	-.04	-.34**	-.14	-.23*	-.21*	-.28**	-.26*	-.27**
	Connection	.12	.13	.27*	.18^	.11	.03	.21*	.02	.33**	.31**	.29**
	Conflict	-.14	-.07	-.33*	-.14	-.09	.00	-.30*	-.15	-.29**	-.41**	-.36**
	Sarcasm	-.04	-.07	-.17	-.22*	-.13	-.16	-.27*	-.33**	-.16	-.23*	-.24*
Boyfriend Ratings	Persuading	-.07	-.05	-.19^	-.18^	-.04	.02	-.16	-.18^	-.19^	-.33**	-.30**
	Giving In	.12	.04	-.12	.00	.01	.01	-.16	-.17	.00	-.12	-.12
	Discomfort	-.04	.01	-.03	-.11	-.04	.14	-.07	-.11	-.10	.12	-.03
	Put Down	-.14	-.15	-.23*	-.24*	-.12	-.13	-.18^	-.29**	-.17	-.21^	-.17

^ $p < .10$
* $p < .05$
** $p < .01$

Table 3
Associations among Narrative Codes and Self-Reported Global Relationship Quality

		Girlfriends' Narrative Coherence			Boyfriends' Narrative Coherence			Narrative Interaction		
		Intern. Cons.	Organization	Flexibility	Congruence	Intern. Cons.	Organization	Flexibility	Congruence	Coord.
Girlfriend	Emotional Support	.12	.11	-.02	.16	.28**	.21 [^]	.14	.38**	.09
	Painfulness	-.04	-.14	-.37**	.01	-.12	-.10	-.37**	-.02	-.40**
	Humiliation	-.06	-.12	-.06	-.06	-.39**	-.28**	-.32**	-.19 [^]	-.31**
Boyfriend	Emotional Support	.01	.21 [^]	.02	.08	.03	.07	.10	.19 [^]	.10
	Painfulness	.09	.10	-.12	-.06	-.05	.03	-.29**	-.13	-.22*
	Humiliation	.08	.01	-.08	-.10	-.10	-.09	-.24*	-.12	-.11

[^]
p < .10
*
p < .05
**
p < .01

Table 4
Associations among Video Recall Codes and Self-Reported Global Relationship Quality

		Girlfriends			Boysfriends		
		Emotional Support	Painfulness	Humiliation	Emotional Support	Painfulness	Humiliation
Girlfriend Ratings	Connection	.27**	-.26**	-.19 [^]	.16	-.11	-.01
	Conflict	-.41**	.25*	.23*	-.03	.32**	.30**
	Sarcasm	-.35**	-.01	.13	-.01	.29**	.40**
	Persuading	-.45**	.17	.33**	-.04	.33**	.28**
	Giving In	-.47**	.19 [^]	.38**	-.08	.28**	.34**
	Discomfort	-.21*	.07	.20 [^]	-.06	-.02	.06
	Putting Down	-.41**	.21*	.38**	-.10	.17	.22*
Boyfriend Ratings	Connection	.18 [^]	-.28**	-.27*	.12	-.08	-.03
	Conflict	-.25*	.36**	.15	-.21*	.23*	.33**
	Sarcasm	-.37**	.18 [^]	.19 [^]	-.28**	.08	.40**
	Persuading	-.24*	.23*	.15	-.24*	.19 [^]	.27*
	Giving In	-.30**	.12	.19 [^]	-.28**	.03	.28**
	Discomfort	-.17	.04	.18 [^]	-.23*	-.05	.04
	Putting Down	-.28**	.12	.07	-.36**	-.11	.11

Table 5
Summary of Regression Findings Explaining Self Reported Relationship Quality from Narrative Codes

Criterion Variable	Predictor Variable	Girlfriend Global Relationship Quality						Boyfriend Global Relationship Quality							
		Adj. R ² or R ² Change	F or F-Change	df	p	Beta	t	p	Adj. R ² or R ² change	F or F-change	df	p	Beta	t	p
Emot. Supp.	BF Narr. Coherence	.08	3.39	3, 82	.02	.40	2.89	.01	.06	2.77	3, 81	.04	.32	2.23	.03
	GF Narr. Coherence					-.08	-0.58	.57					-.14	-0.96	.34
	Narrative Interaction					-.06	-0.42	.68					.09	0.68	.50
Painfulness	BF Narr. Coherence	.16	6.21	3, 74	.01	.16	1.29	.20	.03	0.93	3, 74	.42	.08	0.55	.58
	GF Narr. Coherence					-.07	-0.55	.59					.05	0.38	.71
	Narrative Interaction					-.44	-3.57	.01					-.22	-1.67	.10
Humiliation	BF Narr. Coherence	.09	3.43	3, 79	.02	-.38	-2.89	.01	.01	1.33	3, 82	.27	-.19	-1.35	.18
	GF Narr. Coherence					.19	1.46	.15					.14	0.99	.33
	Narrative Interaction					-.04	-0.32	.75					-.12	-0.85	.40

Summary of Regression Findings Explaining Self Reported Relationship Quality from Video Recall Codes

Table 6

Boyfriend Global Relationship Quality																
Criterion Variable	Set of Predictor Variables	Signif. Predictors	R ² change	F- change	df	p	Beta	t	p	R ² change	F- change	df	p	Beta	t	p
Emot.Supp.	Partner Ratings	Conf-Neg.	.13	4.21	3, 85	.01	-.31	-2.91	.01	.06	1.64	3, 84	.19			
	Self Ratings		Conf-Neg.	.16	6.31	3, 82				.01	-.43	-3.82	.01	.01	0.17	3, 81
	Painfulness	Partner Ratings	Connection Conf-Neg.	.13	4.69	3, 77	.01	-.37	-2.97	.01	.10	3.68	3, 77	.02		
	Self Ratings		.00	0.14	3, 74	.93	.02				0.64	3, 74	.59		30	2.89
Humiliation	Partner Ratings	Conf-Neg.	.06	2.10	3, 82	.11				.15	5.11	3, 85	.01	.43	3.87	.01
	Self Ratings		Conf-Neg.	.07	2.60	3, 79	.06	.31	2.70	.01	.08	2.78	3, 82	.04	.33	2.69