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Empathic Accuracy and Adolescent Romantic Relationships

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Introduction

Successful adult development requires the capacity to enter into and maintain close relationships with others (Baumeister & Leary, 1995; Furman, Brown, & Feiring, 1999). Such relationships derive their significance not only from mutually self-disclosing behaviors but from the experience of feeling understood, validated, and cared for as a result of those behaviors (Reis & Shaver, 1988; Collins & Sroufe, 1999; Neff & Karney, 2005). Accordingly, the ability of an individual to accurately read another's cognitive and affective states, known as empathic accuracy (e.g., Ickes, 1993; Ickes, Stinson, Bissonnette, & Garcia, 1990), should be an important component of close relationships. Indeed, a large body of research on adult relationships demonstrates that understanding one's partner is related to a host of positive outcomes, such as higher ratings of marital adjustment (Thomas, Fletcher, & Lange, 1997), less conflict (Kilpatrick, Bissonnette, & Rusbult, 2002), and better communication (Ickes, Stinson, Bissonnette, & Garcia, 1990).

Theoretical insights regarding adolescent development, such as the idea that the development of empathy is a task integral to the transition into adolescence (Erikson, 1968), suggest empathic accuracy should emerge to play a major role in determining the processes in and outcomes of adolescents' close relationships as well. Nevertheless, a lack of empirical evidence bearing on this issue leaves the role played by empathic understanding in adolescent romantic relationships unknown. The current investigation addressed this issue by attempting to answer three questions: (1) is empathic accuracy developmentally based? (2) are boys and girls differentially accurate? and (3) is empathic accuracy associated with adolescents' satisfaction with their romantic relationships?

Observed interaction, the topic of this special issue of the *Journal of Adolescence*, has played an important role in the exploration of the processes that comprise the study of familial and dyadic relationships (Margolin, Oliver, Gordis, O'Hearn, Medina, Ghosh, & Morland, 1998; Noller & Freeney, 2002). Direct observation provides clear, specific information about the behavioral processes that occur between people in an interpersonal context that can not be obtained from global self-report measures alone. Such observation usually involves researchers describing the specific interactive sequences using standardized coding systems (Powers, Welsh, & Wright, 1994; see Heyman, 2001; Kerig & Baucom, 2004, and Kerig & Lindahl, 2001, for reviews of the most commonly used interaction coding systems). Such ratings provide estimates of intimates' behavior that are independent of those intimates' sentiments towards their relationships (Jacobson & Moore, 1981; Weiss & Heyman, 1990).

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However, intimates' sentiments regarding their partners' behavior play an important role in shaping relationships as well. Video-recall procedures, utilized in the current study, were developed to allow researchers and clinicians to obtain both objective ratings of participants' behaviors, as well as their subjective understanding of those behaviors. Video-recall procedures involve recording participants' interactions and subsequently asking them to review their recorded interactions to provide feedback about their meanings and/or emotional experiences during the original conversations (See Welsh & Dickson, 2005, for review). Because both intimates and their partners provide estimates of the behaviors and emotions behind those behaviors, this procedure is therefore ideal for assessing the accuracy of participants' awareness of another's internal states on a moment-to-moment basis, the success of which is considered empathic accuracy.

Empathic Accuracy and Adolescent Development

During adolescence, there is an increase in the skills required to achieve empathy, including awareness of others' perceptions (see Rosenblum & Lewis, 2003, for review). Accordingly, the ability to be empathically accurate should begin to take shape during adolescence as well. Specifically, it is during late childhood and early adolescence that individuals develop cognitive skills that facilitate an increased capacity to be cognizant of the emotions experienced by others, including role-taking skills (Roberts & Strayer, 1996), more sophisticated interpersonal negotiation strategies (Selman, Beardslee, Schultz, Krupa, & Podorefsky, 1986), and abstract thinking (Rosenblum & Lewis, 1999). Accordingly, we predicted that intimates in the later stages of adolescence would demonstrate empathic accuracy in their relationships, but also that the empathic accuracy of younger intimates would be more limited, based on the idea that the empathic skills of younger adolescents should be less developed,

Likewise, empathic accuracy should be related to the length of time that adolescents have spent in their relationships. Indeed, research with adult samples suggests that over the course of a relationship, as partners experience common situations and events, observe each others' behavior across these situations and events, and discuss those thoughts and feelings, they develop an "intersubjective meaning structure" (Colvin, Vogt, & Ickes, 1997) or "local relationship theory" (Thomas & Fletcher, 2003) which guides future inferences about the partner. Furman and Simon (1999) echo such sentiments in suggesting that adolescents' relationships with each other may be an important setting in which to develop such cognitive representations of relationships. Accordingly, in addition to expecting older adolescents to be more empathically accurate than younger adolescents, we expected that adolescents in more established relationships would be more empathically accurate than adolescents in newer relationships.

Empathic Accuracy and Gender

Should adolescent boys and girls differ in their levels of empathic accuracy? A comprehensive review of the adult literature noted significant gender differences in empathic accuracy in only 3 of 10 studies (Graham & Ickes, 1997), though in all three studies women were more empathically accurate than men. The literature on adolescents is similarly unclear. Specifically, some studies suggest that adolescent females may be more empathically accurate than males because many of the skills underlying perspective-taking develop earlier in females than in males (Else-Quest, Hyde, Goldsmith, & Van Hulle, 2006). Additionally, other studies suggest that girls may be better than boys at applying such skills, revealing that, though boys may have similarly strong desires for intimacy (e.g., Kindlon & Thompson, 1999; Korobov & Thorne, 2006; Giordano, Longmore, & Manning, 2006), girls are more likely than boys to have intimate, self-disclosing same-sex friendships (Caldwell & Peplau, 1982; Furman & Buhrmester, 1992; Reisman, 1990; Savin-Williams & Berndt, 1990; Way, 2004). Complicating the picture

still further, Eisenberg and Lennon (1983) have concluded that sex differences in empathy are largely a function of the methods used to assess the construct. For instance, Caldwell and Peplau (1982), found that despite differences in the types of interactions males and females had with their same-sex friends, there were no gender differences in the value placed on intimate friendship, the number of friends, or the amount of time spent with them. Accordingly, we addressed possible gender differences in empathic accuracy in the current study, although we made no strong predictions regarding gender differences in abilities toward empathic accuracy.

Empathic Accuracy and Relationship Satisfaction

How might empathic accuracy be associated with the way adolescents feel about their relationships? Studies of adults have been mixed in their conclusions regarding the role of accuracy in romantic relationships (for review, see Thomas & Fletcher, 1997). For example, some studies demonstrate benefits of accurate perceptions (e.g., Swann, De La Ronde, & Hixon, 1994) and expectancies (e.g., McNulty & Karney, 2004), whereas others suggest benefits of positively biased perceptions (Murray, Holmes, & Griffin, 1996) and expectancies (McNulty & Karney, 2002). Neff and Karney (2005) offered evidence supporting one way of reconciling these apparent inconsistencies, showing that, whereas the great majority of intimates demonstrate positively biased global perceptions of their partners (e.g., my partner is warm), the happiest partners tend to view their partners' specific qualities more accurately (e.g., my partner is conflictual). A similar pattern may emerge among adolescents.

Accordingly, we predicted that adolescents who were more accurate about the partners' specific thought and feelings that were assessed in the current study, and the partners of more accurate adolescents, would be happier with their relationships than less accurate adolescents and their partners.

Research Questions

The purpose of this study was to examine the role of empathic accuracy in adolescents' romantic relationships by attempting to answer the following three questions: (1) is empathic accuracy developmentally based? (2) does empathic accuracy differ across gender? and (3) is empathic accuracy associated with adolescents' satisfaction with their romantic relationships?

Method

Participants

Data for this investigation come from the Study of Tennessee Adolescent Romantic Relationships (STARR). Participants in the STARR study were recruited from a prior study of over 2,000 high school students who indicated an interest in future research participation. Interested students were contacted by telephone and provided information regarding the purpose and procedures of the STARR study. Two groups of adolescent couples were recruited: middle adolescents, aged 14–17, and late adolescents, aged 17–21. All couples were mailed consent forms and contacted one week later regarding their willingness to participate. The final sample consisted of 209 (102 middle adolescents and 109 late adolescents) male-female dating couples who were dating a minimum of four weeks participated. The University Institutional Review Board approved all procedures and informed consent was obtained from all participants and parents of participants who were under the age of 18 (for additional information about this sample, see Welsh, Haugen, Widman, & Darling, 2005).

From the original sample of 209 couples, 204 dating couples were examined for the current purposes; five couples were excluded from the analyses because of missing data. At the time of data collection, partner members ranged from 14 to 22 years of age, with a median age of 17 years. The majority of the sample identified themselves as Caucasian (90.6%), with the

remainder of the sample identifying as African-American (6.2%), Asian (1.2%), Hispanic (0.7%), Native American (0.5%), and “Other” (0.7%). Approximately half of the sample identified their neighborhoods as suburban (47.1%), followed by rural (31.9%), and urban (21%). The highest education level completed by either parent was: some high school (4.3%), high school graduate (24.9%), technical school or some college (26.2%), college (30%), or graduate school (14.6%). Slightly more than half (55%) of the participants reported that neither parent had a college degree.

Procedure

Couples attended a three hour laboratory session during which they completed a battery of questionnaires, participated in three videotaped discussions, and participated in a video recall procedure during which they watched and rated the second and third discussions (for a detailed description of the video recall procedure, see Welsh & Dickson, 2005). Before the discussions, each member of the couple identified a specific source of disagreement from the Adolescent Couples’ Issues Checklist (Welsh, Grello, Dickson, & Harper, 2001). These sources of disagreement served as topics for the second and third discussions. The first discussion was a warm-up task during which couples were asked to “plan a party.” The second and third conversations were 8 minute and 40 second conflict discussions, one for each topic identified by each partner. These conversations were counterbalanced for whether the couple discussed the male or female issue first. After both conversations had ended, each member of the couple separately viewed and rated the middle 6 min 40 sec of each of the two conflict discussions twice, first rating each 20 second segment of their own behavior and second rating each 20 second segment of their partners’ behavior. Couple members were paid \$30 each (\$60 per couple) for their participation.

Measures

Relationship Satisfaction

Couples’ levels of satisfaction with their relationship were measured with the Relationship Satisfaction Scale (RSS; Levesque, 1993). The RSS is a five item scale that asks participants to report the extent to which they agree or disagree with five items (e.g., “compared to other people’s relationships, ours is pretty good,” “our relationship has met my best expectations.”) using a six-point scale (1 = strongly disagree; 6 = strongly agree). The sum of the five items from this scale was calculated to form a total relationship satisfaction score, yielding scores that could range from 5 to 30, where higher scores reflect higher levels of satisfaction. The internal reliability for the relationship satisfaction scale was acceptable (for males, $\alpha = .85$; for females, $\alpha = .84$).

Relationship Length

Relationship length was assessed with a single item, “How long have you been dating your current partner (please indicate number of weeks)?” The median length of time couples had been dating was 42.5 weeks (approximately 10 months), with a range of between 4 weeks and 260 weeks (approximately 5 years).

Empathic Accuracy

Empathic accuracy was assessed through the first level of a multilevel model that estimated the level of agreement between adolescents’ ratings of the behaviors their partners exhibited during each 20 second segment of the video-recorded discussions and those partners’ own ratings of the behaviors they exhibited during those segments (the specific analysis is described below). Using a 5-point rating scale ranging from 0 [*not at all*] to 4 [*strongly*], each member of the couple rated their own and their partner’s behavior on four dimensions believed to

represent significant affective and cognitive constructs theoretically linked with the developmental and marital literatures (Allen, Hauser, Eickholt, Bell, & O'Connor, 1994; Powers & Welsh, 1999; Welsh, Galliher, & Powers, 1998; Welsh & Dickson, 2005): feeling connected, feeling uncomfortable, being conflictual, and trying to persuade. We assessed empathic accuracy on each specific dimension, by obtaining agreement between boys' and girls' ratings on each of the four specific dimensions separately, and across all dimensions, by obtaining agreement between boys' and girls' ratings averaged across these specific dimensions.

Analytic Strategy

Hypotheses were tested through multilevel modeling (Bryk & Raudenbush, 2002), implemented using the HLM/2L computer program (Bryk, Raudenbush, & Congdon, 2004). Multilevel modeling provides a distinct advantage over other techniques frequently employed to examine empathic accuracy, e.g. difference scores. Specifically, in contrast to differences between partners perceptions of one another, which are confounded with the levels of those perceptions (Griffin, Murray, & Gonzalez, 1999), multilevel modeling accounts for the mean level of each partners' ratings when estimating congruence. In the first level of the analysis, we directly assessed empathic accuracy by estimating the within-couple association between targets' ratings of the behaviors displayed during each segment and their partners' ratings of the behaviors displayed during each segment across the 20 segments, controlling for the overall levels of those ratings. Then, in a second, between subjects level of the analysis, we used developmental qualities (age and relationship length) and relationship qualities (own and partner relationship satisfaction) to explain between-subjects differences in these within couple estimates of empathic accuracy. Given that data from couples violate statistical assumptions of independence, parameters describing boyfriends' and girlfriends' data were estimated simultaneously in a couple-level model that separately estimated each member of the couple's effects while controlling the partner's effects by estimating separate models with separate intercepts for each individual, according to procedures described by Raudenbush and colleagues (Barnett, Marshall, Raudenbush, & Brennan, 1993; Raudenbush, Brennan, & Barnett, 1995).

Results

Descriptive Statistics and Preliminary Analyses

Descriptive statistics and correlations for all independent variables appear in Table 1. As can be seen there, both male and female adolescents in these relationships appeared to be relatively satisfied, with mean ratings falling near the top of the scale. Males and females averaged near 17 years of age, consistent with broader goal of the study to sample middle and late adolescents. On average, couples had been dating for about 10 months, but standard deviations of the same magnitude reflect high variability in relationship duration. Correlations reveal that length of relationship was correlated with age for both males and females, with older adolescents having longer relationships. Further, cross-partner correlations reveal that boys' and girls' reported similar levels of satisfaction and were similar in their ages. No other correlations reached significance. Finally, paired samples *t*-tests revealed that that only one gender difference reached significance: males were older than females, $t(205) = 7.7, p < .001$.

Descriptive statistics and correlations for participants' ratings of their own and their partners' thoughts and feelings during their conversations, as averaged across all segments, are reported in Table 2. Consistent with the high levels of satisfaction described previously, both male and female adolescents reported feeling moderately connected to their partners, experiencing relatively low levels of discomfort, rarely reported being conflictual, and rarely reported trying to persuade their partners. Likewise, adolescents perceived their partners as feeling moderately

connected, experiencing relatively low levels of discomfort, rarely feeling conflictual, and rarely trying to persuade their partners. Paired samples t-tests indicated that, although males and females perceived similar levels of connection in themselves and their partners, males perceived more of the negative emotions, in both themselves and their partners, than females perceived. Specifically, males perceived more discomfort ($t = 2.5, p < .05$) and conflict ($t = 2.3, p < .05$) in themselves than females, and males perceived more persuading ($t = 2.4, p < .05$) and discomfort ($t = 3.2, p < .01$), and marginally more conflict ($t = 1.9, p < .06$), in their partners than their partners perceived in them. With respect to the correlations, the low to moderate correlations across these dimensions reveal some similarities yet substantial uniqueness among the dimensions, justifying our decision to examine empathic accuracy both as summed across the four dimensions and on separate dimensions. Finally, the positive cross-partner correlations indicate that couple members tended to show similarities in the way they described their own behavior and the way they described their partners' behavior. However, these correlations between average levels of perceptions only address how accurate participants were about how their partners felt and behaved during the conversation *generally*, rather than how their partners felt or behaved at specific *moments* during the conversation. It remains possible that intimates recognized how their partner felt and what their behavior meant overall, but did not recognize the moments during the conversation during which those feelings were strongest versus weakest. Further, these correlations do not address any possible differences in the level of accuracy across couples or whether such differences were related to individual or couple-level factors. These issues were the goal of the multilevel analyses reported in the next section.

Empathic Accuracy

Empathic accuracy was assessed in the first level of a multi-level model that regressed individuals' perceptions of their behaviors during each of the 20 segments onto their partners' perceptions of those behaviors, where boyfriends' and girlfriends' accuracy were each estimated simultaneously with their own intercepts, according to procedures described by Raudenbush and colleagues (Barnett et al., 1993; Raudenbush et al., 1995). Accordingly, empathic accuracy can be understood as the covariance between individuals' perceptions of their behaviors during a particular segment and their partners' perceptions of those behaviors during that segment produced by the following model, where the partner's ratings were centered around the mean of his or her ratings across the segments.

$$Y(\text{individual's rating})_{ij} = \pi_{f1}(\text{dummy code for boys})_{ij} + \pi_{m1}(\text{dummy code for girls})_{ij} + \pi_{m2}(\text{boyfriend's rating})_{ij} + \pi_{f2}(\text{girlfriend's rating})_{ij} +$$

[Equation 1]

Accordingly Y_{ij} is a individual i 's rating of himself or herself on a given segment j ; π_{f1} estimates girl i 's intercept, or the mean of her ratings of herself across segments; π_{m1} estimates boy i 's intercept, or the mean of his ratings of himself across segments π_{m2} captures the covariance between variability in the girl i 's ratings of herself and variability in boyfriend i 's rating of her across segments, or boy i 's empathic accuracy; π_{f2} captures the covariance between variability in boy i 's ratings of himself and variability in girlfriend i 's ratings of him across segments, or girl i 's empathic accuracy, and e_{ij} is the residual variance in repeated measurements for the individual, assumed to be independent and normally distributed across individuals.

How empathically accurate were adolescents?

The results of the level-1 analysis are presented in Table 3, where results from the analysis averaging across the different rating dimensions of each segment are presented first and results of the analyses of on each of the specific dimensions are reported subsequently. As can be seen there, for both boys and girls, covariance estimates between adolescents’ perception of their partners’ thoughts and feelings and partners’ own rating of their thoughts and feelings were positive and significant on the overall mean of the dimensions, and across every dimension, at the $p < .001$ level. Apparently, on average, both males and females were able to infer with some degree of accuracy their partner’s feelings of connection, conflict, discomfort and of being persuaded. However, the significant chi-square tests reported in the third and sixth columns of Table 3, which can be thought of as inferential tests of whether the standard deviations of these mean covariance scores differ from zero, reveal substantial between subjects’ variability in empathic accuracy, indicating that some of these adolescent boys and girls were more empathically aware than others. The primary predictions guiding the current study suggest these between-subjects differences in empathic accuracy are associated with developmental and relationship qualities.

Was empathic accuracy associated with developmental qualities?

First, it was predicted that developmental qualities such as age and the length of the relationship might be associated with empathic accuracy. Thus, these variables were entered into a second stage model to account for the between-subjects variance in empathic accuracy, revealed by equation 1, according to the following equations:

$$\pi_{m2} = \beta_{m20} + \beta_{m21}(\text{Relationship Length}) + \beta_{m22}(\text{Boys' Age}) + r_{m2j} \quad \text{[Equation 2a]}$$

$$\pi_{f2} = \beta_{f20} + \beta_{f21}(\text{Relationship Length}) + \beta_{f22}(\text{Girls' Age}) + r_{f2j} \quad \text{[Equation 2b]}$$

where π_{m2} is boys’ empathic accuracy (as described above), β_{m20} is the average empathic accuracy for all boys in the sample, β_{m21} captures the association between the boys’ empathic accuracy and the length of the relationship, β_{m22} captures the association between the boys’ empathic accuracy and their age, r_{m2j} is the residual variability in boys’ empathic accuracy that is not explained by length of relationship and age, π_{f2j} is girls’ empathic accuracy (as described above), β_{f20} is the average empathic accuracy for all girls in the sample, β_{f21} captures the association between the girls’ empathic accuracy and the length of the relationship, β_{f22} captures the association between the girls’ empathic accuracy and their age, and r_{f2j} is the residual variability in girls’ empathic accuracy that is not explained by length of relationship and age. Given that empathic accuracy, as estimated by π_{m2} and π_{f2} , may be correlated with partners’ overall ratings (i.e., their intercepts), as estimated by π_{m1} and π_{f1} , age and length of relationship could appear associated with empathic accuracy through these associations. Thus, we controlled for the association between each partner’s intercept and their age and the relationship length by entering those variables to predict the intercepts produced by equation 1 as well.

Results of these analyses are reported in Table 4. As can be seen there, no significant associations emerged between empathic accuracy and either length of the relationship or age, though a few marginally significant associations between these variables did emerge. Nevertheless, given the lack of consistency in the direction of these marginal effects, and given that they were not unaccompanied by more meaningful significant effects, these effects can not be interpreted confidently. Accordingly, in contrast to developmental perspectives of

empathic accuracy (e.g., Eisenberg, Murphy, & Shepard, 1997), it appears that older boys and girls were not more empathically accurate than younger boys and girls, and that boys and girls in more established relationships were not more empathically accurate than boys and girls in newer relationships.

Were boys and girls similarly empathically accurate?—Second, we examined whether the gender of the perceiver was associated with differences in empathic accuracy, i.e., whether boys and girls differed in the extent to which they accurately inferred the meaning of the partners' behaviors. Given that both boys' and girls' parameters were estimated in the same model, gender differences in empathic accuracy were tested by comparing the size of the covariance estimates for each gender, using the alternative hypothesis testing option offered in HLM. These tests set up specific contrasts that constrain boys' and girls' parameters to be equal, and test the extent to which those contrasts fit the data better than models that do not constrain those parameters to be equal using chi-square tests. Significant chi-square tests would reveal that models allowing boys' and girls' parameters to be different fit the data better than models constraining them to be equal, and thus would provide evidence of gender differences. However, in every case, tests of gender differences in empathic accuracy did not reach significance (for overall empathic accuracy, $\chi^2 = 0.33, p > .5$; for connection, $\chi^2 = 1.39, p > .2$; for persuasion, $\chi^2 = 0.91, p > .5$; for discomfort, $\chi^2 = 0.48, p > .5$; and for conflict, $\chi^2 = 0.23, p > .5$), indicating that boys and girls in these relationships did not differ in the extent to which they were empathically accurate.

Was empathic accuracy associated with relationship satisfaction?

Third, we examined whether differences in empathic accuracy were associated with differences in both partners' relationship satisfaction. That is, were empathically accurate individuals and their partners more satisfied in their relationships? To address this issue, the level-2 analyses described in the first set of analyses were repeated, except that own and partner satisfaction were entered as predictors, rather than relationship length and age. Given that both partners' satisfaction scores share variance, yet are conceptually and theoretically distinct with regard to the current question, each partner's satisfaction was entered separately to maintain the full variance of each variable.

Results are presented in Table 5, where it can be seen that empathic accuracy, as estimated by collapsing across all four ratings of each segment made by the perceivers, was associated with more positive relationship satisfaction for both boys and girls. Specifically, more accurate males reported being more satisfied with their relationships, more accurate females reported being marginally more satisfied with their relationships, and both male and female intimates with more accurate partners reported being more satisfied with their relationships.

Yet, examining the effects obtained for empathic accuracy on each of the four dimensions revealed a less consistent picture of the effects of empathic accuracy in adolescence, particularly with regard to the two genders. Consistent with the positive associations between satisfaction and accuracy of the average ratings, both females and males who were more accurate about their partners' feelings of *discomfort* and *conflict*, and both females and males who had partners who were more accurate about their own feelings of discomfort, were more satisfied with their relationships. However, despite these positive associations, and despite the positive associations between satisfaction and accuracy as averaged across the dimensions, neither males nor females with partners who were more accurate in perceiving their feelings of *connection* were more satisfied with their relationships, females' who were more accurate about their partners' feelings of connection were no more satisfied than less accurate females, and males who were more accurate about their partners' feelings of connection were *less* satisfied with their relationships. Further, the gender difference regarding the association

between accuracy and feelings of connection was marginally significant, such that empathic accuracy on connection was marginally more negatively associated with own satisfaction for males than for females ($\chi^2 = 3.64, p = .05$). Finally, a gender difference also emerged in the effects of accurately inferring *persuasion* on satisfaction. Specifically, females who were more accurate about their partners' feelings of being persuasive and females with partners who were more accurate about their own feelings of being persuasive were more satisfied with their relationships, whereas these effects did not reach significance for males. Though the gender difference in the effect of own accuracy regarding persuasion on own satisfaction did not reach significance ($\chi^2 = 2.6, p > .10$), the gender difference in the effect of partner accuracy regarding persuasion on own satisfaction did reach significance ($\chi^2 = 4.5, p < .05$), such that males' accuracy regarding females' persuasion was more positively associated with females' satisfaction than females' accuracy was associated with males satisfaction.

Discussion

Summary and Interpretation of Results

The results of this study paint a complex picture of the effects of adolescents' capacity for perspective-taking in their romantic relationships, confirming some of our hypotheses but challenging others. Although adolescents in romantic relationships were able to accurately infer the thoughts and feelings of their partners, contrary to our predictions, empathic accuracy did not appear to increase with age or relationship length, as boys and girls of different ages and in relationships of different lengths did not vary in their demonstrations of empathic accuracy. Given that the youngest adolescents in the current sample were 14 years old, this finding suggests that empathic accuracy is already in place by middle adolescence. Perhaps future research examining younger adolescents would provide better insight into the developmental course of empathic accuracy among adolescents.

Even more surprising from a developmental perspective, empathic accuracy was not significantly associated with the length of the relationship. The current sample varied substantially in terms of relationship length, with means and standard deviations of approximately 10 months, suggesting that this non-significant association was not due to a restricted range of relationship length. In a study with adult married couples, Thomas and colleagues (Thomas et al., 1997) found that the positive relationship between empathic accuracy and relationship length was mediated by shared cognitive focus (a consensus on which issues were discussed during the interaction task), with longer relationships experiencing greater consensus which resulted in higher levels of empathic accuracy. Perhaps this finding can help explain why length of the relationship was unrelated to empathic accuracy in these studies. That is, given that the topics of these conversations involved issues about which both members of the couples knew they disagreed, these adolescents were likely to be well-aware of their partners' views on the issue, on average, and thus demonstrate levels of accuracy that were independent of the length of the relationship. Alternatively, accuracy may depend less upon experiences with a specific relationship and more upon experiences with relationships generally. If so, adolescents' time spent in any relationships may be a better predictor of empathic accuracy. Future research may benefit by addresses both possibilities.

Unlike our predictions regarding age and relationship length, some of our predictions regarding the association between empathic accuracy and satisfaction were supported, though these associations were more complex than expected. Specifically, although empathic accuracy, as summed across all four dimensions (connected, persuading, conflict, and uncomfortable), was associated with higher levels of own and partner relationship satisfaction in both males and females, when such accuracy was examined separately in the context of each specific dimension, it was at times positively related to satisfaction, at times unrelated to satisfaction, and at times negatively related to satisfaction. Further, although males and females did not

differ in their overall levels of empathic accuracy, at times the association between accuracy and satisfaction did differ by gender.

The most unexpected finding regarding the association between empathic accuracy and satisfaction emerged on the dimension of connection, where boys' accuracy was *negatively* associated with satisfaction, whereas girls' accuracy about connection was unassociated with satisfaction. Research by Simpson, Ickes and colleagues (Simpson, Ickes, & Grich, 1999; Simpson, Orina, & Ickes, 2003) reveals that empathic accuracy can be negatively associated with satisfaction when the material being communicated is threatening to the relationships. What was it about girls' levels of connection that was so unsatisfying to these boys? Interdependence theory (Thibaut & Kelley, 1959) suggests that satisfaction with a relationship is determined jointly by intimates' relationship outcomes and their standards for those outcomes, such that satisfaction occurs when intimates' outcomes meet or exceed their standards. Given that boys' and girls' reports of connection did not differ, the differential effects of empathic accuracy regarding connection may have been due to differences in boys' and girls' standards for their partners' levels of connection. Perhaps boys endorse the stereotype that females feel more connected in their relationships than males (Deaux & Major, 1987), and thus have high standards for their female partners' levels of connection. Such higher standards for connection would explain why boys were dissatisfied with their partners' levels of connection when those levels did not differ from their own. Future research may benefit by examining this possibility directly.

A gender difference also emerged in the extent to which accuracy in perceiving persuasion was associated with levels of satisfaction, such that more accurate perceptions of persuasion were positively associated with satisfaction for females, but not males. Webster and Foschi (1988) suggest that women occupy subordinate social positions and are therefore *more easily influenced by others* than are men (particularly by receiving negative feedback). Such increased susceptibility to persuasion has been linked to depression among adolescent girls (Keenan & Hipwell, 2005). Perhaps attending to partners' persuading in romantic relationships is satisfying to adolescent girls because it helps them avoid the pitfalls of their susceptibility to such persuasion. Future research may benefit by examining directly the association between persuasion, relationship satisfaction, and individual functioning.

The remaining findings regarding associations between empathic accuracy and satisfaction were more straightforward. Specifically, both boys and girls' accuracy regarding their partners' feelings of conflict and accuracy regarding their partner's feelings of discomfort were positively associated with own and partner satisfaction. Accordingly, broadly speaking, these findings support the idea that accurately perceiving partners' thoughts and feelings about specific aspects of the relationship appears to be adaptive in adolescent relationships, as it has been shown to be adaptive in adult relationships (Neff & Karney, 2005). The specific exceptions to this trend, i.e., the negative association between boys accuracy regarding connection and gender differences in the effects of accurate perceptions of persuasion, are likely reflective of specific more nuanced processes that need further investigation.

Caveats

In light of these methodological implications, although the gender differences identified in this study provide valuable information about the role of gender in romantic relationships, treating gender as a binary variable misses the range of characteristics within each gender. Kimmel (2000) notes that mean scores in gender difference research tell us something about differences between two groups but ignore the distributions themselves, the differences among males or among females. There are, for instance, large numbers of emotionally expressive men and aggressive and physically strong women. Kimmel concludes that the variation within the attributes associated with masculinity and femininity are far greater than the differences

between the two (Kimmel, 2000). Perhaps most salient about this measurement paradigm is that it forces a singular, atheoretical resolution to the number of theoretical descriptions of gender that are held by adolescence researchers (Tolman, Striepe, & Harmon, 2003). These include evolutionary theory (Buss, 1996; Thornhill & Palmer, 2000), social role theory (Pleck, 1987; Eagly & Wood, 1999; Spence, 1993), and social construction theory (Butler, 1993; Gergen, 1985). Future research utilizing the empathic accuracy paradigm clearly needs to include more nuanced measures of masculinity and femininity, and would ideally include a qualitative component, to provide further insight into the meaning of these gender-related differences.

Further, the potential restricted range of the emotions felt and displayed by these adolescents may have muted some of the effects. Specifically, the tendency of adolescents to experience extremes of emotion, either positive or negative, in the context of their romantic relationships has been reported by a number of researchers (see Larson et al., 1999, for review), and presents a unique challenge for studies of this population. These extremes may be reflected in skewed ratings of self and partner during the interaction task, such that scores cluster towards one end of the scale, thereby reducing variability in targets' and partners' ratings. Such limited variability may have affected the results obtained here.

Limitations

While this study assists in our understanding of empathic accuracy in adolescent romantic relationships, the generalizability of our findings is limited in several ways. First, participants were predominately Caucasian adolescents in heterosexual romantic relationships who lived in regions surrounding a mid-sized southeastern city. Results, therefore, may not generalize to racial or sexual minority adolescents or to adolescents in other regions. Second, the inclusion of early adolescents in this study may have shown more age-related effects on empathic accuracy. In addition, couples that participated in this study self-identified themselves as being in a relationship lasting at least one month and were willing to be involved in a study focused on romantic relationships. This sample may differ in important ways from a general sample of individual adolescents or a sample of less committed dating partners. Our sample was also cross-sectional in design. Longitudinal designs are needed to better understand the developmental trajectory of communication and relational processes in adolescent romantic relationships and to tease apart issues of causality. Further, it is important to keep in mind the association between satisfaction and empathic accuracy was obtained from data collected cross-sectionally. Accordingly, longitudinal data would also help determine whether levels of empathic accuracy lead to levels of satisfaction, or whether levels of satisfaction lead to levels of empathic accuracy.

Methodological Implications

The current findings suggest important methodological considerations regarding the assessment of empathic accuracy. Prior studies of empathic accuracy typically aggregate specific thoughts and feelings expressed in dyadic interaction into a single score (e.g., Thomas & Fletcher, 2003). The video recall procedure utilized in this study allowed for thoughts and feelings to be correlated and reported separately. A benefit of this approach can be seen in the current study's sensitivity to the complex role of gender in relationship satisfaction and empathic accuracy. The differential pattern of association by dimension suggests that gender differences in empathic accuracy may be very sensitive to the context in which they are studied. Indeed, Snodgrass (1985) suggests that the interpersonal sensitivity between two interacting people is quite variable and thus the ability to accurately perceive another's thoughts and feelings may be influenced by the social context. Supporting this argument, gender differences in emotional expression occur always in specific cultures, among certain individuals, and in certain situations (Brody, 1997). Not only should future studies include more culturally and

ethnically diverse samples, but serious attempts should be made to translate this paradigm in to more naturalistic settings with less-structured interaction protocols. Korobov and Thorne (2006) have observed unforeseen levels of complexity, nuance, and contradiction in males' construction of intimacy in romantic relationship stories by recording these conversations outside of the lab, in more casual settings. In short, the results of this study represent what adolescents in romantic relationships are *capable of*, but should not be taken as proof of what they *actually do* outside of the laboratory. Developing naturalistic protocols and other methods other strategies for observing the nuanced role of gender is challenging in many ways, but undoubtedly worth pursuing.

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Table 1
Descriptive Statistics of and Correlations between Independent Variables

	Weeks Dating	Males' Age	Females' Age	Males' Relationship Satisfaction	Females' Relationship Satisfaction
Weeks Dating	1.00				
Males' Age	.43**	1.00			
Females' Age	.38**	.70**	1.00		
Males' Satisfaction				1.00	
Females' Satisfaction					1.00
<i>M</i>	45.8	17.4	16.8	26.1	26.3
<i>SD</i>	46.9	1.8	1.5	4.1	4.0
<i>N</i>	205	205	205	205	205

** Correlation is significant at the 0.01 level 2-tailed.

Table 2
Descriptive Statistics of and Correlations among Boys' and Girls' Perceptions

Ratings of Self	Boys' connection	Girls' connection	Boys' Conflict	Girls' Conflict	Boys' Persuasion	Girls' Persuasion	Boys' Discomfort	Girls' Discomfort
Boys' connection	1	.33**	-.35**	-.33**	-.31**	-.26**	-.39**	-.15*
Girls' connection		1	-.26**	-.16*	-.17*	-.20**	-.26**	-.32**
Boys' Conflict			1	.40**	.72**	.35**	.30**	.21**
Girls' Conflict				1	.44**	.84**	.09	.40**
Boys' Persuasion					1	.42**	.31**	.20**
Girls' Persuasion						1	.08	.46**
Boys' Discomfort							1	.18**
Girls' Discomfort								1
M	2.78	2.87	1.45 _a	1.31 _b	1.33	1.16	0.98 _a	0.72 _b
SD	1.20	1.16	1.41	1.35	1.40	1.36	1.28	1.13

Ratings of Partner	Boys' connection	Girls' connection	Boys' Conflict	Girls' Conflict	Boys' Persuasion	Girls' Persuasion	Boys' Discomfort	Girls' Discomfort
Boys' connection	1	.38**	-.23**	-.29**	-.28**	-.25**	-.27**	-.05
Girls' connection		1	-.26**	-.27**	-.26**	-.27**	-.25**	-.38**
Boys' Conflict			1	.43**	.76**	.33**	.40**	.15*
Girls' Conflict				1	.41**	.82**	.13	.37**
Boys' Persuasion					1	.39**	.41**	.16*
Girls' Persuasion						1	.09	.43**
Boys' Discomfort							1	.27**
Girls' Discomfort								1
M	2.81	2.85	1.40	1.25	1.26 _a	1.20 _b	0.94 _a	0.74 _b
SD	2.85	1.17	1.39	1.31	1.38	1.37	1.32	1.14

* p < .05

** p < .01, 2-tailed. Different subscripts within a dimension indicate significant gender difference.

Different subscripts within a dimension indicate significant gender difference.

Table 3
 Within Couple Associations between Self and Partner Ratings

	Males			Females		
	π_{m2}	<i>t</i>	Chi Square Test of Variance	π_{f2}	<i>t</i>	Chi Square Test of Variance
Overall	0.17	11.02***	530.91***	0.19	11.12***	673.97***
Connection	0.33	14.25***	701.01***	0.29	16.44***	460.21***
Conflict	0.25	12.87***	588.45***	0.24	12.56***	534.86***
Persuading	0.12	6.56***	457.82***	0.10	4.84***	554.86***
Uncomfortable	0.14	7.06***	511.20***	0.16	7.77***	496.84***

 $p < .001$

Table 4
Associations between Empathic Accuracy and Developmental Qualities

	Males		Females	
	β	<i>Effect Size r</i>	β	<i>Effect Size r</i>
Overall Empathic Accuracy				
Relationship Length	0.03 ⁻³	.01	.01 ⁻³	.00
Age	-1.10 ⁻³	-.01	4.50 ⁻³	.02
Empathic Accuracy about Connection				
Relationship Length	-0.88 ⁻³	-.12 [†]	0.41 ⁻³	.09
Age	1.30 ⁻²	.07	2.35 ⁻²	.13 [†]
Empathic Accuracy about Conflict				
Relationship Length	-0.24 ⁻³	-.04	0.55 ⁻³	.11
Age	-1.56 ⁻³	-.01	-0.21 ⁻³	-.01
Empathic Accuracy about Persuading				
Relationship Length	-0.13 ⁻³	-.03	0.26 ⁻³	.04
Age	-2.56 ⁻³	-.02	-2.53 ⁻²	-.12 [†]
Empathic Accuracy about Discomfort				
Relationship Length	-0.57 ⁻³	-.07	-0.29 ⁻³	-.03
Age	1.38 ⁻²	.07	1.19 ⁻²	.05

Note. *B*s are unstandardized.

[†]
p < .10

Table 5
Associations between Empathic Accuracy and Relationship Satisfaction

	Males		Females	
	β	<i>Effect Size r</i>	β	<i>Effect Size r</i>
Overall Empathic Accuracy				
Own Relationship Satisfaction	1.03 ⁻²	.21 ^{**}	0.62 ⁻²	.13 [†]
Partner Relationship Satisfaction	1.33 ⁻²	.21 ^{**}	1.16 ⁻²	.22 ^{**}
Empathic Accuracy about Connection				
Own Relationship Satisfaction	-1.07 ⁻²	-.14 _a [*]	0.27 ⁻²	.05 _b
Partner Relationship Satisfaction	-0.66 ⁻²	-.09	-0.43 ⁻²	-.07
Empathic Accuracy about Persuading				
Own Relationship Satisfaction	0.50 ⁻²	.09	1.44 ⁻²	.22 ^{**}
Partner Relationship Satisfaction	0.25	.04 _a	1.45 ⁻²	.27 _b ^{***}
Empathic Accuracy about Discomfort				
Own Relationship Satisfaction	0.86 ⁻²	.12 [†]	1.26 ⁻²	.22 ^{**}
Partner Relationship Satisfaction	1.14 ⁻²	.15 [*]	1.09 ⁻²	.15 [*]
Empathic Accuracy about Conflict				
Own Relationship Satisfaction	1.00 ⁻²	.14 [*]	1.20 ⁻²	.22 ^{**}
Partner Relationship Satisfaction	1.53 ⁻²	.21 ^{**}	1.67 ⁻²	.34 ^{***}

Note. *B*s are unstandardized. Different subscripts within a row denote significant gender differences

[†]
p < .10

*
p < .05

**
p < .01

p < .001