

The Past Is Present: Representations of Parents, Friends, and Romantic Partners Predict Subsequent Romantic Representations

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This study examined how representations of parent–child relationships, friendships, and past romantic relationships are related to subsequent romantic representations. Two-hundred 10th graders (100 female; $M_{\text{age}} = 15.87$ years) from diverse neighborhoods in a Western U.S. city were administered questionnaires and were interviewed to assess avoidant and anxious representations of their relationships with parents, friends, and romantic partners. Participants then completed similar questionnaires and interviews about their romantic representations six more times over the next 7.5 years. Growth curve analyses revealed that representations of relationships with parents, friends, and romantic partners each uniquely predicted subsequent romantic representations across development. Consistent with attachment and behavioral systems theory, representations of romantic relationships are revised by representations and experiences in other relationships.

One of Bowlby's (1973) key ideas was that individuals develop cognitive representations of their close relationships or as he termed them "internal working models." Such representations were expected to influence and be influenced by experiences in close relationships. Bowlby (1973, 1979) thought that attachment relationships with parents are particularly central; he hypothesized that the cognitive representations of these relationships not only influence cognitions, affect, and behavior with parents but also shape their representations of other types of close relationships, including their later romantic relationships. In other words, individual differences in how romantic relationships are represented and experienced are expected to reflect differences in past attachment history with parents.

Like Bowlby, Sullivan (1953) recognized the importance of early relationships with parents but also emphasized the key role of peers in psychosocial development. He maintained that peers become the major source of companionship in middle childhood. Furthermore, Sullivan proposed that the need for intimacy emerges in preadolescence and leads to the development of "chumships" or close

friendships. These relationships were seen as the prototype of adult friendships and a foundation for romantic and marital relationships (Buhrmester & Furman, 1986). In adolescence, genital interest or lust emerges and the object of the need for intimacy was expected to change to romantic partners.

Thus, Bowlby's attachment theory primarily focused on the parent–child relationship, whereas Sullivan mainly focused on peer relationships. In an effort to integrate the insights of these two theories, Furman and Wehner (1994) proposed a behavioral systems theory of close relationships particularly romantic relationships. In behavioral systems theory, the attachment, caregiving, affiliative, and sexual behavioral systems are conceptualized as key facets of romantic relationships. Individuals' approaches to these behavioral systems were expected to be influenced by their experiences in relationships with parents, friends, and prior romantic partners, which would be reflected in their representations of these relationships. The purpose of this study was to test this hypothesis that adolescents' representations of parent–child relationships, representations of friendships, and representations of romantic relationships would each be related to subsequent representations of romantic relationships.

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*The Conceptualization and Measurement of
Representations of Relationships*

Attachment theory has specifically focused on representations of the attachment behavioral system. Behavioral systems theory, however, conceptualizes representations of close relationships in terms of one's approach to intimacy and closeness in relationships. Similar to that of attachment theory, behavioral systems theory's conceptualization of representations incorporates cognitions, affect, and behavior regarding attachment but also incorporates those regarding the caregiving, affiliative, and sexual systems because they too involve intimacy and closeness (Furman & Simon, 1999; Furman & Wehner, 1994).

Like attachment theory (Brennan, Clark, & Shaver, 1998), behavioral systems theory proposes that differences in these representations can be characterized in terms of two continuous dimensions of avoidance and anxiety. Those who are high on the avoidant dimension are not comfortable with intimacy or closeness and prefer self-reliance, do not enjoy caring for the other, and value the activity rather than the companionship of the other; those who are high on the anxious dimension may worry about the other person's availability, provide excessive care, and are more invested in the relationship than the other person. Those who are high on both the avoidant and anxious dimensions have been characterized as fearful (Bartholomew, 1990). Those who are low on both the avoidant and anxious dimensions are considered secure; they are comfortable with intimacy and closeness and worry less about the other's availability.

Several theorists have hypothesized that individuals have representations of close relationships overall, representations of different types of relationships (e.g., romantic relationships or friendships), and representations of specific relationships (Collins & Read, 1990; Furman & Wehner, 1994). Theoretically, the associations hypothesized by behavioral systems theory may be stronger among representations of *types* of relationships versus representations of *specific* relationships. Representations of a particular friendship or romantic relationship are likely to be influenced by idiosyncratic characteristics of a particular relationship. In contrast, representations of a type of relationship should reflect their current integration of their cumulative experiences in that kind of relationship. Representations of romantic relationships or friendships overall (vs. specific relationships) may be particularly important in adolescence and early adulthood because many youth are likely to have had several significant

relationships rather than one committed one. Indeed, youth are likely to have periods when they are not in a romantic relationship or perhaps even a friendship; yet, they still have representations that may influence their interest in and ability to form romantic relationships or friendships.

Representations of different types of relationships have also been examined using two different methodologies—interviews and questionnaires. Interview measures have primarily been used to assess *working models* or internalized, partially unconscious representations of relationships (Furman & Wehner, 1994). These interview measures, such as the Adult Attachment Interview (AAI), examine the nature of the discourse to identify how individuals organize and process information regarding relationship experiences, feelings, and ideas (Main, Kaplan, & Cassidy, 1985). In contrast, questionnaire measures have primarily been used to assess *relational styles* or conscious self-perceptions of one's cognitions, affect, and behavior in relationships (Furman & Wehner, 1994). Substantial evidence exists that both interview measures of working models and self-report measures of styles provide theoretically consistent valid assessments of representations of relationships (see Crowell, Fraley, & Shaver, 2008). However, despite the rich evidence of construct validity for each type of measure, studies have found that internalized working models and self-reported styles are not highly correlated (see Roisman et al., 2007) and may predict different facets of relationships (see Crowell et al., 2008). Such differences make it important to examine both working models and styles to get a more comprehensive picture of representations and their development.

*Representations of Relationships With Parents, Friends,
and Romantic Partners*

Bowlby's (1973, 1979) idea that representations of parent-child relationships may influence romantic relationships has received significant empirical support. For example, interview assessments of secure working models of relationships with parents in adolescence are predictive of behavior in romantic relationships 1–2 years later (Holland & Roisman, 2010; Roisman, Madsen, Hennighausen, Sroufe, & Collins, 2001). Similarly, interview assessments of secure working models are associated with using the other as a secure base, providing support, and effective conflict management behaviors in romantic couples (Creasey, 2002; Crowell et al., 2002). Although research has examined the

links between *representations* of parent–child relationships and *experiences in romantic relationships* (e.g., support or conflict management), less empirical work has directly examined the associations between *representations* of relationships with parents and *representations* of relationships with romantic partners. Studies of the links between representations are particularly important because representations have been hypothesized to explain effects of early experiences on later development; they may also explain responses in new relationships and account for subjective perceptions of experiences affecting behavior (vs. simply objective features, Crowell & Treboux, 1995).

The existing cross-sectional studies of both interview measures of working models and self-report measures of styles have typically found modest associations between representations of relationships with parents and romantic partners, but not in all cases (Fraley, Heffernan, Vicary, & Brumbaugh, 2011; Furman, Simon, Shaffer, & Bouchee, 2002; Furman, 1999; Furman & Wehner, 1994; Haydon, Collins, Salvatore, Simpson, & Roisman, 2012; Owens et al., 1995; Treboux, Crowell, & Waters, 2004). Only a few longitudinal studies have been conducted on the links between representations of relationships with parents in adolescence and subsequent romantic representations. Adolescents' self-reported styles with parents have been found to be related to self-reported romantic styles concurrently, 2 years later, and 8 years later (Doyle, Lawford, & Markiewicz, 2009; Pascuzzo, Cyr, & Moss, 2013). In contrast, an interview measure of working models of parents was not predictive of an interview measure of working models of romantic partners a year later (Roisman, Collins, Sroufe, & Egeland, 2005). Further work is needed to understand the longitudinal associations of both styles and models, especially in the context of other close relationships, such as friendships and prior romantic partners.

Behavioral systems theorists have argued that friendships, as well as parent–child relationships, play an important role in shaping romantic relationships and their representations (Furman, 1999; Furman & Wehner, 1994). Relationships with parents may serve as the foundation for being able to be intimate with others, but friendships are also hypothesized to contribute to the development of *mutual* intimacy, *mutual* attachment, and *mutual* caregiving that are central in romantic relationships. Characteristics of the affiliation system such as collaboration, co-construction, and symmetrical interchanges are central in both friendships and romantic relationships. Substantial evidence exists

documenting that the qualities of friendships are associated with the qualities of romantic relationships (see Furman & Rose, 2015), but few studies have directly examined representations of friendships. In the existing literature, concurrent associations between friends or peers and romantic partners are consistently found for self-report measures of styles and interview measures of working models (Doyle et al., 2009; Fraley et al., 2011; Furman, 1999), but the longitudinal links for self-reported styles are less consistent (cf., Doyle et al., 2009; Pascuzzo et al., 2013). To the best of our knowledge, the longitudinal links for representations of friendships have not been examined with interview measures of working models.

In addition, behavioral systems theorists have also proposed that representations of romantic relationships themselves may be particularly important in shaping subsequent romantic relationships. Indeed, romantic relationships generally have some characteristics, such as passion or sexual behavior, that make them distinct from relationships with parents or friends (Furman & Wehner, 1994). Furthermore, representations of romantic relationships have been found to be relatively stable over time; a meta-analysis revealed an average correlation of .54 (Fraley & Brumbaugh, 2004). Most of the studies in this meta-analysis, however, included individuals who were in the same relationship as well as those who were not. Representations of romantic relationships may be more stable when participants are still in the same relationship; thus, it is important to examine the associations omitting same partners to determine if such representations continue to be predictive even after a relationship has ended. Finally, most studies only examined the stability of self-report measures of romantic styles (vs. interview measures of working models), and few have examined stability over a period longer than a year.

Predictive Associations of Multiple Types of Relationships

Several investigators have examined how self-reported styles of both parents and friends are predictive of subsequent romantic relational styles. In one case, security of friendship styles was uniquely associated with security of romantic styles, but security of styles with regard to relationships with mothers or fathers was not (Doyle et al., 2009). In another study, lower security with parents and peers were both predictive of subsequent self-reported anxious romantic styles but not avoidant styles (Pascuzzo et al., 2013). To date, research on

the role of representations of multiple types of relationships has been limited to self-report measures of styles. In addition, work has not examined how either self-report measures of styles or interview measures of working models of romantic relationships are predictive of representations of subsequent romantic relationships when representations of other types of relationships are taken into account.

Given the potential significance of representations of each type of relationship, it is important to simultaneously examine all three types of representations. The simultaneous examination of all three types of representations would help identify the unique contributions each may have for subsequent romantic representations. Moreover, if one does not simultaneously examine all three types of representations, it is difficult to conclude that any one type of relationship directly predicts representations of romantic relationships. That is, an association between representations of two different types of relationships could stem from the shared variation in representations of multiple types of relationships. For example, if we were to only examine the association between representations of friendships and subsequent representations of romantic relationships, the correlation could reflect the effect of friendships on romantic representations, but it could simply reflect the covariation between them that would occur if both were affected by representations of relationships with parents.

Adolescence is a particularly important time to examine how representations of different types of relationships may be related to romantic representations. Relationships with parents, friends, and romantic partners are all undergoing substantial changes (Laursen & Collins, 2012), and representations are thought to be reevaluated and updated based on these changing relationship dynamics (Bowlby, 1973; Furman & Wehner, 1994). The development of formal operations and abstract thinking also allows adolescents to step back and reflect on their relationships for the first time (Main, 1999; Main et al., 1985). Taken together, these features of adolescence make it an ideal time to study how emerging romantic relationship representations may be influenced by representations of other relationships.

This Study

The primary purpose of this study was to examine the associations between adolescents' representations of parent-child relationships, friendships,

and romantic relationships and their representations of subsequent romantic relationships. To date, no longitudinal study has simultaneously examined the predictive significance of all three types of representations. In addition, most studies have only examined the associations for self-report measures of styles and not interview measures of working models.

Finally, prior longitudinal work has also focused on the associations between representations at two time points. In this study, we examined whether representations of relationships with parents, representations of friendships, and romantic representations at Wave 1 could predict the growth curves of subsequent romantic representations over the next six waves (Waves 2–7). The development of representations is conceptualized as a stable developmental process or trajectory that continuously unfolds over time in a relatively predictable fashion, thus making latent growth analyses particularly appropriate (Young, Furman, & Laursen, 2011). Furthermore, growth curve analyses allow us to examine changes in the level (intercept) and trajectory of growth (slope). First, individual trajectories of development may vary in terms of the intercept, which typically represents the *level* of a variable at a specific time. In the present analyses, corresponding representations of all three types of relationships at Wave 1 were simultaneously entered as predictors of the growth curve intercept at Wave 2; thus, representations of romantic relationships at Wave 1 were controlled for in the prediction of the romantic representation intercept at Wave 2. Consequently, the representations of all three types of relationships at Wave 1 were used to predict *changes* in the *level* of romantic representations at Wave 2. For example, if we found that more avoidant representations of relationships with parents at Wave 1 predicted a positive intercept effect at Wave 2, it would mean they predicted *increases* in avoidant romantic representations from Wave 1 to Wave 2. Furthermore, we examined whether these changes in the level of romantic representations were sustained by seeing if representations at Wave 1 also predicted romantic intercepts at Wave 7.

Growth curves also vary in their trajectory or slope, which represents the direction and degree of change from the beginning of the growth curve to the end of the growth. Continued change could occur if the trajectory showed subsequent changes in the same direction as a change in the level from Wave 1 to Wave 2. For example, it could take longer than a year for the effects of Wave 1

representations to be fully incorporated into subsequent romantic representations. Alternatively, a change in level from Wave 1 to Wave 2 may not be sustained and the degree of avoidance in romantic working models could decrease over time from Wave 2 to Wave 7. In that case, we would observe an intercept effect at Wave 2 and a slope effect in the opposite direction as the intercept effect.

In sum, growth curve analyses allow us to examine how prior representations predict the developmental course of subsequent romantic representations. In particular, we can determine if the prior representations predict *changes* in the level of romantic representations a year later (a Wave 2 intercept effect) and whether such *changes* in the level are *sustained* (a Wave 7 intercept effect). We can also see if prior representations affect the trajectory over time to see if change continues in the same direction after Wave 2 or if scores revert back to what they were in Wave 1 (i.e., two kinds of slope effects).

Given the formative role of parents in development, we expected representations of parent-child relationships to be predictive of subsequent changes in corresponding representations of romantic relationships. We also expected representations of friendships to be predictive of subsequent changes in corresponding representations of subsequent romantic relationships as friendships and romantic relationships have many similar features. Finally, we expected prior representations of romantic relationships to be predictive of subsequent corresponding representations of romantic relationships because earlier experiences in romantic relationships may influence subsequent ones; continuity may also occur because of similarities in the characteristics of different partners. We assessed anxious and avoidant representations using both questionnaire measures of styles and interview measures of working models. Theoretically, similar results for the two methods should be found, as both are theorized to be indices of representations. We aimed to determine this empirically, however, as this idea has not been extensively tested.

Method

Participants

The participants were part of a longitudinal study investigating the role of relationships with parents, peers, and romantic partners on psychosocial adjustment. Two-hundred 10th grade high school students (100 male, 100 female;

$M_{\text{age}} = 15.87$ years, $SD = 0.49$) were recruited. The participants came from 37 zip codes of working class to upper middle class neighborhoods in a large Western metropolitan area. We sought to obtain such a diverse sample by distributing brochures and sending letters to families residing in a number of different zip codes and to students enrolled in various schools in ethnically diverse neighborhoods. We were unable to determine the ascertainment rate because we used brochures and because letters were sent to many families who did not have a 10th grader. We contacted interested families with the goal of selecting a quota sample that had an equal number of male and female adolescents, and had a distribution of racial and ethnic groups that approximated that of the United States. To insure maximal response, we paid families \$25 to hear a description of the project in their home. Of the families that heard the description, 85.5% expressed interest and carried through with the Wave 1 assessment.

The sample consisted of 11.5% African Americans, 12.5% Hispanics, 1.5% Native Americans, 1% Asian American, 4% biracial, and 69.5% White, non-Hispanics. With regard to family structure, 57.5% were residing with two biological or adoptive parents, 11.5% were residing with a biological or adoptive parent and a stepparent or partner, and the remaining 31% were residing with a single parent or relative. The sample was of average intelligence (Wechsler Intelligence Scale for Children, 3rd ed. vocabulary score $M = 9.8$, $SD = 2.44$); 55.4% of their mothers had a college degree, indicating that the sample was predominately middle or upper middle class.

With regard to sexual orientation, 89.3% said they were heterosexual or straight at Wave 7, whereas the other participants said they were bisexual, gay, lesbian, or questioning. We chose to retain the sexual minorities in the sample to be inclusive and because we had no theoretical or empirical rationale for believing that the patterns of associations among representations would differ by sexual orientation.

As part of the larger project, the participants and their mothers completed a number of other measures in Wave 1. Although these measures are not directly relevant to this particular study, we compared our sample's scores to comparable national norms of representative samples for trait anxiety scores on the State Trait Anxiety Inventory (Spielberger, 1983), maternal report of externalizing symptoms on the Child Behavior Checklist (Achenbach, 1991), participants' reports of

internalizing and externalizing symptoms on the Youth Self-Report, and eight indices of substance use from the Monitoring the Future survey (Johnston, O'Malley, & Bachman, 2002). This sample was more likely to have tried marijuana, 54% versus 40%, $z = 2.23, p < .05$; sample scores did not differ significantly from the national scores on the other 11 measures, including frequency of marijuana usage.

For the purposes of this study, we used the first through seventh waves of data collection, beginning when the participants were in the 10th grade and ending approximately 5.5 years after graduation from high school. Data were collected on a yearly basis in Waves 1 through 4, and then every 18 months for Waves 5–7. In the analyses, we adjusted for the difference in the time lags (e.g., Wave 5 was scored as 5.5; Wave 6 as 7.0; Wave 7 as 8.5). For clarity, however, we continue to refer to these as Waves 5–7. The seven waves of data were collected between 2000 and 2010.

Participant retention was excellent (Wave 2 $N = 200$, $M_{\text{age}} = 16.89$ years; Wave 3 $N = 199$, $M_{\text{age}} = 17.94$ years; Wave 4 $N = 195$, $M_{\text{age}} = 19.03$ years; Wave 5 $N = 186$, $M_{\text{age}} = 20.51$ years; Wave 6 $N = 185$, $M_{\text{age}} = 22.11$ years; and Wave 7 $N = 179$, $M_{\text{age}} = 23.71$ years). Those who participated in the study in Wave 7 did not differ from those who did not in terms of age, ethnicity, maternal education, or their initial scores on the 12 measures of representations at Wave 1. Participants were compensated financially. The study was approved by the local institutional review board. The confidentiality of participants' data was protected by a certificate of confidentiality issued by the U.S. Department of Health and Human Services.

Interview Measures of Working Models

In Wave 1, the AAI, Friendship Interview, and Romantic Interview were administered in a series of laboratory sessions. The interviews were administered at least 1 week apart by different female interviewers. To control for carryover or practice effects, the order of the interviews was counterbalanced and sessions were separated by at least 6 days ($Mdn = 12.8$ days). In Waves 2–7, participants only completed the Romantic Interview.

Adult Attachment Interview

The AAI (George, Kaplan, & Main, 1985/1996) was administered in Wave 1 to assess adolescents' working models of relationships with parents. This

semi structured interview consisted of 18 questions, which ask participants to describe their childhood relationships with parents and to support their descriptions by providing particular memories. The AAI has proven to be a highly valuable means of assessing representations or states of minds regarding attachment relationships in general (see Hesse, 2008) and in adolescence in particular (Allen, 2008, 2015). The AAI is usually conceptualized as a measure of generalized representations of attachment (Hesse, 2008), but we believe that a more conservative interpretation would be that it reflects representations or states of minds regarding relationships with parents because the vast majority of AAI questions focus on relationships with parents. In fact, the AAI has been found to be unrelated, or only modestly, related to similar interview measures of representations of romantic relationships or friendships (Furman, 1999; Furman et al., 2002; Roisman et al., 2005; Treboux et al., 2004). If the AAI was assessing generalized representations of all types of attachments, one would expect stronger associations with these measures of representations of other types of relationships.

Friendship Interview

The Friendship Interview was administered in Wave 1 to assess adolescents' working models of friendships (Furman, 2001). It was based on the AAI, and many questions were the same as or similar to those of the AAI. A few questions were modified to take into account differences between relationships with parents and peers. For instance, AAI questions about being upset were included, but the ones about being hurt or ill were omitted, as adolescents do not commonly seek care from peers in those instances. The interview included questions about caregiving and affiliation as well as attachment. Thus, we asked about what happened when the friend was upset as well as what happened when the participant was upset. The interview focused primarily on the two high school friendships they considered most important, although participants were provided opportunities to discuss other friendships or share their insights about friendships in general. Friendships that had become romantic relationships were excluded from the interview. The Friendship Interview has been found to be associated with a version of Hazan and Shaver's (1987) attachment style measure regarding friendships (Furman, 2001), perceptions of friendship qualities, and observed interactions with friends (Furman, Stephenson, & Rhoades, 2014).

Romantic Relationship Interview

The Romantic Relationship Interview was administered in each wave to assess working models in romantic relationships (Furman, 2001). It was the same as the Friendship Interview except that the questions focused on romantic relationships. Like the Friendship Interview, the interview focused primarily on the one to three romantic relationships they considered most important, including the most important one in the last year (if applicable). The interview was only administered to those who had at least one relationship of at least 1 month's duration. The Romantic Relationship Interview has been found to be associated with sexual behavior, perceptions of relationship qualities, and patterns of interaction in romantic relationships (Furman & Simon, 2006; Furman et al., 2014; Jones & Furman, 2011).

Coding of Interviews

The AAIs, Friendship Interviews, and Romantic Relationship Interviews were audiotaped and subsequently transcribed verbatim. Working models (states of mind) were assessed using Main and Goldwyn's (1985/1998) AAI scales and Crowell and Owens' (1996) valuing of intimacy and autonomy scales. Coders indicated how prototypically secure, dismissing, and preoccupied the transcript was using 9-point Likert scales (1 = *has none of the features of the type*, 9 = *prototypic instance*). Secure transcripts were those in which the participants were able to describe relationships coherently, value them, and find them to be influential in their lives. Dismissing transcripts were those in which the participants attempted to limit the influence of relationships by idealizing, derogating, or failing to remember their experiences. In preoccupied transcripts, the participants were vague, passive in speech, confused, angry, or absorbed with the experiences or relationships. The bases of prototype ratings for friendships and romantic relationships were similar to those used for the classifications on the AAI but also took into account the nature of peer relationships among adolescents and young adults. For example, we considered not only whether they valued the attachment feature of support seeking but also whether they valued caregiving, and affiliative features, such as cooperation, mutuality, and shared interests. Avoidant working model ratings were calculated by subtracting secure prototype ratings from dismissing prototype ratings because secure and dismissing prototype

ratings were strongly negatively related ($M_r = -.75$). Preoccupied ratings were used for the anxious dimension scores. Although we used these dimensional ratings of security, dismissing, and preoccupied ratings in our analyses, we examined the categorical classifications for descriptive purposes. On the AAI, 41% of the participants were classified as secure; 50% were classified as dismissing, 6% were classified as preoccupied, 4% were classified as unresolved, and 1% as cannot classify. On the Friendship Interview, 62% of the participants were classified as secure; 34% were classified as dismissing, 4% were classified as preoccupied, and 4% were classified as unresolved. On the Wave 1 Romantic Interview, 51% of the participants were classified as secure; 40% were classified as dismissing, 5% were classified as preoccupied, and 4% were classified as unresolved.

Different coders coded each of the three interviews for a participant. All coders had attended Main and Hesse's AAI Workshop and received additional training and practice in coding romantic and friendship interviews. AAI coders successfully completed Main and Hesse's Certification process. Two coders independently coded 11% of the transcripts. The reliabilities of the avoidant and anxious working model scores were satisfactory (mean intraclass correlation coefficients (ICC): romantic avoidant ICC = .73, romantic anxious ICC = .75, parent avoidant ICC = .70, parent anxious ICC = .83, friend avoidant ICC = .80, and friend anxious ICC = .78).

Questionnaire Measures of Relational Styles

The Behavioral Systems Questionnaire (BSQ) was used to measure self-perceptions of relational styles (Furman & Wehner, 1994, 1999). In Wave 1 the participants completed three versions of the BSQ—one about parents, one about friends, and one about romantic partners. For Waves 2–7, only the Romantic BSQ was used. The Romantic BSQ was only administered to those who had at least one relationship of at least 1 month's duration at some point.

The BSQ resembles attachment style questionnaires but assesses approaches to intimacy and closeness with respect to caregiving and affiliation as well as attachment. Although the romantic BSQ also assessed approaches to intimacy with respect to sexual behavior, these items were not used in this study so that the versions for the three types of relationship would parallel one another. For each type of relationship, secure, dismissing, and preoccupied styles were each assessed with nine 5-point

Likert items referring to cognitions, affect, and behaviors. These items were further divided into items related to the attachment, caregiving, and affiliative behavioral systems. For example, a dismissing item referring to caregiving was "I do not like having to comfort or reassure my (romantic partners)"; a secure item referring to affiliation was "My (romantic partners) and I make frequent efforts to see and talk with each other"; and a preoccupied item referring to attachment was "I feel that (my romantic partners) believe that I depend on them too much." Consistent with the idea that relational styles reflect representations of all behavioral systems, and not just attachment, corresponding style scores of the three behavioral systems were substantially related to one another, $M_r = .46$. Consequently, scores for each of the three different behavioral systems were averaged to derive secure, dismissing, and preoccupied scores.

Next, two relational style scores were calculated: (a) an avoidant score, which was computed by reverse scoring the secure score and averaging it together with the dismissing score; and (b) an anxious style score, which was the preoccupied scale score. These dimensions are similar to the avoidance and anxiety dimensions often found in adult attachment studies (Brennan et al., 1998; Simpson, Rholes, & Nelligan, 1992). Confirmatory factor analyses of the measures in the waves used in this study revealed that a two-factor solution provided a satisfactory fit to the data (friend comparative fit index [CFI] = .91, root mean square error of approximation [RMSEA] = .07, parent CFI = .90, RMSEA = .06, $M_{\text{romantic}} = .93$, CFI = .06). Internal consistencies were all satisfactory, M_{α} romantic avoidant $M_{\alpha} = .93$ (range = .90–.94), romantic anxious $M_{\alpha} = .84$ (range = .78–.86), parent avoidant $\alpha = .92$, parent anxious $\alpha = .78$, friend avoidant $\alpha = .92$, and friend anxious $\alpha = .79$. The BSQ measures have been found to be associated with measures of attachment style (Starr & Davila, 2009), attachment history (Milan, Zona, & Snow, 2013), perceptions of relationship qualities, and patterns of interaction (Furman & Simon, 2006; Furman et al., 2014), social competence (Starr & Davila, 2009), and multiple indices of problems in adjustment (Milan et al., 2013; Starr & Davila, 2009).

Results

Data Preparation and Preliminary Analyses

All variables were examined to ensure that they had acceptable levels of skew and kurtosis

(Behrens, 1997). No violations were noted. Multivariate normality was assessed using Mardia's multivariate normality test in the R package MVN (Korkmaz, Goksuluk, & Zararsiz, 2014). Mardia's test revealed that the variables included in analyses examining avoidant styles, avoidant working models, and anxious styles were all multivariate normal (all $ps > .05$). The variables included in the examination of anxious working models were not multivariate normal. However, the current analyses used the Mplus MLR estimator, which is the recommended approach for managing multivariate non-normality because the estimator delivers maximum likelihood parameter estimates with standard errors that are robust to nonnormality (Muthén & Muthén, 1998–2011).

The average number of different partners described on the Romantic Interview across the seven waves was 7.54, the average length of each relationship was 11.53 months, and 7.5% of participants were married in Wave 7. Table 1 presents the correlations among the representations of the three types of relationships at Wave 1. Consistent with the idea that representations of different types of relationships are distinct, corresponding scores for representations of relationships with parents, friends, and romantic partners were only moderately related to each other ($M_r = .20$). Corresponding style and working model scores were only modestly related ($M_r = .18$). Similarly, corresponding anxious and avoidant scores were essentially independent of each other ($M_r = .04$). Finally, we also examined the pattern of correlations of romantic representations across Waves 2 to Wave 7; corresponding representations at adjacent waves were moderately related to each other, suggesting it would be appropriate to examine these variables as growth curves ($M_r = .48$).

To determine whether representations of the three types of relationships at Wave 1 were predictive of the subsequent growth curves of romantic representations from Wave 2 to Wave 7, we conducted a series of multilevel models (MLMs) using the statistical program MPlus v.6.11 (Muthén & Muthén, 1998–2011). Participants were not administered the romantic BSQ or the Romantic Interview until they had a romantic relationship of at least 1-month duration, and their scores on those measures were treated as missing until they had (Wave 1 $n = 48$, Wave 2 $n = 35$, Wave 3 $n = 21$, Wave 4 $n = 15$, Wave 5 $n = 9$, and Wave 6 $n = 5$). Participants who had never had a romantic relationship of at least 1-month duration by the end of Wave 7 were excluded from the study ($n = 5$).

Table 1
Correlations Among the Different Representations at Wave 1

	Avoidant romantic style	Avoidant parent style	Avoidant friend style	Avoidant romantic model	Avoidant parent model	Avoidant friend model	Anxious romantic style	Anxious parent style	Anxious friend style	Anxious romantic model	Anxious parent model
Avoidant parent style	.07										
Avoidant friend style	.12	.09									
Avoidant romantic model	.42*	.12	.26*								
Avoidant parent model	.19*	.27*	.08	.31*							
Avoidant friend model	.19	.15	.39*	.35*	.39*						
Anxious romantic style	.13	.00	.01	-.10	.17*	.15					
Anxious parent style	.01	.03	.04	.12	.13	.14	.29*				
Anxious friend style	.12	.06	.25*	.08	.13	.15	.18*	.10			
Anxious romantic model	-.23*	.02	.08	-.09	-.14	-.15	-.06	-.04	.12		
Anxious parent model	-.06	.24*	-.01	-.09	-.05	-.17*	.07	-.04	-.01	.23*	
Anxious friend model	-.05	-.07	-.12	-.01	-.14	-.02	.07	-.06	-.02	.12	.17*

* $p < .05$.

In addition, romantic representations at Wave 2 or later were treated as missing if the participant was in the same relationship as in Wave 1, as we were interested in predicting representations after that romantic relationship had ended (Wave 2: $n = 20$, Wave 3: $n = 2$). Multiple imputation (MI) procedures were used to estimate missing data (Schafer & Graham, 2002). We included relevant auxiliary variables in our MIs to maximize the likelihood of meeting the assumption that the data are missing at random (Collins, Schafer, & Kam, 2001). MI provides a powerful alternative to list-wise deletion and protects against bias in analyses (Graham, Olchowski, & Gilreath, 2007; Little, Jorgensen, Lang, & Moore, 2013). One-hundred MI data sets were generated using the software program Amelia II (Honaker, King, & Blackwell, 2011), and the results of the analyses of the 100 data sets were averaged using MPlus.

To test our hypotheses, we used the following model.

$$\text{Level 1: } Y_i = \beta_0 + \beta_1(\text{wave}) + r_i$$

$$\text{Level 2: } \beta_0 = \gamma_{00} + \gamma_{01}(\text{gender}) + \gamma_{02}(\text{Wave 1 representation of relationships with parents}) + \gamma_{03}(\text{Wave 1 representation of friendships}) + \gamma_{04}(\text{Wave 1 romantic representation}) + \mu_0$$

$$\beta_1 = \gamma_{10} + \gamma_{11}(\text{Wave 1 representation of relationships with parents}) + \gamma_{12}(\text{Wave 1 representation of friendships}) + \gamma_{13}(\text{Wave 1 romantic representation}) + \gamma_{14}(\text{gender}) + \mu_1$$

In these models, Y represented one of the four romantic representation score for individual i at Waves 2–7. Because styles and models scores were only modestly related and anxious and avoidant scores were unrelated, we only examined the predictive associations between corresponding representations (e.g., avoidant style scores at Wave 1 predicting avoidant romantic style growth curves). Each of the other predictors was grand mean centered. We included a random slope effect for Wave (β_1) and examined slope effects of each type of relationship by including the cross-level interactions between the representation of relationships with parents (γ_{11}), friends (γ_{12}), romantic partners (γ_{13}), and Wave (β_1). All of the predictors were grand mean centered except for Wave. In this case we conducted each model six times, centering Wave (β_1) at each of the waves in the growth curve (i.e., Waves 2–7), such

that the parameter estimate is the intercept or the average level of the romantic representation at each of the waves (see Singer & Willett, 2003). In all but one case, the centering at the different waves did not affect the results. That is, if a parameter estimate for an intercept was significant at one wave, it was significant at all waves. The slope parameters were identical regardless of where wave was centered. Accordingly, Tables 2 and 3 only report the results of the analyses for when wave was centered at Wave 2 and Wave 7. We also report the one instance in which the parameter changed in significance across waves in the text (i.e., anxious working models of parent-child relationships).

Relationships With Parents

Representations of relationships with parents were predictive of changes in the corresponding intercept of romantic representations in most instances. Specifically, Wave 1 avoidant styles and avoidant working models of parent-child relationships were each predictive of increases in corresponding avoidant intercept scores regardless of at which wave the intercept was centered. Similarly, Wave 1 anxious styles for relationships with parents were consistently predictive of increases in subsequent intercept scores for romantic anxious styles regardless of at which wave the intercept was set. Wave 1 anxious working models of

Table 2
Multilevel Models Testing the Associations Among Avoidant Friend, Parent, and Romantic Representations and Subsequent Romantic Representations

Avoidant	Avoidant style W2	Avoidant style W7	Avoidant model W2	Avoidant model W7
Intercept (β_0)	-3.48 (.12)	-3.86 (.11)	.74 (.65)	.84 (.66)
Wave (β_1)	-.07 (.01)***	-.07 (.01)***	-.09 (.08)*	-.08 (.07)
Gender main effect (γ_{01})	-.24 (.07)***	-.23 (.07)**	-.93 (.40)*	-.93 (.39)*
Parent (γ_{02})	.10 (.05)*	.13 (.05)*	.09 (.04)*	.08 (.04)*
Friend (γ_{03})	.11 (.05)*	.11 (.06)*	.17 (.05)**	.17 (.05)***
Romantic partner (γ_{04})	.21 (.07)**	.20 (.07)**	.17 (.05)***	.17 (.05)***
Parent \times Wave (γ_{11})	.03 (.02)	.03 (.02)	.01 (.02)	.01 (.02)
Friend \times Wave (γ_{12})	.00 (.02)	.01 (.02)	-.00 (.02)	-.00 (.02)
Romantic Partner \times Wave (γ_{13})	-.01 (.03)	-.01 (.04)	-.02 (.02)	-.02 (.02)
Gender \times Wave (γ_{14})	.02 (.03)	.02 (.03)	.04 (.15)	.04 (.15)

Note. Results depict associations between corresponding measures (e.g., styles to subsequent romantic styles, models to subsequent romantic models). The primary numbers in the table are the unstandardized coefficients for the fixed effects. Standard errors are in parentheses. The headers indicate whether the intercept was set at Wave 2 (the first point of the growth curve) or Wave 7 (the last point of the growth curve).
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3
Multilevel Models Testing the Associations Among Anxious Friend, Parent, and Romantic Representations and Subsequent Romantic Representations

Anxious style	Anxious style W2	Anxious style W7	Anxious model W2	Anxious model W7
Intercept (β_0)	2.26 (.12)	2.00 (.12)	1.75 (.33)	1.76 (.32)
Wave (β_1)	-0.04 (.01)**	-0.04 (.01)**	0.06 (.04)	0.06 (.04) [†]
Gender main effect (γ_{01})	-0.03 (.07)	-0.00 (.07)	0.45 (.19)*	0.43 (.20)*
Parent (γ_{02})	0.19 (.07)**	0.18 (.06)**	0.11 (.06) [†]	0.12 (.06)*
Friend (γ_{03})	-0.00 (.05)	-0.01 (.05)	0.22 (.10)*	0.27 (.10)*
Romantic partner (γ_{04})	0.30 (.07)***	0.31 (.07)**	0.33 (.12)**	0.32 (.12)**
Parent \times Wave (γ_{11})	-0.00 (.02)	-0.01 (.02)	0.03 (.02)	0.02 (.02)
Friend \times Wave (γ_{12})	-0.00 (.02)	-0.01 (.02)	-0.09 (.04)*	-0.09 (.04)*
Romantic Partner \times Wave (γ_{13})	-0.00 (.03)	-0.01 (.03)	-0.03 (.03)	-0.03 (.03)
Gender \times Wave (γ_{14})	0.03 (.03)	0.03 (.03)	0.01 (.07)	0.01 (.07)

Note. Results depict associations between corresponding measures (e.g., styles to subsequent romantic styles, models to subsequent romantic models). The primary numbers in the table are the unstandardized coefficients for the fixed effects. Standard errors are in parentheses. The headers indicate whether the intercept was set at Wave 2 (the first point of the growth curve) or Wave 7 (the last point of the growth curve).
[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

relationships with parents only tended to be predictive of increases in anxious romantic working models intercept scores when the intercept was centered at Waves 2–4 but were significantly predictive when the intercept was centered at Waves 5–7. As noted above, this was the only instance in which differences in significance were found when centering at different waves. Representations of relationships with parents were not predictive of the corresponding romantic growth curve slopes in any instance.

Friendships

Both avoidant friendship styles and models were predictive of increases in the corresponding intercept of romantic representations regardless of at which wave the intercept was set. Similarly, anxious friendship models were also consistently predictive of increases in the intercept of anxious romantic models regardless of at which wave the intercept was set. Anxious friendship styles were not predictive of the intercept of subsequent romantic styles. Representations of friendships were predictive of the corresponding romantic growth curve slopes in only one instance and thus were not interpreted.

Romantic Relationships

Representations of romantic relationships at Wave 1 were predictive of the corresponding intercept of romantic representation in all cases. That is, both avoidant and anxious romantic styles and models were predictive of corresponding subsequent romantic representations regardless of where the intercept was set. Representations of romantic relationships were not predictive of the corresponding romantic growth curve slopes in any instance.

Gender

Main effects of gender were found such that males had more avoidant romantic representations on both the self-report style and interview working model measures. Furthermore, main effects of gender were found such that girls had more anxious romantic representations on the interview working model measure. No main effect of gender was found for anxious romantic representations on the self-report style measure. No gender differences existed in any of the romantic growth curve slopes.

Secondary Analyses

To determine the unique contribution made by representations of relationships with parents, friends, and romantic partners in adolescence, we conducted a series of stepwise MLM analyses predicting intercept effects. Specifically, we compared the R^2 of a reduced model (e.g., representations of relationships with friends and romantic partners) to the R^2 of a full model (i.e., representations of relationships with friends, romantic partners, and parents) to determine whether the addition of parents provided a significant change in R^2 . We made these comparisons for each relationship and corresponding measure. In all instances of a significant intercept effect in the primary analyses, the secondary analyses indicated a significant change in R^2 . Thus, representations of relationships with parents, friends, and romantic partners were not only significantly associated with changes in representations of romantic relationships, but also they each uniquely added to the prediction of subsequent romantic representations.

Discussion

Consistent with behavioral systems theory, representations of relationships with parents, friends, and romantic partners in adolescence were associated with subsequent levels of representations of romantic relationships over time (i.e., intercept effects). Such associations were found with both self-report measures of styles and interview measures of working models. Thus, the results provide strong evidence that representations of different types of close relationships in adolescents' networks are related to subsequent romantic representations in young adulthood.

Bowlby (1973, 1979) hypothesized that the cognitive representations of relationships with parents shape representations of other types of close relationships, including later romantic relationships. Consistent with this central idea of both attachment and behavioral systems theory, this study found associations between representations of relationships with parents in adolescence and changes in subsequent levels of romantic representations, spanning into young adulthood. These findings are consistent with the prior empirical work that has found links between adolescent representations of relationships with parents and subsequent romantic relationship representations (Pascuzzo et al., 2013). Notably, the current findings build upon this work,

replicating the expected patterns using multiple methods and also simultaneously accounting for representations of friendships and romantic relationships. Thus, even under these more stringent tests, the developmental links from adolescent representations of relationships with parents to subsequent representations of romantic relationships were observed.

Bowlby (1973, 1979) and Ainsworth (1989) focused on the links between parent-child relationships and other close relationships, but consistent with Sullivan's (1953) ideas and behavioral systems theory (Furman & Wehner, 1994), this study found that representations of friendships were also predictive of changes in the subsequent levels of romantic representations. The egalitarian nature of friendships and romantic relationships provides rich opportunities for reciprocity, collaboration, cooperation, and reciprocal altruism. Furthermore, the expectations regarding those affiliative processes in friendships may carryover to their romantic relationships (Furman, 1999; Furman & Wehner, 1994). Thus, the pattern of findings is consistent with the idea that friendships not only serve as a foundation for developing intimacy with peers, but they also play an important role in shaping romantic relationships and their representations.

As hypothesized by behavioral systems theory, romantic representations were consistently predictive of subsequent levels of romantic representations. The consistent associations even when the intercepts were centered at Wave 7 are particularly noteworthy. Most adolescents' romantic experiences by Wave 1 (the 10th grade) are still in a relatively early stage, yet their representations at that time are predictive of representations 7.5 years later, despite the substantial changes in romantic relationships that occur during this developmental period. For example, adolescent romantic relationships are characterized in terms of companionship and social activities, whereas young adult romantic relationships are primarily described as trusting, supportive, mature, and emotionally close (Shulman & Kipnis, 2001). In effect, relationships become more serious, committed, and interdependent as youth grow older (see Furman & Winkles, 2012). Yet the representations that emerge from experiences in these early relationships are nonetheless linked to subsequent representations when relationships are likely to be more intimate and serious in nature.

Notably, these associations were observed even though we only included the scores for the romantic representations of participants who were no longer in the same relationship as they were in

Wave 1; indeed, 57% of participants reported having had a new relationship by Wave 2 and 79% by Wave 3. Like other measures of representations, our measures of working models are intended to reflect current states of minds regarding relationships, but these findings suggest that romantic representations are influenced by past experiences and not just current ones. In other words, representations of romantic relationships in general appear to reflect cumulative experience.

Given the changes in partners and the developmental changes in the nature of romantic relationships, it may seem surprising that adolescent romantic representations are predictive of romantic representations years later in early adulthood. Yet romantic representations are likely to be in a formative stage in adolescence and the early romantic experiences and representations that stem from them may play a particularly important role in shaping romantic representations. The continuity in representations of romantic relationships may also be because a person's different romantic relationships may share some similar properties with one another. After all, the person's interpersonal characteristics are likely to affect the nature of romantic relationships. Moreover, a person may be attracted to a certain kind of partner, which would also promote continuity in romantic representations.

Importantly, and consistent with behavioral systems theory, representations of each of these types of relationships were predictive of subsequent representations of romantic relationships in the vast majority of instances. These associations emerged even though the effects of the other types of relationships on subsequent representations of romantic relationships had been taken into account. The fact that all relationships provide unique contributions has important implications for explanations of these associations. Attachment theory predicts, and empirical research has shown, that early representations of parents influence subsequent representations of relationships (Bowlby, 1973, 1979). This study complements that work by demonstrating that representations are not fully fixed but are revised and updated by representations of and presumably experiences in other relationships. For example, representations in friendships accounted for unique variance in the prediction of subsequent romantic representations even after accounting for representations of relationships with romantic partners and parents. Similarly, representations of romantic relationships at Wave 1 accounted for unique variance in subsequent romantic relationships after accounting for representations of relationships with parents and friends.

Representations of the three types of relationships at Wave 1 were predictive of the subsequent romantic intercepts in most instances. These intercept effects are particularly interesting because the analyses had controlled for the corresponding romantic representations at Wave 1. Thus, the findings do not simply mean that the representations of relationships with parents, friends, and romantic relationships covary to some degree, but instead they mean that representations of relationships with parents and friends are predictive of *changes* in representations of romantic relationships. For example, if an individual had relatively avoidant representations of friendship at Wave 1, it may lead to a greater degree of avoidance in his/her romantic representations. In essence, the degree of avoidance in romantic representations is *recalibrated* to a new level. Moreover, in virtually all instances, the changes were sustained through Wave 7. Thus, prior representations may lead to relatively quick and enduring changes in the level of romantic representations.

In contrast, in only one instance were representations of relationships with parents, friends, and romantic partners predictive of the trajectory (slope) of the romantic representation growth curves from Waves 2 to Wave 7. The absence of slope effects is not surprising when we consider what could have led to slope effects. One potential way slope effects could have occurred is if the input of Wave 1 representations only had a temporary effect on romantic representations. If so, representations would have eventually reverted back to their prior level, and we would have seen a slope effect. The effects do not, however, seem to be transitory; indeed, the evidence of intercept effects at Wave 7 suggests the effects can be lasting. Another way slope effects could have occurred is if the process of recalibration of romantic representations on the basis of the input from the Wave 1 representations took longer than a year (the time between Wave 1 and Wave 2). If so, romantic representations would still be changing to take into account the Wave 1 representations, and we would have seen a slope effect. But it seems quite reasonable that the input from representations of other relationships can be incorporated into romantic representations within a year and the process of recalibration completed. To be clear, we are not saying that recalibration only occurs between Wave 1 and Wave 2; we are simply saying that the recalibration that occurs on the basis of the input from Wave 1 representations occurs between Wave 1 and Wave 2. Representations are likely to continue to change and be recalibrated

across development, but the nature of that change is determined by relationship experiences that occur subsequent to Wave 2. If we had assessed representations of other relationships at Wave 2 or later, we expect that we could have predicted subsequent changes in representations. In sum, the changes related to the representations of relationships at Wave 1 appear to occur within a year, and romantic representations do not appear to revert back to their original levels. Thus, the pattern of enduring changes in level (intercepts) but few trajectory (slope) effects is quite consistent with both attachment theory and behavioral systems theory.

Much of the theoretical and empirical literature has focused on how experiences or representations in early childhood are related to adults' representations of romantic relationships. Some work, including this study, shows that representations of relationships with parents, friends, and romantic partners in adolescence are related to subsequent representations of romantic relationships. Moreover, the findings suggest that the subsequent developmental course of romantic representations is also determined by relationship experiences and representations of close relationships that emerge later in adulthood. In effect, a comprehensive account of the evolution of romantic relationships and their representations requires taking into account influences in childhood, adolescence, and adulthood.

The same interview approach was used for assessing working models at each time point and of each type of relationship, and the same self-report questionnaire method was used for assessing styles at each time point and of each type of relationship. Although method variance could account for the associations between representations of different relationships at Wave 1 when we used the same type of measure (see Table 1), those associations are not the focus of this study. Instead, the focus is on the associations between the Wave 1 predictors and the subsequent romantic growth curve from Wave 2 to Wave 7. A method variance explanation cannot account for those findings. For example, it cannot explain why representations of parent-child relationships are predictive of *changes* in romantic representations. Any shared method variance between the parent-child relationships and the romantic representation growth curve from Wave 2 to Wave 7 would have been taken into account by controlling for the romantic representations at Wave 1. By the same logic, method variance cannot account for the findings that representations of friendships are predictive of *changes* in romantic representations.

Moreover, if the findings only reflected shared method variance, only the variance shared by the representations of different types of relationships should have been predictive, and representations of each type of relationship should not have provided unique contributions to the prediction of the intercepts of the romantic relationship growth curve from Wave 2 to Wave 7. Yet they did in virtually all instances. Finally, the fact that similar associations were found for working models and styles also suggests that the findings are not simply a function of shared method variance.

On a related note, the similarity of results for the styles and working model variables are particularly interesting in light of the fact that the two types of representations were not very related to each other. Such findings are consistent with the idea that both interview measures of working models and self-report measures of styles provide theoretically consistent valid assessments of representations of relationships (see Crowell et al., 2008). The similarities in findings also underscore the robustness of the results.

Limitations and Future Directions

This study addressed several important methodological limitations of the existing literature. Most research examining the links between representations of different relationships has been cross-sectional or only examined the associations between two points. By examining the growth curve of romantic representations over six points in time from adolescence into young adulthood, we obtained a more reliable index of the trajectory of such representations; thus, we were better able to assess the developmental patterns of these associations. At the same time, the study is still not an experimental one and firm causal inferences cannot be made.

Moreover, we only examined all three types of relationships at Wave 1, when the participants were in the 10th grade. Further research should examine whether the associations were stronger or weaker with representations if other relationships were assessed at other points in development. More generally, future work examining the associations among all three types of relationships over time would provide an important extension to this study.

Moreover, with few exceptions (e.g., Stocker & Richmond, 2007), parent-child relationship variables have been assessed at earlier ages than friendship variables in studies predicting romantic

relationships or representations. As a consequence, it is not possible to determine whether differences in the predictive power of relationships with parents and friends stem from the type of relationship considered or the time that the relationship was assessed. Early relationships could be more influential if they serve as prototypes for subsequent relationships; however, more recent relationships could be more influential as they may be more similar to later relationships or because less time has lapsed. By examining all three types of representations simultaneously in Wave 1, this study avoided confounding time of assessment and type of relationship. However, neither past research nor this study can fully determine whether representations of relationships with parents directly predicted subsequent representations of romantic relationships or whether representations of friendships may have completely or partially mediated the links between relationships with parents and romantic partners. An evaluation of such potential mediation would require that the hypothesized predictor, mediator, and outcome all be assessed at three different time points (see Cole & Maxwell, 2003).

We found clear evidence of longitudinal links between representations of different types of relationships and subsequent romantic representations, but we do not mean to suggest that such associations are unilateral in direction. Indeed, an important direction for subsequent research would be to determine if romantic representations are predictive of subsequent representations of relationships with parents and friends. Another important direction would be to identify factors that may moderate the magnitude of associations among representations of different types of relationships. For example, the continuity of representations may be greater for individuals with similar experiences in different relationships.

In this study we examined the associations between representations of types of relationships (rather than representations of individual relationships) because we expected representations of types of relationships to better reflect individuals' current integration of their cumulative experiences in that kind of relationships. Thus, such representations would theoretically be more likely to contribute to the development of subsequent representations of romantic relationships. It would also be of interest to see how representations of specific relationships were predictive of romantic relationships (e.g., mothers or fathers or a particular romantic partner, see Doyle et al., 2009).

In addition, we focused on the links for avoidant and anxious representations. As part of the

interview coding, raters also categorized individuals as being unresolved or disorganized with regard to death, trauma, or break-ups. Only 7% of the participants were categorized as being unresolved in one of the Wave 1 interviews; unfortunately, even using continuous-scale scores of being unresolved or disorganized, the limited variability in scores precluded an appropriate assessment of the predictive significance of such representations.

Finally, we were unable to determine our ascertainment rate because of our recruiting procedure. The sample was comparable to national norms on intelligence, substance use, and internalizing and externalizing symptoms. However, mothers' average level of education was higher than national norms, indicating that the sample was predominately middle or upper middle class. Thus, it is likely that the sample would differ from representative samples on other variables associated with socioeconomic status; it is also likely to vary on other variables that we either did not measure or do not have normative information available to make comparisons with. On a related note, we also did not have a sufficient number of participants from specific ethnic or racial minority groups to determine if the findings were applicable to specific groups.

These limitations notwithstanding, this study is the first to our knowledge to simultaneously examine the role of parents, friends, and romantic partners in shaping subsequent representations of romantic relationships developmentally. The findings suggest that adolescents and young adults' expectations and beliefs about romantic relationships do not simply reflect their experiences with their current partner. Instead, these past representations of and experiences in relationships with parents, friends, and romantic partners are carried forward into present representations.

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