

# Adolescents' Attachment Representations and Their Capacity for Intimacy in Close Relationships

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*A secure state of mind with regard to attachment, as assessed by the Adult Attachment Interview (AAI), as well as attachment styles as assessed by questionnaires (the two most prevalent facets of attachment representations assessed in adolescence and adulthood) were examined as potential contributors to adolescents' capacity for intimacy. Eighty male Israeli adolescents were administered the two measures and reported on their impulsiveness during their senior year of high school. Four years later, at the end of their mandatory military service, they were interviewed regarding their capacity for intimacy, and they filled out questionnaires. State of mind with regard to attachment and attachment styles uniquely predicted capacity for romantic intimacy and affective relationships with friends. Impulsiveness interacted with attachment security (benefiting dismissing and avoidant participants, and hampering secure ones) in predicting romantic intimacy. The discussion underscores the distinctiveness and importance of different facets of attachment representations to close relationships with peers.*

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modeled after Hazan and Shaver (1987), are the two most prevalent facets of attachment representations identified in adolescence and adulthood. Both originated in different research paradigms, assess attachment representations in a different context, parental and romantic, respectively, and are considered conducive to better interpersonal functioning. In particular, each has proven implicated in the capacity for intimate and close relationships with friends and romantic partners (e.g., Fraley & Shaver, 2000; Shaver & Mikulincer, 2002; Thompson, 1999). In this study we investigated longitudinally the contributions of these two facets of attachment representations to adolescents' capacity for intimacy, and explored in addition the moderating role of temperament.

During late adolescence and emerging adulthood adolescents are expected to expand their relationships' network (Collins, Gleason, & Sesma, 1997) and further develop their capacity for mature intimacy with peers (friends and romantic partners) as these relationships become more central in their affective world (Allen & Land, 1999). Intimate relationships evince trust, self-disclosure, and concern (Collins & Sroufe, 1999; Orlofsky, 1993). Mature intimacy also involves the capacity for autonomy, individuality, and separateness within the relationship (Shulman, Laursen, Kalman, & Karpovsky, 1997).

Attachment theory posits that experiences in close relationships, particularly with caregivers during childhood, and the attachment representations thereby formed affect the capacity to form intimate relationships with others. Representations of major aspects of attachment relationships with caregivers are internalized to form an internal working model, which then guides the interpretation and planning of interpersonal transactions with other significant others, and affects the formation and quality of new relationships (e.g., Bretherton & Munholland, 1999). Cassidy (2001) discussed four key abilities necessary for the development of the capacity for intimacy: the ability to seek care, to give care, to feel comfortable with an autonomous self, and to negotiate. In each of these realms adolescents having secure attachment representations, will probably enjoy an advantage over others (Allen & Land, 1999; Collins & Sroufe, 1999). This advantage might also be manifested in their capacity to form and maintain close and trusting relationships with friends and romantic partners (Furman, Simon, Shaffer, & Bouchey, 2002).

### **State of Mind with Respect to Attachment**

State of mind with respect to attachment is assessed by the AAI, which was developed in the context of developmental psychology (Main &

Goldwyn, 1998) and probes for global descriptions of past attachment-related experiences as well as specific biographical events (mostly with parents). Adults with a secure (autonomous) internal representation have somewhat easier access to past experiences, positive or negative, which they tend to describe openly and coherently. Insecure adults do not access past experiences easily, or they describe them incoherently. Specifically, dismissing adults tend to restrict the importance of attachment in their own lives, or to idealize their parents without being able to illustrate their positive evaluations with concrete evidence. Preoccupied adults are still greatly involved in and preoccupied with their past attachment experiences, and may express passivity or anger when describing current attachment relationships with their parents. A fourth category was proposed for people who are unresolved with respect to loss or trauma. Such individuals are also placed in one of the other three major categories as a forced categorization.

An autonomous state of mind was associated with exhibiting less disruptive behaviors toward a friend (Zimmermann, 2004; Zimmermann, Maier, Winter, & Grossmann, 2001), and security in the relationships as evinced in an interview modeled on the AAI to assess working models (representations) of friendships (Furman et al., 2002).

In the realm of romantic relationships, adults' and adolescents' autonomous attachment representations were related to ratings of more positive dyadic processes during an observed interaction with the romantic partner (Bouthillier, Julien, Dube, Belanger, & Hamelin, 2002; Cohn, Silver, Cowan, Cowan, & Pearson, 1992; Crowell, Treboux, Gao, Fyffe, Pan, & Waters, 2002; Roisman, Madsen, Hennighausen, Sroufe, & Collins, 2001). Also, autonomous attachment representations were associated with interview-based secure representations of relationships with romantic partners in one large study with young adult couples in committed relationships (Crowell, Fraley, & Shaver, 1999; Crowell, Treboux, & Waters, 2002) but not in another with high-school seniors (Furman et al., 2002). The findings of the two studies might have differed because attachment is less likely to be activated in romantic relationships in adolescence than in young adulthood. Finally, AAI classifications longitudinally predicted the capacity for intimacy (Scharf, Mayseless, & Kivenson-Baron, 2004) and feelings of intimacy but did not predict other aspects of the couple's relationships such as commitment, satisfaction, and passion (Cohn et al., 1992; Crowell, Treboux, & Waters, 2002). Altogether, these studies demonstrated that state of mind with regard to attachment has ramifications for close relationships with friends and romantic partner, and that autonomous state of mind is associated, as expected, with positive markers (particularly intimacy) of the relationships.

## Attachment Styles

The construct and assessment of attachment styles were developed in the context of social psychology. Attachment styles are assessed by various questionnaires modeled after Hazan and Shaver (1987), who suggested that adult romantic relationships include an attachment component and proposed a classification of romantic attachment patterns similar to the three main attachment classifications identified in infancy. Secure adults evinced low anxiety over abandonment and high comfort with dependency and closeness. Avoidant adults reported low anxiety over abandonment but low comfort with dependency and closeness. Ambivalent adults reported high anxiety over abandonment and intermediate levels of comfort with dependency and closeness.

With regard to friendships, secure attachment style was associated with smoother interactions between same-sex adolescent friends that promoted a sense of connection (Weimer, Kerns, & Oldenburg, 2004). In addition a secure attachment style was associated with greater relationship satisfaction, greater use of prosocial maintenance strategies, and prosocial conflict resolution styles as reported by close friends (Bippus & Rollin, 2003). Further, a secure attachment style was associated with reports of higher self-disclosure (e.g., Mayseless, 1993), responsiveness to partner's disclosure, and feeling validated and understood in the friendship; however, observations of intimate communication provided only limited support for this reported association (Grabill & Kerns, 2000).

As for romantic relationships, a large number of studies with samples of late adolescents or young adults (see review papers by Feeney, 1999; Fraley & Shaver, 2000; Shaver & Mikulincer, 2002) consistently found that secure individuals had more trusting attitudes and higher levels of satisfaction and intimacy in their romantic relationships, as reported by them and by their partners through questionnaires and interviews (e.g., Mikulincer & Erev, 1991). Ambivalent individuals, on the other hand, expressed the highest degrees of dependence, jealousy, and obsessive preoccupation with the love partner, and the lowest levels of satisfaction in their romantic relationships (e.g., Collins & Read, 1994; Mayseless, Sharabany, & Sagi, 1997). Finally, avoidant individuals evinced more mistrust and less intimacy in romantic relationships than others, as reported and observed concurrently (Guerrero, 1996) and longitudinally (Collins, Cooper, Albino, & Allard, 2002).

In sum, secure attachment style was associated with higher intimacy in romantic relationships and in friendships, whereas insecure attachment, in particular avoidance, was associated with lower levels of closeness and intimacy in these relationships.

### **Unique Contribution of State of Mind with Respect to Attachment and Attachment Styles to Quality of Close Relationships**

Attachment styles and state of mind with respect to attachment both assess attachment representations and refer to the same construct, the internal working attachment model. This is described as a complex of interrelated components, including different beliefs and attitudes, autobiographical memories, goals and motives, rules for affect and behavior regulation, and behavioral strategies (Bretherton & Munholland, 1999; Collins & Read, 1994; Kobak & Sceery, 1988). Attachment styles and state of mind with respect to attachment seem to assess somewhat different facets of a person's attachment internal working model. First, state of mind with respect to attachment as measured by the AAI seems to tap a more global and general model regarding attachment as it relates to general ways of accessing and processing attachment-related information. The self-report attachment styles seem to assess somewhat more specific attitudes, feelings, and beliefs. Second, state of mind with respect to attachment assesses a person's less conscious aspects of the internal working model while attachment styles tap aspects known to the person that he/she chooses to share with the researcher. (However, despite their conscious origin attachment styles have been experimentally linked to intrapsychic, unconscious affect regulation processes as well; see Shaver & Mikulincer, 2002.) The two likewise focus on different domains of relationships. State of mind with respect to attachment assesses the adult's current state of mind concerning relations with parents during childhood; attachment styles have been applied to assess romantic relationships or relations with other close adults. In this respect attachment styles that focus on close relationships in general seem to tap a less specific model than state of mind with respect to attachment that is based on narrative regarding relations with parents.

Several studies indeed yielded only low (if any) association between the two measures. de Hass, Bakermans-Kranenburg, and van IJzendoorn (1994) studied 83 mothers, and Mayseless and Sagi (1994) examined 60 college students; neither study found any significant association between the AAI attachment classifications and the attachment-styles ratings. In 53 married women, Crowell, Treboux, and Waters (1999) found only a trend toward a relation between the AAI categories and classifications based on an attachment questionnaire. Eighty-one percent of autonomous women described themselves as secure in the questionnaire, whereas 42% of non-autonomous women identified themselves as insecure. The attachment style scales correlated moderately, yet consistently, with the AAI scales regarding experiences with parents, but were mostly nonsignificantly

correlated with the scales regarding state of mind. Finally, Shaver, Belsky, and Brennan (2000), with a larger sample of 138 women, found moderate correlations between some of the specific scales of the two measures. Even when interviews similar to the AAI were used to assess internal working models of friendships and romantic relationships, only very small association between corresponding internal working models and relational styles (e.g., internal working models and relational style of romantic relationships) was found (Furman et al., 2002). Thus, empirical findings seem to corroborate the conceptual distinctiveness of state of mind with respect to attachment and attachment styles as two distinct constructs/facets of the attachment internal working model.

Recent discussions advocate furthering our understanding when and how these different facets of the working model affect attachment-related manifestations in adult relationships (e.g., Bartholomew & Moretti, 2002; Jacobvitz, Curran, & Moller, 2002). Simpson, Rholes, Orinea, and Grich (2002) showed that state of mind with respect to attachment and attachment styles independently predicted women's videotaped spontaneous provision of support to their romantic partners in a stressful situation. By contrast, Bouthillier et al. (2002) found that only state of mind with respect to attachment predicted emotion-regulation behaviors of couples videotaped when engaged in a problem-solving discussion. More studies involving assessments of the two facets of attachment representations are clearly needed for a better understanding of the unique aspects assessed by each. This research took that approach, and probed the joint and unique contribution of these facets in predicting the capacity for intimacy in late adolescence. We expected each to make a unique contribution to late adolescents' capacity for intimacy in romantic relationships and in friendships.

We used a longitudinal design with a sample of adolescent Israeli males who leave their parents' home for 3 years' mandatory military service. A large number of studies indicated that females experience more intimacy than males in their close relationships (Buhrmester, 1996; Maccoby, 1990) and are more expressive and intimate, focusing more on emotional sharing, than males (Belle, 1989; Blyth & Foster-Clark, 1987). It has been argued that women are socialized to place high importance on interdependence, while men value independence and competition (Vangelisti & Daly, 1997). Buhrmester (1996) suggested that both genders form strong connections with others of the same sex, but males' friendships are more extensively focused on agentic concerns whereas females' friendships focus more on communal concerns. Thus intimacy is a more salient characteristic of females' friendships, and females also report higher intimacy than males in their romantic relationships (Berndt, 1982; Feiring, 1996). Accordingly, the

examination of the role of attachment representations in the development of the capacity for intimacy of males might prove especially challenging and revealing. Furthermore, we assessed the development of the capacity for intimacy when these young men were engaged in mandatory military service. The military context may limit opportunities to invest in close relationships, especially romantic ones. Furloughs are infrequent, and many units, in particular combat ones, are composed mostly of young men. Hence the contribution of attachment representations to the capacity for intimacy, especially romantic intimacy, may not be large.

### **Role of Temperament**

This study also examined the role of temperament, particularly impulsiveness, in the development of the capacity for intimacy. Historically, temperament has been implicated as a possible contributor to attachment security or as an antecedent of the type of insecurity that a child will develop (for a literature review see Vaughn & Bost, 1999). A series of studies exploring this question only partially substantiated such an association (for a recent review see Mangelsdorf & Frosch, 2000). Still, temperament, in particular impulsiveness, may interact with attachment security in revealing different profiles of outcomes (Burgess, Marshall, Rubin, & Fox, 2003; van-der Mark, van IJzendoorn, & Bakermans-Kranenburg, 2002). Impulsiveness is exhibited in an individual's tendency to act or react quickly without much reflection, and it involves lower capacity to regulate emotions and behaviors. Higher self-regulation (i.e., lower level of impulsivity) has been associated with better social skills and empathy in school-age children concurrently and longitudinally (Paterson & Sanson, 1999; Prior, Smart, Sanson, & Oberklaid, 2000). We could similarly expect this temperamental dimension to be implicated in the functioning of late adolescents in the specific prosocial domain of intimacy.

In general, in line with the discussions of Sanson, Hemphill, and Smart (2004) such temperamental quality may hamper the formation of intimate relationships with friends and romantic partners because it conflicts with the need to act in a reflective manner when paying attention to a partner's needs and emotional states—a major aspect of the capacity for intimate communications (Collins & Sroufe, 1999). Thus, with secure and preoccupied individuals we would expect temperament to hinder the development of intimacy. However, with dismissing and avoidant individuals temperamental impulsiveness may work somewhat differently. Such individuals inhibit their emotional arousal in attachment-related situations and deactivate their perception and display of emotional cues of distress

(Cassidy, 1994). To be able effectively to activate control of one's emotional and behavioral reactions, a high level of self-regulation must be maintained. Impulsiveness as a temperamental dimension hampers the capacity to maintain such self-regulation. Emotions or behaviors such as neediness, love, and seeking contact and proximity may "leak," working against the tendency of avoidant or dismissing individuals to keep distant and aloof in close relationships. These somewhat less controlled displays of emotions and behaviors may actually help them contact other adults whom they might have otherwise avoided altogether. Further they may even aid in promoting more mutual disclosure and physical closeness. For example, the prototypical dismissing adolescent, who might never show his partner that he cares even when he sees his partner after a long trip, may "leak" such information because of his less controlled emotional reaction. This display may contribute to higher levels of disclosure and intimacy within the dyad compared with the situation where no such "leak" of care was displayed.

In sum, we hypothesized that both attachment styles and state of mind would uniquely contribute to the development of the capacity for intimacy in friendships and in romantic relationships. In addition, we expected impulsiveness to interact with attachment, hampering the capacity for intimacy for secure (autonomous) individuals and promoting the capacity for intimacy for avoidant or dismissing individuals.

## METHOD

### Sample

The study reported here is part of a longitudinal project examining parent-son relationships in Israel during late adolescence and young adulthood as the young men (18-year-olds) leave their parents' home for 3 years' mandatory service in the Israel Defense Forces (IDF). Only adolescent males participated.

Participants were recruited from published lists of high-school seniors in metropolitan middle-class neighborhoods in Israel. All families with an adolescent son on these lists, which covered all the high schools in these neighborhoods, were informed of the research by mail and then by phone. Families that met the research requirements were asked for their cooperation. These requirements were their being intact families that had not immigrated recently to Israel (i.e., families for whom life had been fairly stable) so as to avoid diverse sources of variation. This constraint did not result in a highly skewed sample because divorce rates in Israel are much lower than in the United States (8.5% according to the Central Bureau of

Statistics, 1996) and because in these neighborhoods new immigrants comprise only 5% of the population (Central Bureau of Statistics, 1996). The active consent of all three family members concerned (father, mother, son) was required for inclusion in the larger research project. This study focused only on data from the adolescents' reports.

The final sample originally included 88 families, which reflected consent by 41% of those eligible. In line with the prevailing characteristics of their middle-class neighborhoods, the sample families were primarily well-educated (80% of the fathers and 74% of the mothers had at least a college education), 70% were of Western origin—Europe and North America, and their living quarters were of moderately low density (.98 person per room). These characteristics (academic education, Western origin) are similar to those of middle-class families in Israel (Central Bureau of Statistics, 1996).

At the time of the first assessment adolescents' ages ranged from 17 to 18 years. The number of children in these families varied between two and five, with a mean of 2.93 ( $SD = .74$ ). About a third of the adolescents (37%) were first-born children. About 70% of the families described themselves as secular, the remainder as upholding the Jewish religious tradition but not in an orthodox manner. None of these background variables was associated with the variables assessed in this study.

## Procedure

The adolescents were interviewed (AAI) during their senior high-school year, approximately a year before their conscription, and filled out questionnaires (Time 1—late adolescence assessment). Toward the end of the participants' 3-year mandatory military service (Time 2—emerging adulthood assessment) 80 of them were interviewed, during a furlough, about their intimacy status and 74 of them filled out questionnaires regarding their psychosocial functioning. There was no significant difference on any of the attachment variables or on impulsiveness between participants who were interviewed or filled out questionnaires at both times and those who were able to participate only at Time 1.

## Measures

*Time 1—late adolescence assessment. Attachment assessment.* The AAI (Main & Goldwyn, 1998) is a structured interview designed to arouse memories and emotions regarding attachment experiences. Participants were requested to give a general description of their relationships with

their parents, supported by specific biographical incidents. They were asked to explain their parents' behavior, to describe the nature of their current relationship with their parents, and to assess the influence of childhood experiences on their development and personality. Minor changes were made in the original interview's closing questions, which enquire about the subject's own children. Instead, the adolescents were asked to imagine how they would feel and behave if and when they became parents themselves.

The AAI coding is based on the participant's reflections and evaluations, and groups transcripts according to state of mind: *insecure-dismissing*, *insecure-preoccupied*, *secure-autonomous*, and *unresolved by trauma or loss* (Main & Goldwyn, 1998). The interviews were audiotaped and transcribed verbatim. The second author and another person, both reliable AAI coders, analyzed 21 transcripts identified by number only. Interrater reliability was 95% ( $\kappa = .90$ ). Coders' disagreements were resolved by conference.

The *Attachment Style Questionnaire* is based on Hazan and Shaver's (1987) descriptions of how people typically feel in close relationships. It was employed in this study to assess the adolescents' attachment styles. Participants rated the extent to which each of the 15 statements (Hebrew version: Mikulincer & Nachshon, 1991) applied to them in their close relationships with others on a seven-point scale ranging from not at all (1) to very much (7). This version asked about close relationships in general. Three scales were constructed: secure style ("I find it relatively easy to get close to others"); avoidant style ("I am somewhat uncomfortable being close to others"), and ambivalent style ("I find that others are reluctant to get as close as I would like"). Internal reliabilities were .61, .66, and .62, respectively. The present internal consistencies of the scales are only moderate but the magnitude resembles the internal consistencies obtained with these scales in other studies (e.g., Collins & Read, 1990; Mikulincer & Nachshon, 1991). In a previous study using the same questionnaire these attachment scales were found to correlate with respondent's own and respondent's spouse's feelings of love, friendship, jealousy, and marital satisfaction (Mayseless, 1995). Further, mothers' attachment style correlated, as expected, with the Strange Situation reunion scales of those mothers' infants, and with intimacy with their husbands (Mayseless et al., 1997). Finally, despite their moderate internal reliability Shaver and Mikulincer (2002) reported extensive findings validating these styles (e.g., using reports by others, observations, and subliminal perceptions).

*Impulsiveness.* The eight-item impulsiveness scale from the *Weinberger Adjustment Inventory* (WAI; Feldman & Weinberger, 1994) was employed to assess this construct (e.g., "I say the first thing that comes into my mind

without thinking enough about it") using a five-point scale (Cronbach's  $\alpha = .74$ ). For convergent and discriminant validity using parent, teacher, and peer ratings see Weinberger (1996) and for concurrent and predictive validity with a variety of cross-sectional and longitudinal studies see Weinberger and Gomes (1995). Seven-month test-retest correlations was .76 ( $N = 337$ ).

*Time 2—emerging adulthood assessment.* Participants' capacity to forge mature intimacy with friends and romantic partners was assessed by means of an interview and a questionnaire. Participants were also asked to indicate whether or not they had experienced various stressful events since the previous assessment. Number of stressful events experienced was not directly associated with any of the outcomes assessed in this study, nor did it moderate any of the effects.

*Close relationships with peers.* The *Affective Relationships Scale* (Takahashi & Nagima, 1994) assesses attachment-related affective and behavioral qualities in close relationships which reflect the level of intimacy and closeness in them. Participants (now emerging adults) rated on a five-point scale how far each statement characterized their relationship with friends and romantic partner, if they had one (12 items, e.g., "When I receive bad news I want to be with X"). Only 26 respondents had a romantic partner at the time when the questionnaire was completed. Cronbach's  $\alpha$  was .87 and .87, respectively.

*Intimacy Status Interview* (Orlofsky, 1993; Orlofsky & Roades, 1993) is a semistructured interview lasting 60–90 minutes designed to examine individuals' interpersonal attitudes and behavior and their capacity for intimacy in friendships and romantic relationships (all but one reported heterosexual romantic relationships). Participants were asked about emotional closeness, conflict resolution, involvement and autonomy, satisfaction, and commitment in their relationships with friends and with past and/or current romantic partners. The interview assesses the capacity for intimacy based on past and present relationships *even if the respondent does not have a current romantic relationship* and capture optimal ability and not necessarily current characteristics. For example, with regard to self-disclosure the rater assesses the extent to which such disclosure was apparent based on the quality of the relationships, even past ones, at their peak. Further, the highest or best quality exhibited was coded whether displayed currently or in previous relationship so as to reflect the interviewee's capacity rather than the quality of his current relationship. The interviews were audiotaped, and rated according to the manual (Orlofsky & Roades, 1993) by two raters using several scales, all ranging from 1 (the low end of the scale) to 5 (the high end). Interviews were identified by code

numbers and raters were blind to AAI classifications, attachment styles, and temperament ratings. For each interview the same rater coded the two parts of the interview (friendship and romantic). To establish reliability, 25 interviews were coded by both raters. Two dimensions of the capacity for intimacy were closeness and separateness. *Closeness* was assessed on four scales: *Intrapersonal self-disclosure*: confiding and sharing of personal worries, problems, and other personal matters; *Interpersonal disclosure*: sharing openly positive and negative feelings regarding the relationship; *Caring and affection*: genuine caring for the partner; and *Knowing partner's characteristics*. Interrater reliabilities were .94, .97, .94, and .91, respectively for romantic relationships and .93, .92, .83, and .91 for friendship relationships. A composite closeness scale was constructed by averaging across the four scales (Cronbach's  $\alpha = .96$  in romantic relationships and .91 in close friendship).

*Separateness* was assessed by three rating scales: *Maintenance of own interests*: maintaining own interests while caring for partner's needs and wishes; *Acceptance of partner's separateness*: encouraging and valuing partner's autonomy; *perspective taking*: capacity to perceive and appreciate partner's perspective. Interrater reliabilities were .76, .73, and .93, respectively for romantic relationships and .63, .77, and .93 for friendships. A composite separateness scale was constructed by averaging across the three scales (Cronbach's  $\alpha = .77$  in romantic relationships and .80 in friendships). Because correlations between closeness and separateness for each type of relationship were high ( $r = \sim .75$ ) we averaged across the two scales to construct one composite scale for each relationship, reflecting the general capacity for intimacy in romantic relationships and in friendships.

Regarding romantic intimacy, participants were also classified into one of seven intimacy statuses (Orlofsky & Roades, 1993) representing two main categories:

- (1) *Low capability for intimacy*, which included the following. *Isolates*, who had had no close relationship with a partner; *Stereotypes*, who lacked open communication and emotional closeness in their relationships and had not established any long-term commitment; *Pseudo-intimate* participants, who lacked closeness in their relationships yet had established a long-term commitment; *Mergers/committed* and *Mergers/uncommitted*, who had established long-term relationships characterized by high involvement to the point of enmeshment and by low levels of separateness with different degrees of commitment.
- (2) *High capability for intimacy*, which included: *Pre-intimates*, who had had relationships characterized by open communication,

affection, care, and respect for the other's preferences, and autonomy, yet had had low level of commitment in their relationship; and *Intimate* participants, who had had the same qualities in their relationship but had also made a commitment to continue in the relationship.

There was 100% agreement on the statuses between the two raters on the 25 interviews coded by both of them. Information regarding the validity of the interviews is provided by Orlofsky and Roades (1993) and other studies (e.g., Dresner & Grolnick, 1996; Prager, 1991).

## RESULTS

Assessment of the participants' state of mind with regard to attachment resulted in 41 participants being classified autonomous (51%), 34 dismissing (42.5%), and five preoccupied (6.25%). None of the participants was classified unresolved. Because only five participants evinced a preoccupied state of mind, and because preoccupied and dismissing individuals might be expected to have different psychosocial trajectories especially regarding intimacy (Allen & Land, 1999), we focused on the differences between autonomous and dismissing adolescents. There were no differences between adolescents with autonomous state of mind and dismissing adolescents in the levels of security, avoidance, and ambivalent styles (see Table 1 for means and *SD*).

### Association of Attachment, Impulsiveness, and Intimacy

As expected (see Table 1), *t*-tests showed that autonomous participants revealed higher levels of capacity for intimacy than dismissing participants in friendships ( $t[73] = 2.97, p < .01$ ) and in romantic relationships ( $t[73] = 2.22, p < .05$ ), as well as higher levels of affective relationships with best friend ( $t[67] = 1.81, p < .10$ ) and romantic partner ( $t[20] = 2.32, p < .01$ ).

Pearson's correlations between attachment style scales and intimacy variables (see Table 2) showed that secure attachment style was positively related to capacity for romantic intimacy and affective relationships with best friend, whereas avoidant style was negatively related to these variables. None of the attachment styles' scales was significantly associated with capacity for intimacy in friendships. Finally, ambivalent style was not significantly related to the intimacy variables.

TABLE 1  
Comparing Autonomous and Dismissing Adolescents on Attachment Styles and Intimacy Indicators (Means, SD)

	<i>Adult Attachment Interview Categories</i>	
	<i>Autonomous Mean (SD)</i>	<i>Dismissing Mean (SD)</i>
Attachment styles		
Secure attachment style	3.67 (.72)	3.69 (.61)
Avoidant attachment style	2.36 (.66)	2.28 (.52)
Ambivalent attachment style	2.53 (.62)	2.48 (.71)
Capacity for intimacy (interview)		
Romantic relationship	3.33 (.84)	2.91 (.81)
Friendship	3.40 (.62)	2.98 (.61)
Affective relationships (questionnaires)		
Romantic relationship	4.79 (.23)	4.48 (.39)
Friendship	4.41 (.47)	4.19 (.54)

We further wanted to examine whether participants with current romantic partner differed from others. MANOVA conducted regarding attachment styles was significant ( $F[3, 76] = 4.71, p < .01$ ). Post hoc ANOVAs showed that participants who had romantic partners at the time of the assessment exhibited higher levels than others of secure style ( $M = 3.55, SD = .65$  versus  $M = 4.01, SD = .53; F[1, 79] = 11.99, p < .01$ ) and lower levels of avoidant style ( $M = 2.48, SD = .57$  versus  $M = 1.99, SD = .58; F[1, 79] = 10.44, p < .01$ ). Furthermore, participants who had current romantic partners evinced higher capacity for romantic intimacy

TABLE 2  
The Association Between Attachment Style Scales, Intimacy, and Impulsiveness

	<i>Capacity for Intimacy—In Friendship (N = 80)</i>	<i>Capacity for Romantic Intimacy (N = 80)</i>	<i>Affective Relationships—Friend (N = 74)</i>	<i>Affective Relationships—Romantic (N = 26)</i>	<i>Impulsiveness (N = 80)</i>
Security	.21	.33**	.25*	.15	-.11
Avoidance	-.15	-.34**	-.28*	-.39*	.23*
Ambivalence	.21	.09	.08	-.23	.22*

Note. \* $p < .05$ ; \*\* $p < .01$ .

than those who did not ( $t[78] = 3.69, M = 3.54, SD = .73$  and  $M = 2.87, SD = .91$ , respectively).

We also explored the association between length of the relationship and intimacy indicators. For romantic relationships, the longest reported relationship was counted even if it was not current. For friendships, length of the relationship with the current closest friend was considered. Length of friendships ranged from 18 months (a year and a half) to 228 months (19 years), with a mean of 93 months ( $SD = 50$ ; median = 84 months). Namely more than 75% of the participants reported friendships that had started before their military service. Length of romantic relationships ranged from 1 month to 60 months (5 years) with a mean of 17 months ( $SD = 16$ ; median = 10 months). Sixty percent of the participants reported a relationship that endured between 4 and 18 months, and 12% reported a romantic relationship that began before their conscription. Length of relationship and timing (before or after the conscription) was not significantly associated with intimacy indicators or with attachment representations (i.e., AAI and attachment styles) nor did it moderate the association between attachment and intimacy.

Finally, because of the possibility that the military context limited the opportunities to socialize and develop intimate relationships we explored the association between frequency of furloughs and intimacy indicators. In general about 15% of the participants came home a few times a week, about 70% once a week or once in 2 weeks for a weekend, and the rest had even fewer furloughs. There was no significant association between frequency of furloughs and indicators of intimacy nor did it moderate the association between attachment and intimacy. None of the associations between impulsiveness and the intimacy indicators or AAI categorization was significant. However, impulsiveness was significantly and positively associated with ambivalent and avoidant attachment styles (see Table 2).

Table 3 shows the distribution of the different romantic intimacy statuses among adolescents with autonomous, dismissing, and preoccupied

TABLE 3  
Distribution of Intimacy Statuses Among Different Adult Attachment Interview (AAI) Attachment Categories

	<i>Stereotype</i>	<i>Pseudo-Intimate</i>	<i>Merger no Commitment</i>	<i>Merger Commitment</i>	<i>Pre-Intimate</i>	<i>Intimate</i>
Autonomous	17	1		1	14	8
Dismissing	21	1	1		9	2
Preoccupied	2	1			2	
Total	40	3	1	1	25	10

state of mind (the preoccupied group is presented for a general impression only; it was not included in the statistical analyses). As seen in Table 3, the *high capability for romantic intimacy* group (pre-intimate and intimate statuses) consisted of 22 autonomous and 11 dismissing participants. The *low capability for romantic intimacy* group (all other statuses) consisted of 19 autonomous and 23 dismissing participants. Chi square analyses demonstrated correspondence between state of mind and intimacy status ( $\chi^2[1, 76] = 3.42, p < .05$ ). However, a substantial number of autonomous adolescents were categorized into statuses characterized by low levels of capacity for intimacy. Similarly, a large minorities of dismissing adolescents were categorized into statuses reflecting high levels of capacity for intimacy.

To explore the possible moderating role of temperament we examined differences in these groups on impulsiveness. As expected, autonomous participants with high capacity for intimacy reported lower levels of impulsiveness than did those with low capacity for intimacy ( $t[40] = 2.50, p < .05; M = 2.39, SD = .68$  and  $M = 2.93, SD = .72$ , respectively). Further, also as expected dismissing participants with high capacity for intimacy were higher than the others on impulsiveness ( $t[33] = 3.07, p < .01; M = 3.00, SD = .53$ ; and  $M = 2.31, SD = .66$ , respectively).

### Prediction of Intimacy

To examine the contribution of attachment state of mind, attachment styles, and impulsiveness to intimacy, we performed hierarchical regression analyses with three of the outcome variables that we assessed: capacity for romantic intimacy, capacity for intimacy in friendships, and affective relationships with friends. The group of participants who completed the affective relationships questionnaire with regard to a romantic partner was too small for a regression analysis. Impulsiveness was entered in the first step because it reflects a constitutional attribute. AAI attachment representations (dummy coded: dismissing 0 versus autonomous 1) were entered in the second step because they were assumed to reflect the parent/child relationship, which precedes and sets the stage for the relationships with adults (such as friends and romantic partners) that are assessed by attachment styles. In the third step we examined the contribution of attachment styles with an aggregate scale of avoidant/insecure attachment style (the secure and the avoidant attachment style scales correlated  $r = -.71$ ). Lastly, in the fourth step we examined the contribution of the two interactions between impulsiveness and state of mind and impulsiveness and the aggregate scale of avoidant/insecure attachment style (scales were centered before computing the interactions).

TABLE 4  
 Hierarchical Regression Analyses Predicting Intimacy Variables from Attachment Variables and Impulsiveness

	$\beta$	$\Delta F$	$df$	$\Delta R^2$
<i>Friendship capacity for intimacy</i>				
First step: Impulsiveness	.03	.08	1, 73	.001
Second step: State of mind regarding attachment	.33**	8.61**	1, 72	.11
Final model		4.35**	2, 72	.11 <sup>a</sup>
<i>Romantic capacity for intimacy</i>				
First step: Impulsiveness	.01	.002	1, 73	.00
Second step: State of mind regarding attachment	.25*	4.86*	1, 72	.06
Third step: Avoidant/insecure attachment style	-.37**	11.33***	1, 71	.13
Fourth step: Avoidant/insecure style $\times$ impulsiveness	-.29*	6.64**	2, 69	.13
State of mind $\times$ impulsiveness	-.40*			
Final model		6.57***	5, 69	.32 <sup>a</sup>
<i>Affective relationships—best friend</i>				
First step: Impulsiveness	-.08	.40	1, 67	.00
Second step: State of mind regarding attachment	.23*	3.89*	1, 66	.05
Third step: Avoidant/insecure attachment style	-.28*	5.45*	1, 65	.08
Final model		2.63*	3, 65	.13 <sup>a</sup>

Note. State of mind 0 = dismissing; 1 = autonomous.

<sup>a</sup>In the final model this figure represents the cumulative  $R^2$ .

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

As can be seen in Table 4, capacity for intimacy in friendships was significantly predicted (11% explained variance) only by state of mind. The other steps were not significant. Affective relationship with best friend was explained (13%) by state of mind and the aggregate scale of avoidant/insecure attachment style. The other steps were not significant. As for capacity for romantic intimacy, attachment state of mind, the aggregate scale of avoidant/insecure attachment style, and the interaction between avoidant/insecure attachment style and impulsiveness, as well as the interaction between AAI categorization and impulsiveness, all uniquely entered the regression model and explained 32% of the variance.

We examined these interactions by splitting the sample into low ( $N = 39$ ) and high ( $N = 44$ ) impulsiveness groups based on the mean of the impulsiveness scale. We performed Spearman's correlations between state of mind (coded 0 for dismissing and 1 for autonomous) and capacity for romantic intimacy and Pearson's correlations between avoidant/insecure

TABLE 5  
Capacity for Romantic Intimacy for Secure and Insecure Individuals with Low and High Levels of Impulsiveness

	<i>AAI</i>		<i>Avoidant/Insecure Attachment Style Scale<sup>a</sup></i>	
	<i>Dismissing</i>	<i>Autonomous</i>	<i>High (Avoidant)</i>	<i>Low (Secure)</i>
Impulsiveness <sup>a</sup>				
Low	2.63 (.60)	3.53 (.83)	2.61 (.89)	3.47 (.66)
High	3.14 (.93)	3.13 (.88)	3.09 (.80)	3.20 (.80)

<sup>a</sup>Groups were created by splitting the sample based on the mean of the avoidant/insecure scale or the impulsiveness scale (below the mean, low; above the mean, high).

AAI, Adult Attachment Interview.

attachment style and capacity for romantic intimacy. For the low-impulsiveness group the correlations were high ( $r = .52$ , and  $-.60$ ,  $p < .001$ , respectively), and for the high-impulsiveness group correlations were not significant ( $r = .01$ , and  $-.13$ , respectively). Secure or autonomous participants exhibited lower intimacy when their impulsiveness was high compared with when it was low whereas dismissing and avoidant individuals exhibited higher intimacy when their impulsiveness was high than when it was low (see Table 5).

## DISCUSSION

State of mind with regard to attachment and attachment styles assessed in late adolescence predicted capacity for intimacy as assessed 4 years later in an interview, which reflected optimal ability as well as with actual attachment-related affect in current relationships. Autonomous adolescents showed a higher mature intimacy as seen in their capacity for intimacy in romantic relationships and in friendships and in their actual attachment-related affect in current relationships. Avoidant attachment style was generally associated with lower levels of capacity for romantic intimacy and of affective relations in close friendships. Secure style was associated with a higher capacity for intimacy and closer affective relations in friendships. These associations across a 4-year span are significant, given the time range between the assessments and the differences in method (i.e., self-report questionnaires, semistructured interview).

### Unique Contribution of State of Mind with Respect to Attachment and Attachment Styles

The two facets of attachment representations in adolescence and adulthood—*state of mind with respect to attachment* and *attachment styles*—were not significantly associated. These results confirm findings from several previous studies. Two of these studies had mothers as participants (de Hass, Bakermans-Kranenburg, & vanIJzendoorn, 1994; Shaver et al., 2000) and three others included older couples (Bouthillier et al., 2002; Crowell et al., 1999; Simpson et al., 2002). The replication of their general pattern of findings with our sample of male adolescents corroborates what now seems to be the accepted notion that these two facets tap different aspects of an individual's attachment representations (e.g., parental versus peers' domain, general state of mind versus specific beliefs, less conscious aspects versus aspects the individual is more aware of, and more). The unique contribution made by each to the participants' capacity for romantic intimacy and affective relationships with friends further strengthens this idea.

The two facets assess somewhat different parts of a person's internal working attachment model, but they by no means exhaust it. For example, it has recently been shown that besides a general state of mind with respect to attachment individuals hold distinct (yet related) states of mind with respect to attachment with each of their parents (Furman & Simon, 2004). Further, the internal working model includes nonverbal aspects that are more procedural (Crittenden, 2006). Thus this compound and complex notion—the internal working model—awaits further elaboration at the conceptual and empirical levels.

The consistent finding across various samples of the low (often non-significant) association between state of mind with respect to attachment and attachment styles call into question the assumption that they both assess the same construct—internal working model of attachment. Though both are associated in theoretically meaningful ways with similar outcomes they might reflect different nominal constructs which are only very modestly related within the individuals' internal dynamic of emotional and cognitive processes. Alternatively, the low-internal reliabilities of the attachment styles' scales hinder the capacity to find such associations with the AAI should they exist and might lead to underestimation of other associations with relevant constructs (e.g., intimacy).

Previous research attempting to predict behaviors in romantic couples found in one case that both facets made a unique contribution and in another case that only state of mind with respect to attachment did. From those results it is not clear why and under what conditions each facet or

each construct might be implicated. In our study AAI categories significantly predicted each of the indicators of intimacy we used in our study with regard to romantic partners and friends. By contrast, attachment styles showed a more variable pattern of associations. They evinced a unique prediction of adolescent capacity for romantic intimacy even though this outcome was assessed by an interview which was rated by a coder—a method similar to the AAI. Similarly, attachment styles uniquely predicted attachment-related aspects of the relationship with friends as assessed in a self-report questionnaire. In contrast, attachment styles were not associated with capacity for intimacy in friendships.

This profile of associations may be related to the different constructs assessed by the intimacy interview and the affective relationships questionnaire. The latter assessed attachment-related aspects and specifically asked about the provision of a secure base and a safe haven; the interview looked more broadly at closeness, as reflected also in companionship and shared interests, and it examined separateness in the relationships too. The affective relationships questionnaire was therefore more closely tied to attachment, and might therefore be expected to be more strongly associated with attachment representations than the interview-based assessment of capacity of intimacy with friends, which took other elements into account.

Why then did attachment styles correlate with this interview when it was applied to romantic relationships? The answer may concern the different focus of young men's friendships and their romantic relationships. Although related in their quality (Scharf & Mayseless, 2001) men's friendships seem to revolve more around doing things together and less around self-disclosure and intimacy, aspects that are more characteristic of their romantic relationships (Maccoby, 1990). Attachment representations might be less central in this type of friendship and less strongly implicated in predicting their quality (Shulman & Scharf, 2000). Other aspects, such as shared experiences and shared interests, may play an important role as well. Attachment dynamics might be more easily aroused in romantic relationships than in friendships (Hazan & Zeifman, 1999). State of mind with respect to attachment may be more robust and less sensitive than attachment styles to such variations in type of closeness assessed. In addition, the realm in which these two facets are embedded might be relevant. State of mind with regard to attachment is related mostly to the relationship with parents whereas attachment styles refer more broadly to close others. The relationship with parents might be more pertinent to capacity for intimacy than a general attitude with regard to close others. Furthermore, as indicated above the moderate internal reliability of attachment styles might have restricted the capacity to predict intimacy reliably as well. Future research may need to address these possibilities.

### Role of Impulsiveness

Impulsiveness of itself did not affect intimacy but was associated with avoidant and ambivalent attachment styles. Both styles are theoretically and empirically associated with imbalanced emotion regulation (Shaver & Mikulincer, 2002) which might lead to less controlled behavior (i.e., impulsiveness). Ambivalence is associated with heightening emotion display—so the association with impulsiveness is expected. In contrast avoidance is associated with inhibiting emotional display in attachment-related situations. Because of the concomitant frustration and deranged emotion regulation avoidant individuals might still be impulsive in other contexts. The reported association between avoidance and maladjustment, in particular conduct problems (e.g., Granot & Mayseless, 2001) concurs with this interpretation.

As expected, autonomous participants who did not develop a high capacity for intimacy were more impulsive—a quality that might have impaired their capacity to form and to maintain intimate romantic relationships. Also as expected, the same dimension of impulsiveness was associated positively with the development of the capacity for intimacy in dismissing adolescents. For them, being more impulsive may be beneficial as it counteracts their tendency to withdraw from close relationships. A similar interaction was apparent with avoidant attachment style. These results highlight the importance of temperament and emotion regulation in developing the capacity for intimate romantic relationships, an issue rarely addressed so far. These results accord with current pleas to incorporate constitutional aspects along with relational ones in predicting socio-emotional functioning (e.g., Rutter, 2002; Thompson & Raikes, 2003). Indeed the moderating role of temperament has lately received more intense conceptual and empirical focus with children (e.g., Kochanska, 1997). The demonstration that temperament also moderates the development of the capacity for intimacy with adolescents is therefore important and opens the way for further research. Still, though impulsiveness is assumed to be a personality variable and its stability over time has been documented (Costa, & McCrae, 1985) directionality and in particular causality cannot be assumed from correlational data—a limitation that needs to be acknowledged.

Interestingly, these interactions were not apparent when intimacy in friendships was considered. As discussed above, in males' friendships companionship and shared activities might be more important, whereas in romantic relationships emotional give-and-take, empathy, and sensitive response may be more central (Benenson, 1996; Shulman, Levy-Shiff, Kedem, & Alon, 1997). Hence impulsiveness may be less relevant to young men's friendships than to their romantic relationships.

## Limitations and Implications

Though the current study included 80 participants, only five of our adolescent respondents were classified as preoccupied, a number that precluded examination of their unique developmental trajectory. The relatively small number of preoccupied adolescent males has already been noted (e.g., Kobak & Sceery, 1988; Larose & Bernier, 2001). The understanding of this seemingly gender-related variation awaits further investigation.

This study was conducted in a unique cultural context and examined adolescents from intact middle-class families, so the generalizability of its findings to other contexts and social groups needs to be further explored. Moreover, this study focused only on the developmental trajectories of adolescent males. Theoretical conceptualizations (Josselson, 1996) and research (Feldman, Gowen, & Fisher, 1998) suggest that males' development of intimacy is different from females'. The latter perceive dyadic relationships as the chief place for the give-and-take of emotional exchange, whereas males are less selective in their target network (Belle, 1989) and are more oriented to shared activities (Maccoby, 1990). Thus a separate examination of females' trajectories of developing intimacy in a sufficiently large sample is called for. The conclusions drawn from this study are limited by the specific measures we used and its time span. With regard to measures, shared method in the intimacy interview as well as coding of the two parts of the interview by the same raters probably contributed to some similarity in findings. Further, though the interview assessed optimal level of intimacy and not actual attachment-related affect in current relationships, romantic capacity for intimacy was higher for participants who had current romantic partners than for those who did not. In addition, all measures were assessed using one informant—the adolescent. Observations of the adolescents' close relationships, reports by peers, or physiological measures pertaining to their emotion regulation might have revealed a more complex story. Similarly, we examined the capacity for romantic intimacy at 22—an age when some individuals only begin to fully develop this capacity; hence we may witness changes in different directions later in life (Furman, Brown, & Feiring, 1999).

In this study we assumed that attachment representations assessed before conscription were implicated in the level of intimacy demonstrated by participants 4 years later. However, temporal stability of attachment representations was not assessed. Changes in state of mind with respect to attachment or in attachment styles might have occurred, in particular in such a formative age period. Attachment styles in particular are subject to such changes (Fraleigh, 2002). This might have accounted for the lower

prediction of intimacy from attachment styles compared with state of mind with respect to attachment.

The capacity for intimacy in young men in Israel was examined in the course of their mandatory military service in the Israel Defense Forces. This service is long (3 years) and usually arduous. Many of the soldiers serve in units composed almost entirely of males, and they go home only once in several weeks for a weekend vacation; they find it difficult to invest in a long-term romantic relationship. Still, frequency of furloughs was not associated with intimacy indicators. Furthermore, given this context, and the notion that closeness within same-gender male friendships is based on common experiences, we might have expected attachment representations to be more salient in predicting friendship intimacy than romantic intimacy. This was not the case. It is not highly probable that the association between attachment representations and romantic intimacy reflects a Time 1 correlation because, for the great majority of participants the most intimate romantic relationships existed during their military service and because level of intimacy was not affected by duration or the timing of the relationship (pre- versus postconscription). Our participants might have been able to forge intimate romantic relationships even across distance and with few face-to-face encounters by other means of communication such as phone calls and letters. They could also have had romantic relationships with partners who served with them in their military unit.

The moderately early age at which we assessed romantic intimacy and the nonoptimal context for investing in romantic relationships (less than a third of our participants had such a relationship at the time we interviewed them) might explain the non-negligible minority of autonomous participants in our study who evinced low capacity for romantic intimacy. In a different, more facilitating context, and with time, they too might have evolved to higher levels of capacity for intimacy, rendering the explained variance of attachment representations even larger. Still, the prediction found in our study across a 4-year span is quite impressive, and reflects a strong effect of attachment representations even in a context that is non-optimal for the development of romantic intimacy.

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## REFERENCES

- Allen, J. P., & Land, D. (1999). Attachment in adolescence. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 319–335). New York: Guilford.
- Bartholomew, K., & Moretti, M. (2002). The dynamics of measuring attachment. *Attachment and Human Development, 4*, 162–165.
- Belle, D. (1989). Gender differences in children's social networks and supports. In D. Belle (Ed.), *Children's social networks and social supports: Wiley series on personality processes* (pp. 173–188). Oxford, UK: John Wiley & Sons.
- Benenson, J. F. (1996). Gender differences in the development of relationships. In G. G. Noam & K. W. Fischer (Eds.), *Development and vulnerability in close relationships* (pp. 263–286). Mahwah, NJ: Erlbaum.
- Berndt, T. J. (1982). The features and effects of friendship in early adolescence. *Child Development, 53*, 1447–1460.
- Bippus, A. M., & Rollin, E. (2003). Attachment style differences in relational maintenance and conflict behaviors: Friends' perceptions. *Communication Reports, 16*, 113–123.
- Blyth, D. A., & Foster-Clark, F. S. (1987). Gender differences in perceived intimacy with different members of adolescents' social networks. *Sex Roles, 17*, 689–718.
- Bouthillier, D., Julien, D., Dube, M., Belanger, I., & Hamelin, M. (2002). Predictive validity of adult attachment measures in relation to emotion regulation behaviors in marital interactions. *Journal of Adult Development, 94*, 291–305.
- Bretherton, I., & Munholland, K. A. (1999). Internal working models in attachment relationships: A construct revisited. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 89–111). New York: Guilford Press.
- Buhrmester, D. (1996). Need fulfillment, interpersonal competence, and the developmental contexts of early adolescent friendship. In A. F. Newcomb & W. M. Bukowski (Eds.), *The company they keep: Friendship in childhood and adolescence: Cambridge studies in social and emotional development* (pp. 158–185). New York: Cambridge University Press.
- Burgess, K. B., Marshall, P. J., Rubin, K. H., & Fox, N. A. (2003). Infant attachment and temperament as predictors of subsequent externalizing problems and cardiac physiology. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 44*, 819–831.
- Cassidy, J. (1994). Emotion regulation: Influences of attachment relationships. In N. A. Fox (Ed.), *The development of emotion regulation: Biological and behavioral considerations. Monographs of the Society for Research in Child Development, 59* (2–3, Serial No 240), 228–249.
- Cassidy, J. (2001). Truth, lies and intimacy: An attachment perspective. *Attachment and Human Development, 3*, 121–155.
- Central Bureau of Statistics (1996). *Statistical abstract of Israel*. Jerusalem: Central Bureau of Statistics, The Government of Israel.
- Cohn, D. A., Silver, D. H., Cowan, C. P., Cowan, P. A., & Pearson, J. (1992). Working models of childhood attachment and couple relationships. *Journal of Family Issues, 13*, 432–449.
- Collins, N. L., Cooper, M. L., Albino, A., & Allard, L. (2002). Psychosocial vulnerability from adolescence to adulthood: A prospective study of attachment style differences in relationship functioning and partner choice. *Journal of Personality, 70*, 965–1008.

- Collins, N. L., & Read, S. J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology*, *58*, 644–663.
- Collins, N. L., & Read, S. J. (1994). Cognitive representations of attachment: The structure and function of working models. In K. Bartholomew & D. Perlman (Eds.), *Attachment processes in adulthood. Advances in personal relationships* (Vol. 5, pp. 53–90). London: Jessica Kingsley.
- Collins, W. A., Gleason, T., & Sesma, A. Jr. (1997). Internalization, autonomy, and relationships: Development during adolescence. In J. E. Grusec & L. Kuczynski (Eds.), *Parenting and children's internalization of values: A handbook of contemporary theory* (pp. 78–99). New York: Wiley.
- Collins, W. A., & Sroufe, L. A. (1999). Capacity for intimate relationships: A developmental construction. In W. Furman, B. B. Brown, & C. Feiring (Eds.), *The development of romantic relationships in adolescence* (pp. 125–147). Cambridge, UK: Cambridge University Press.
- Costa, P. T. Jr., & McCrae, R. R. (1985). *The NEO Personality Inventory Manual*. Odessa, FL: Psychological Assessment Resources.
- Crittenden, P. (2006). Why do inadequate parents do what they do? In O. Mayseless (Ed.), *Parenting representations: Theory, research and clinical implications* (pp. 388–433). London: Cambridge University Press.
- Crowell, J., Treboux, D., Gao, Y., Fyffe, C., Pan, H., & Waters, E. (2002). Assessing secure base behavior in adulthood: Development of a measure, link to adult attachment representations, and relations to couples' communication and reports of relationships. *Developmental Psychology*, *38*, 679–693.
- Crowell, J. A., Fraley, R. C., & Shaver, P. R. (1999). Measurement of individual differences in adolescent and adult attachment. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications research* (pp. 434–465). New York: Guilford.
- Crowell, J. A., Treboux, D., & Waters, E. (1999). The Adult Attachment Interview and the Relationship Questionnaire: Relations to reports of mothers and partners. *Personal Relationships*, *6*, 1–18.
- Crowell, J. A., Treboux, D., & Waters, E. (2002). Stability of attachment representations: The transition to marriage. *Developmental Psychology*, *38*, 467–479.
- de Hass, M. A., Bakermans-Kranenburg, M. J., & vanIjzendoorn, M. H. (1994). The Adult Attachment Interview and questionnaires for attachment style, temperament, and memories of parental behavior. *Journal of Genetic Psychology*, *15*, 471–486.
- Dresner, R., & Grolnick, W. (1996). Constructions of early parenting, intimacy and autonomy in young women. *Journal of Social and Personal Relationships*, *13*, 25–39.
- Feeney, J. A. (1999). Adult romantic attachment and couple relationships. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 355–377). New York, NY: Guilford Press.
- Feiring, C. (1996). Concept of romance in 15-year-old adolescents. *Journal of Research on Adolescence*, *6*, 181–200.
- Feldman, S. S., Gowen, K. L., & Fisher, L. (1998). Family relationships and gender as predictors of romantic intimacy in young adults: A longitudinal study. *Journal of Research on Adolescence*, *8*, 263–286.
- Feldman, S. S., & Weinberger, D. A. (1994). Self-restraint as a mediator of family influences on boys' delinquent behavior: A longitudinal study. *Child Development*, *65*, 195–211.
- Fraley, R. C. (2002). Attachment stability from infancy to adulthood: Meta-analysis and dynamic modeling of developmental mechanisms. *Personality and Social Psychology Review*, *6*, 123–151.
- Fraley, R. C., & Shaver, P. R. (2000). Adult romantic attachment: Theoretical developments, emerging controversies, and unanswered questions. *Review of General Psychology*, *4*, 132–154.

- Furman, B., Brown, B., & Feiring, C. (Eds.) (1999). *The development of romantic relationships in adolescence*. Cambridge, UK: Cambridge University Press.
- Furman, W., & Simon, V. A. (2004). Concordance in attachment states of mind and styles with respect to fathers and mothers. *Developmental Psychology, 40*, 1239–1247.
- Furman, W., Simon, V. A., Shaffer, L., & Bouchey, H. A. (2002). Adolescents' working models and styles for relationships with parents, friends, and romantic partners. *Child Development, 73*, 241–255.
- Grabill, C. M., & Kerns, K. A. (2000). Attachment styles and intimacy in friendship. *Personal Relationships, 7*, 363–378.
- Granot, D., & Mayseless, O. (2001). Attachment security and adjustment to school in middle childhood. *International Journal of Behavioral Development, 25*, 530–541.
- Guerrero, L. K. (1996). Attachment style differences in intimacy and involvement: A test of the four-category model. *Communication Monographs, 63*, 269–292.
- Hazan, C., & Shaver, P. R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52*, 511–524.
- Hazan, C., & Zeifman, D. (1999). Pair bonds as attachments: Evaluating the evidence. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 336–354). New York: Guilford.
- Jacobvitz, D., Curran, M., & Moller, N. (2002). Measurement of adult attachment: The place of self-report and interview methodologies. *Attachment and Human Development, 4*, 207–215.
- Josselson, R. (1996). *Revisiting herself: The story of women's identity from college to midlife*. New York: Oxford University Press.
- Kobak, R. R., & Sceery, A. (1988). Attachment in late adolescence: Working models, affect regulation and representations of self and others. *Child Development, 59*, 135–146.
- Kochanska, G. (1997). Multiple pathways to conscience for children with different temperaments: From toddlerhood to age 5. *Developmental Psychology, 33*, 228–240.
- Larose, S., & Bernier, A. (2001). Social support processes: Mediators of attachment state of mind and adjustment in late adolescence. *Attachment and Human Development, 3*, 96–120.
- Maccoby, E. (1990). Gender and relationships. *American Psychologist, 45*, 513–520.
- Main, M., & Goldwyn, R. (1998). *Adult attachment rating and classification systems*. Unpublished manuscript, Department of Psychology, University of California, Berkeley.
- Mangelsdorf, S. C., & Frosch, C. A. (2000). Temperament and attachment: One construct or two? In H. W. Reese (Ed.), *Advances in child development and behavior* (Vol. 27, pp. 181–220). San Diego, CA: Academic Press.
- Mayseless, O. (1993). Gifted adolescents and intimacy in close same-sex friendships. *Journal of Youth and Adolescence, 22*, 135–146.
- Mayseless, O. (1995). Attachment patterns and marital relationships. In S. Shulman (Ed.), *Close relationships and socioemotional development: Human development* (Vol. 7, pp. 185–202). Westport, CT: Ablex Publishing.
- Mayseless, O., & Sagi, A. (1994). *The association between the Adult Attachment Interview and attachment patterns in romantic relationships*. Paper presented at the 7th International Conference on Personal Relationships, Groningen, the Netherlands.
- Mayseless, O., Sharabany, R., & Sagi, A. (1997). Attachment concerns of mothers as manifested in parental, spousal, and friendship relationships. *Personal Relationships, 4*, 255–269.
- Mikulincer, M., & Erev, I. (1991). Attachment style and structure of romantic love. *British Journal of Social Psychology, 30*, 273–291.
- Mikulincer, M., & Nachshon, O. (1991). Attachment styles and patterns of self-disclosure. *Journal of Personality and Social Psychology, 61*, 321–331.

- Orlowsky, J. L. (1993). Intimacy status: Theory and research. In J. E. Marcia (Ed.), *Ego identity: A handbook for psychological research* (pp. 111–133). New York: Springer.
- Orlowsky, J. L., & Roades, L. A. (1993). Intimacy status interview and rating scales. In J. E. Marcia (Ed.), *Ego identity: A handbook for psychological research* (pp. 334–358). New York: Springer.
- Paterson, G., & Sanson, A. (1999). The association of behavioural adjustment to temperament, parenting and family characteristics among 5-year-old children. *Social Development, 8*, 293–309.
- Prager, K. J. (1991). Intimacy status and couple conflict resolution. *Journal of Social and Personal Relationships, 8*, 505–526.
- Prior, M., Smart, D., Sanson, A., & Oberklaid, F. (2000). Does shy-inhibited temperament in childhood lead to anxiety problems in adolescence? *Journal of the American Academy of Child and Adolescent Psychiatry, 39*, 461–468.
- Roisman, G. I., Madsen, S. D., Hennighausen, K. H., Sroufe, L. A., & Collins, W. A. (2001). The coherence of dyadic behavior across parent–child and romantic relationships as mediated by the internalized representation of experience. *Attachment and Human Development, 3*, 156–172.
- Rutter, M. (2002). Nature, nurture, and development: From evangelism through science toward policy and practice. *Child Development, 73*, 1–21.
- Sanson, A., Hemphill, S. A., & Smart, D. (2004). Connections between temperament and social development: A review. *Social Development, 13*, 142–170.
- Scharf, M., & Mayseless, O. (2001). The capacity for romantic intimacy: Exploring the contribution of best friend and marital and parental relationships. *Journal of Adolescence, 24*, 379–399.
- Scharf, M., Mayseless, O., & Kivenson-Baron, I. (2004). Adolescents' attachment representations and developmental tasks in emerging adulthood. *Developmental Psychology, 40*, 430–444.
- Shaver, P. R., Belsky, J., & Brennan, K. A. (2000). The adult attachment interview and self-reports of romantic attachment: Associations across domains and methods. *Personal Relationships, 7*, 25–43.
- Shaver, P. R., & Mikulincer, M. (2002). Dialogue on adult attachment: Diversity and integration. *Attachment and Human Development, 4*, 243–257.
- Shulman, S., Laursen, B., Kalman, Z., & Karpovsky, S. (1997). Adolescent intimacy revisited. *Journal of Youth and Adolescence, 26*, 597–617.
- Shulman, S., Levy-Shiff, R., Kedem, P., & Alon, E. (1997). Intimate relationships among adolescent romantic partners and same-sex friends: Individual and systemic perspectives. In S. Shulman & W. A. Collins (Eds.), *Romantic relationships in adolescence: Developmental perspectives* (pp. 37–51). San Francisco: Jossey-Bass.
- Shulman, S., & Scharf, M. (2000). Adolescent romantic behaviors and perceptions: Age- and gender-related differences, and links with family and peer relationships. *Journal of Research on Adolescence, 10*, 99–118.
- Simpson, J. A., Rholes, W. S., Orinea, M. M., & Grich, J. (2002). Working models of attachment, support giving, and support seeking in a stressful situation. *Personality and Social Psychology Bulletin, 28*, 598–608.
- Takahashi, K., & Nagima, N. (1994). Transition from home to college dormitory: The role of preestablished affective relationships in adjustment to new life. *Journal of Research on Adolescence, 4*, 367–384.
- Thompson, R. A. (1999). Early attachment and later development. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 265–286). New York: Guilford.

- Thompson, R. A., & Raikes, H. A. (2003). Toward the next quarter-century: Conceptual and methodological challenges for attachment theory. *Development and Psychopathology, 15*, 691–718.
- van-der Mark, I. L., van IJzendoorn, M. H., & Bakermans-Kranenburg, M. J. (2002). Development of empathy in girls during the second year of life: Associations with parenting, attachment, and temperament. *Social Development, 11*, 451–468.
- Van IJzendoorn, M. H. (1995). Associations between adult attachment representations and parent-child attachment, parental responsiveness, and clinical status: A meta-analysis on the predictive validity of the Adult Attachment Interview. *Psychological Bulletin, 117*, 387–403.
- Vangelisti, A. L., & Daly, J. A. (1997). Gender differences in standards for romantic relationships. *Personal Relationships, 4*, 203–219.
- Vaughn, B. E., & Bost, K. K. (1999). Attachment and temperament: Redundant, independent, or interacting influences on interpersonal adaptation and personality development? In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 198–225). New York: Guilford.
- Weimer, B. L., Kerns, K. A., & Oldenburg, C. M. (2004). Adolescents' interactions with a best friend: Associations with attachment style. *Journal of Experimental Child Psychology, 88*, 102–120.
- Weinberger, D. A. (1996). Distorted self perceptions: Divergent self-reports as statistical outliers in the multimethod assessment of children's socioemotional adjustment. *Journal of Personality Assessment, 66*, 126–143.
- Weinberger, D. A., & Gomes, M. E. (1995). Changes in daily mood and self-restraint among undercontrolled preadolescents: A time-series analysis of "acting out". *Journal of the American Academy of Child and Adolescent Psychiatry, 34*, 1473–1482.
- Zimmermann, P. (2004). Attachment representations and characteristics of friendship relations during adolescence. *Journal of Experimental Child Psychology, 88*, 83–101.
- Zimmermann, P., Maier, M. A., Winter, M., & Grossmann, K. E. (2001). Attachment and adolescents' emotion regulation during a joint problem-solving task with a friend. *International Journal of Behavioral Development, 25*, 331–343.