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Narrative assessment of attachment representations: Links between secure base scripts and adolescent attachment

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Abstract

We explored the notion that adolescents possess mental secure base scripts of attachment-related events and examined, for the first time, whether these scripts were linked to adolescent attachment security. Results indicated that adolescents possessed a general script for mother and for father, and that they drew upon these scripts across different contexts. Adolescents' scripts for mother and for father were related, but only the scripts for mother predicted unique variance in adolescents' scripts for nonspecific others. Moreover, greater attachment security (as measured by the Adult Attachment Interview; AAI) was linked to greater access to and knowledge of secure base scripts for mothers, fathers, and nonspecific others. Only mother scripts, however, predicted unique variance in adolescents' AAI coherence of mind scores. Adolescents' romantic-attachment avoidance and anxiety scores (as assessed using the Experiences in Close Relationship Inventory) were linked negatively to scripts for mothers and nonspecific others, respectively.

Keywords: *Attachment, secure base, scripts, Adult Attachment Interview, romantic attachment, narratives*

Introduction

According to attachment theory, attachment relationships are characterized principally by the presence of secure base behaviors (Ainsworth, 1989; Bowlby, 1988; Waters & Cummings, 2000). Within these relationships, secure base use is evident when an individual shows a propensity to use the attachment figure as both a base from which to explore the environment and as a haven to which to return in times of need or distress. Secure base provision, in turn, is evident during times when parental availability fosters exploration and the attachment figure responds to the individual's secure base behaviors by providing the secure base that he or she elicits. Beginning in infancy, individuals will typically direct these secure base behaviors first towards their parental attachment figures.

Bowlby (1973) believed that the secure base interactions that children experience with their parents across the lifespan are internalized and retained in cognitive structures that he termed "representational models." Through the course of repeated daily interactions, children store knowledge regarding the degree to which they can use their parent as a secure base, as well as the degree to which their parent provides such a secure base. Co-created

simultaneously with these representational models of attachment figures are representational models of self, which store expectations about the extent to which one is likely to receive care and affection. Attachment theorists propose that children who are capable of using their parents as secure bases in both ordinary and emergency circumstances will develop secure representational models of their parents, and will view their parents as persons who will suitably respond to their attachment signals. They will also develop a representational model of the self as a person who is likely to receive care and affection. Children who are not able to use their parents as secure bases in these circumstances, however, are believed to develop insecure representational models of their parents as persons who do not respond to their attachment needs. They are thought to develop a complementary representational model of the self as a person who is unlikely to receive care and affection.

Bowlby's (1973) initial attention to attachment-related representational processes has spawned much theoretical discussion about the nature of representational models of attachment (e.g., Bretherton & Munholland, 1999; Collins, 1996; Main, Kaplan, & Cassidy, 1985; Thompson, 1998). As a result, the representational model construct has become central to attachment research and much knowledge has been gained regarding how these models function (e.g., how they enable individuals to store information gathered from secure base experiences, how they allow individuals to forecast and make predictions regarding how future secure base experiences should unfold, and how they influence the processing of attachment-relevant information; see Bretherton & Munholland, 1999, for a review). Yet although the *functions* that representational models of attachment perform have been studied for some time, their *form* is less well understood. Despite Bowlby's (1973, 1980) earlier emphases on the possible cognitive components of representational models of attachment (e.g., episodic and semantic memory stores), contemporary attachment theorists have yet to fully understand the cognitive architecture of these models (Thompson, 1998).

In an attempt to lend greater theoretical specificity to the cognitive architecture of representational models of attachment, Bretherton (1991) examined contemporary theory and research in the cognitive psychology literature. Her review of this literature led to the proposition that mental *scripts* could be the cognitive "raw material" of representational models of attachment. Cognitive psychologists (e.g., Nelson & Gruendel, 1986; Schank & Abelson, 1977) had defined a script as a knowledge structure containing a sequence of causally-linked events that occur in a particular situation. According to these researchers, scripts are forged out of a variety of settings and circumstances, and are typically employed voluntarily at first and later involuntarily as the script becomes used more regularly. Most children, for example, possess a script for eating (e.g., When I am hungry, I ask my mother for a snack. And when she gives me my snack, I eat it). With respect to attachment phenomena, Bretherton suggested that through repeated secure base interactions with their parents, children also develop a script of how causally-linked attachment-related events will unfold in time (e.g., When I am hurt, my mother soothes me. When I feel better, I can play). According to Bretherton, when individuals are presented with an attachment-related situation, they will employ this script to predict how their parent will respond and how they themselves should respond. Bretherton urged attachment researchers to explore the possibility that scripts underlie attachment representations and noted that script-related techniques could prove useful to researchers exploring this possibility.

Waters, Rodrigues, and Ridgeway (1998) were the first researchers to examine Bretherton's (1991) propositions regarding scripts directly. They introduced the idea that children develop "secure base scripts," and examined whether these scripts were linked to the quality of children's attachment to their mother. Waters and her colleagues re-examined children's responses to an attachment-related story completion task in which children were

told a story and were asked how the story would end (e.g., a child climbing a rock with his parents hurts his knee; Bretherton, Ridgeway, & Cassidy, 1990). These responses were then coded for the extent to which children used an elaborative and prototypical secure base script (i.e., a detailed and context-appropriate script for how a distressed child sought and received care from his or her parents). Results indicated that many children possessed elaborate and prototypical secure base scripts, and that this tendency was related to individual differences in attachment security: Greater attachment security at age 25 months (as assessed using the Attachment Q-Set; Waters, 1995) was linked to greater knowledge of and access to secure base scripts at ages 37 and 54 months. Children who had been classified as secure, for example, produced longer, richer, and more highly scripted stories of how parents were capable of providing a secure base and safe haven for their child.

Since these initial investigations, there has been growing interest in understanding secure base scripts and how these scripts relate to attachment security. In a recent cross-cultural study, for example, Vaughn and his colleagues (Vaughn et al., in press) reported that mothers' secure base scripts are linked to their infants' attachment security as assessed using the Attachment Q-Set. Evidence has also emerged indicating that mothers' secure base scripts are linked to mothers' coherence of mind and continuous security scores derived from the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1984, 1985, 1996; see also Coppola, Vaughn, Cassibba, & Costantini, 2006).

Yet, despite recent work examining children's and adults' secure base scripts, no published studies have examined these scripts in adolescents. Therefore, in the present investigation, we wanted to examine secure base scripts during adolescence and to determine, for the first time, whether these scripts were linked to adolescents' attachment security (i.e., their ''state of mind with respect to attachment'' as assessed with the AAI, and their romantic attachment-related avoidance and anxiety, as assessed using the Experiences in Close Relationship Inventory [ECR; Brennan, Clark, & Shaver, 1998]). To obtain adolescents' secure base scripts, we used a narrative task (Steiner, Arjomand, & Waters, 2003) that yielded attachment-related stories for mother, father, and nonspecific others. (This narrative task was based on Waters and Rodrigues-Doolabh's [2001] novel narrative technique to obtain attachment-relevant stories from *adults*.) These attachment-related stories were coded for whether or not adolescents followed a secure base script when creating a narrative about attachment-relevant interactions. We also used a control measure to exclude the possibility that any relations among adolescents' secure base scripts, and any relations between secure base scripts and security of attachment, were linked to adolescents' verbal knowledge.

We had two principal research aims in this investigation. Our first principal research aim was to examine whether and how secure base scripts generalize across (a) the same person in different contexts, and (b) different persons. Our second principal research aim was to examine, for the first time, whether and how secure base scripts are linked to adolescents' attachment security.

Understanding how individuals generalize information, the focus of our first aim, is a topic of central importance to attachment theorists and to developmental psychologists more broadly. The issue of generalization about the same person across different contexts addresses how a psychological mechanism (in this case, cognition) can develop in the face of various environmental inputs. For example, adolescents' attachment relationships with a parent develop over the course of many different interactions that occur in a variety of different contexts, under a variety of different circumstances. At the level of representation, it is possible that these varied attachment-related interactions yield different types of secure base scripts (e.g., different secure base scripts emerge for interactions of varying types that

occur either within or outside of the home environment). On the other hand, it is possible that different kinds of attachment-related interactions converge to yield a single overarching secure base script for each parent that is updated with subsequent attachment-related interactions. This secure base script is then tapped across different contexts involving the adolescent and the parent. We hypothesized that adolescents' secure base scripts for mothers, even though related to different contexts, would be highly associated (i.e., the secure base scripts adolescents used for their mother in one context would relate to the ones they used for their mother in another context). We had a similar hypothesis with respect to adolescents' secure base scripts for fathers.

The issue of generalization across different persons is central to attachment researchers interested in understanding whether (and to what extent) experiences and representations that characterize one attachment relationship relate to those of other relationships. With respect to secure base scripts, it is possible that adolescents' scripts created with regard to one attachment figure play a role in influencing their scripts for another attachment figure. This possibility is reasonable given Bowlby's (1973) notion that the expectations and perceptions forged from attachment-related experiences often generalize lawfully to the expectations and perceptions generated in other attachment relationships. On the other hand, children have different sets of secure base experiences with different parents (e.g., an adolescent might experience her mother but not her father as a secure base) and it is possible that children keep their secure base scripts about mother separate from those about father, at least during childhood and adolescence while still living with parents, and perhaps their whole lives. This alternative possibility is reasonable given Ainsworth's (1982) notion that in the case of mothers and fathers, babies develop two experience-based attachments to these two different caregivers from the start. Moreover, empirical data have indicated that infants' Strange Situation attachment classifications can differ across parents (e.g., Belsky & Rovine, 1987), which implies that infants keep their attachment-related cognitions about mother separate from those about father.

In the present investigation, we explored two kinds of generalization across persons. First, we examined generalization across parents. If adolescents do not generalize secure base scripts across their parents, then their separate secure base scripts for mother and father should not be highly correlated. If adolescents do generalize secure base scripts across their parents, then their separate secure base scripts for mother and father should be highly correlated. Next, we examined whether adolescents' secure base scripts regarding parents generalize to their secure base scripts regarding nonspecific others. If adolescents generalize their secure base scripts for parents to those for nonspecific others, then these secure base scripts should be highly correlated. Moreover, adolescents' secure base scores for parents should explain a significant amount of variance in adolescents' secure base scores for nonspecific others.

Our second principal research aim was to examine, for the first time, whether and how secure base scripts are linked to adolescents' attachment security. Bretherton's (1991) theoretical model contains the proposition that scripts are cognitive building blocks of internal working models of attachment, and one way of testing this proposition is to examine whether and how scripts are related to measures that claim to tap the quality of internal working models. Therefore, in the present investigation, we expected that when creating a narrative about attachment-relevant interactions involving mother figures, father figures, and nonspecific others, adolescents with a secure "state of mind with respect to attachment" (as assessed using the AAI) would be more likely than adolescents with an insecure state of mind to follow a secure base script. Similarly, we expected that adolescents who reported low levels of attachment-related anxiety and avoidance when managing interpersonal

distance in romantic relationships (as assessed using the self-report ECR) would follow a secure base script. We used these two well-known measures to tap attachment security because the AAI and ECR approach measurement differently and may capture different components of internal working models of attachment (see Roisman, Holland, Fortuna, Fraley, Clausell, & Clarke, 2006).

Although we expected to find significant associations between adolescents' secure base scripts and their attachment security, we were unsure how different secure base scripts (i.e., secure base scripts related to mother, father, and nonspecific others) would contribute to adolescents' state of mind with respect to attachment and romantic attachment-related anxiety and avoidance. If individuals do have separate secure base scripts about different individuals, does each script account for a significant amount of variance in adolescent attachment security? Or do some secure base scripts account for significant amounts of variance above and beyond other secure base scripts? Currently, attachment theory provides few hints in support of either of these perspectives. On one hand, there is evidence that adolescent attachment security is linked to the quality of both mother and father secure base relationships (e.g., Cassidy, Ziv, Mehta, & Feeney, 2003; Feeney & Cassidy, 2003), suggesting that relationships with each parent might contribute independently to adolescent attachment security. Yet, no study to date has examined directly whether the secure base elements of one adolescent–parent relationship are a better predictor of attachment security than the elements of the other. Nor has any study examined whether secure base scripts related to relationships between nonspecific others also explain significant amounts of variance in adolescent attachment security. Therefore, in the present investigation we explored the possible unique contributions of scripts about mother, father, and nonspecific others to explaining variance in adolescents' attachment security.

Method

Participants

Participants were 44 eleventh–grade students (24 girls and 20 boys) who were assessed during the final wave of data collection for a larger study of family and peer relationships in late adolescence. The racial/ethnic distribution of these 44 students was 59% White/Caucasian, 31% Black/African American, 5% Asian, and 5% Hispanic. All adolescents lived with both parents and the annual household income of most adolescents (93%) was above $41,000. Adolescents and their families were paid $125 for participating in the larger study. (Sample size varies slightly across analyses due to missing data.)

Measures

Adult Attachment Interview (AAI; George et al., 1984, 1985, 1996). This semistructured interview was designed to assess an adult's "current state of mind with respect to attachment" through a series of questions focused principally on memories of attachment-related experiences during childhood (i.e., before the age of 12 years old). Throughout the interview, individuals are required to give general descriptions ("semantic memories") of their childhood relationship with their parents and to provide specific supporting memories ("episodic memories"). For example, participants are asked to choose five adjectives that describe their childhood relationship with each parent and then to provide specific memories that supported their choices. Other questions focus on participants' memories of being upset, ill, or threatened, their reactions to major separations and losses, and any feelings of

rejection. The interviewer also asks participants to offer explanations for their parents' behavior and to describe their current relationship with them. Interviews lasted approximately an hour and were audiotaped for later verbatim transcription. Minor modifications to the adult version were made to make some of the questions more appropriate for an adolescent population (e.g., the word "recently" replaced the phrase "in adulthood;" Allen, Moore, Kuperminc, & Bell, 1998; Ward & Carlson, 1995).

Using Main and Goldwyn's (1998) classification system, coders rated each transcript on a series of 9-point scales that reflected adolescents' probable attachment experiences (e.g., of being parented in a loving way) and "current state of mind with respect to attachment." The principal scale used to assess adolescents' "current state of mind with respect to attachment" was *coherence of mind*, which referred to the degree to which adolescents discussed and evaluated their attachment-related experiences in a "reasonably consistent, clear, relevant, and succinct [manner]" (Hesse, 1999, p. 404). More specifically, this scale reflected the extent to which adolescents adhered to Grice's (1975) four maxims regarding the nature of collaborative discourse (i.e., the "Cooperative Principal") when discussing attachment-related experiences: (a) quality (i.e., truthfulness), (b) quantity (i.e., succinct, yet complete), (c) relation (i.e., relevance), and (d) manner (i.e., clarity; Hesse, 1999).

Based on an integrated consideration of both the adolescent's probable experiences and state of mind, coders assigned one of five classifications to the transcript. Adolescents were classified as *secure/autonomous* if they coherently described various childhood experiences, valued attachment relationships, and considered attachment-related experiences as important to personal development. Adolescents were classified as *insecure/dismissing* or *insecure/preoccupied* if they demonstrated an inability to coherently describe their childhood attachment experiences. These adolescents lacked the ability to reflect on their past attachment experiences in ways that would corroborate the genuine meaning and impact of those experiences. Specifically, adolescents were classified as insecure/dismissing if they described a history of rejection by principal attachment figures and denied or dismissed the impact this rejection had on personal development and its influence on both past and current attachment relationships. On the other hand, adolescents were classified as insecure/ preoccupied if they demonstrated an excessive, confused/passive, and unobjective (e.g., angry) preoccupation with attachment relationships or experiences. Adolescents were classified as *insecure/unresolved* when there were indications of lapses in the monitoring of reasoning or discourse when discussing loss or trauma. Adolescents placed in this category also received one of the principal underlying classifications (i.e., unresolved/dismissing, unresolved/ preoccupied, unresolved/secure). When adolescents could not be placed into any of these categories, they were labeled *insecure/cannot classify*. The AAI has been widely used in developmental research, including research with adolescents (see Allen & Land, 1999, for a review), and its psychometric properties have been well established (Hesse, 1999).

Four coders who were trained and certified as reliable by Mary Main and Erik Hesse rated AAI transcripts. All four coders were blind to any information regarding the adolescents. Agreement among the AAI coders was assessed continuously throughout the coding period of the larger study (across all four waves of data collection); a total of 29% of cases were selected to be coded by at least two coders. For the AAI coherence of mind scale data, the intraclass correlation coefficient (ICC) was .73. For the AAI classification data, agreement was 78% ($\kappa = .61$) for the five-way classification and 84% ($\kappa = .66$) for the secure/insecure group placement. Disagreements were resolved by a fifth independent coder who coded no additional data.

Experiences in Close Relationships Inventory (Brennan et al., 1998). This 36-item question-naire was used to tap adolescents' general feelings of attachment-related anxiety and avoidance within the context of all current and previous romantic relationships. The avoidance subscale (18 items; $\alpha = .92$) measured the extent to which adolescents were uncomfortable with closeness and intimacy, uncomfortable depending on others, and uncertain that others could be relied on when needed (e.g., ''I prefer not to show a partner how I feel deep down''). The anxiety subscale (18 items; $\alpha = .86$) measured the extent to which adolescents were concerned about being rejected, abandoned, and unloved by others (e.g., ''I worry about being abandoned''). For each item, adolescents rated their degree of attachment-related avoidance or anxiety using a 7-point Likert scale ranging from (1) *disagree strongly* to (7) *agree strongly*. Summary scores reflecting adolescents' attachment-related avoidance were generated by calculating the mean of the items along the avoidance dimension; possible scores ranged from 1 to 7. Summary scores reflecting adolescents' attachment-related anxiety were generated by calculating the mean of the items along the anxiety dimension; possible scores ranged from 1 to 7. This questionnaire has been widely used in adult attachment research and its psychometric properties have been well established (Brennan et al., 1998; Crowell, Fraley, & Shaver, 1999; Shaver & Mikulincer, 2002).

Adolescent Script Assessment (Steiner et al., 2003). This assessment was designed to obtain attachment-relevant stories from adolescents. Adolescents completed three versions of this assessment: one in relation to mother, one in relation to father, and one in relation to nonspecific others. For each version, adolescents completed two stories. For mother, adolescents completed two stories entitled *The Party* and either *Acne* (completed by girls) or *The Haircut* (completed by boys). Girls and boys completed different stories about acne and a haircut for mother because pilot testing indicated different gender-related sensitivities to these subjects of personal appearance. For father, adolescents completed two stories entitled *The Tennis Match* and *Studying for an Exam*. Finally, for nonspecific others, adolescents completed two stories entitled *Jane and Bob's Camping Trip* and *Sue's Accident*. The order in which the stories were administered was counterbalanced across participants.

To obtain each story, an experimenter gave adolescents a laminated 8½ inch by 10 inch sheet of paper with the story's title typed at the top. Below this title was a list of 12 words (large typeface, 3 columns, double-spaced) that served as a word-prompt outline (the word lists used in each of the seven stories can be found in the Appendix). The experimenter instructed adolescents to tell a story using the outline (by reading down the columns, from left to right). The experimenter stressed to the adolescents that this outline was a just a guide, and that they did not have to use all of the words if they did not want to use them. Moreover, adolescents were permitted to change the order of the words, or to change the words themselves. This task was not timed, but adolescents were asked to provide a detailed and information-rich story that would be approximately one page in length if it were typed. To facilitate adolescents' story telling, the experimenter gave adolescents as much time as they needed before beginning their stories to think about what they wanted to tell. The word-prompt outline remained in front of the adolescents until they completed the story. To make sure that the adolescents understood the task instructions, the experimenter presented the adolescents with a practice story entitled *A Trip to the Beach*. None of the adolescents reported any trouble understanding the task. Stories were audiotaped for later verbatim transcription.

Transcripts were coded using a system developed by Waters and Rodrigues-Doolabh (2001). In Table I, we provide two examples of narratives elicited by *The Party* story. Using a 7-point scale, coders rated transcripts from (1) does not have a secure base script to (7) has a

Table I. Two examples of narratives elicited from *The Party* story.

Narrative with a well-defined secure base script

Um, it's Friday night and, one of my friends is having a big party, but, I wasn't invited, so I go up to my mom and she asked me what I was doing and I told her, nothing all my friends are going to this party and, my friend didn't invite me, and I was really upset about it, so, I was sulking a little bit, I was a little bit upset, and finally my mom, asked me if I wanted to watch a movie with her, so, we're talking about it, and, we go, we have Direct TV so we rent a movie on TV, she makes popcorn cause it's her favorite thing, and we end up just watching movies all night and laughing and talking and smiling.

Narrative without a well-defined secure base script

It's Friday night and we'll all getting ready for a party. Got to run out to Blockbuster to rent some movies, get some popcorn, snacks, get everything all ready. Gonna have a big party in un in an hour. Gotta call my friends come and help me out. Get all the stuff, get ready, move the couch, move everything out of the way that can break, fall down, everything in value put it away. Uh, um party gets started cool, it's all right. Everything's hanging out. Um mom comes home, early than usual. Finds the party. Everybody runs out through the basement. Uh she nags yells talks about it. Next morning, she ends up smiling cause none of the stuff is broken.

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well-defined secure base script. Higher scores, reflecting greater knowledge of and access to a secure base script, were given when (a) the caregiver supports the adolescents' exploration, (b) the caregiver remains responsive and available as a resource if needed, (c) the adolescent encounters an obstacle or threat and becomes distressed, (d) the child and his or her caregiver come together, (e) proximity and/or contact with the caregiver comforts the adolescent, (f) difficulty is resolved or removed, and (g) the adolescent returns to confident exploration.

All transcripts were coded separately by expert coders from the Waters laboratory who were blind to the adolescents' AAI classifications as well as to any other information regarding the adolescents. To eliminate intrarater bias, transcripts were coded across stories so that the coders did not have access to an adolescent's score for one story when they were coding another of his or her stories (e.g., after coding all of the *Acne* stories, the coders coded all of *The Haircut* stories). To assess interrater reliability, ICC's were calculated for each of the seven stories. These ICC's ranged from .78 for *The Camping Trip* story to .91 for both *The Party* and *The Tennis Match* stories (mean ICC = .88), which demonstrated satisfactory interrater reliability. For the seven stories, when the coders' ratings were within 2 points of each other (which occurred for 96% of the cases), these ratings were averaged. When the coders' ratings were greater than 2 points apart, consensus scores were generated through conference.

Shipley Institute of Living Scale (SILS; Shipley, 1946). This 40-item vocabulary subtest, in which adolescents were asked to select the correct synonym from a list of four possible, was used to assess adolescents' verbal knowledge. The reliability and validity of the SILS as a measure of intellectual functioning has been well established (Kirk & Rattan, 1992).

Procedure

The data reported here were gathered over three sessions spanning approximately 5 months. First, adolescents completed the ECR as part of a questionnaire packet during a classroom visit in the spring of their eleventh grade year. Second, during the following summer, adolescents visited a university laboratory and completed the SILS. Finally, one month later, adolescents returned to the university laboratory. Adolescents first completed the AAI and then, after completing a battery of questionnaire measures and engaging in several

behavioral tasks (lasting approximately 1 hour), they completed the Adolescent Script Assessment.

Results

Descriptive statistics and preliminary analyses

The distribution of the 44 adolescent AAI classifications was 24 secure/autonomous, 13 insecure/dismissing, 4 insecure/preoccupied, 2 insecure/unresolved, and 1 insecure/cannot classify. Because there were few adolescents in each of the insecure subgroups, we combined these subgroups into one insecure group ($n = 20$) in our main analyses. The descriptive statistics for adolescents' attachment scores (i.e., adolescents' AAI coherence of mind and ECR avoidance/anxiety scores) and their secure base script scores are presented in Table II. As is consistent with previous research (see Hesse, 1999), adolescents' coherence of mind scores were not linked to their ECR avoidance ($r = -.11$, $p > .05$) or anxiety ($r = .07$, $p > .05$) scores. (Due to the exploratory nature of this study and its small sample size, alpha was set at .05 for all analyses.) Although we did not expect that adolescent gender would be linked to adolescents' AAI classifications, AAI coherence of mind scores, ECR anxiety/avoidance scores, or any of adolescents' secure base script scores, we nevertheless explored the possibility of gender differences in these variables. As expected, no gender differences emerged with respect to adolescents' AAI classifications, $\chi^2(1, N = 44) = .44$, AAI coherence of mind scores, $t(42) = -.73$, ECR avoidance scores, $t(40) = -.82$, or ECR anxiety scores, $t(40) = .06$ (all p's > .05). Moreover, a series of t-tests revealed no gender differences in any of the adolescents' secure base script scores (all p's > .05). Because of the lack of gender differences in these preliminary analyses, we did not include adolescent gender in our main analyses.

Due to the highly verbal nature of the Adolescent Script Assessment, we also examined whether adolescents' verbal knowledge was linked to their secure base script scores. Results indicated that adolescents' verbal knowledge scores were linked significantly to their secure base script scores for *Acne/The Haircut* ($r = .31$, $p < .05$) and *The Tennis Match* ($r = .37$, $p < .05$). Although adolescents' verbal knowledge scores were not linked to any of their other secure base scripts scores, we decided to control for adolescents' verbal knowledge in all subsequent analyses.

Table II. Descriptive statistics for the Adolescent Attachment and Secure Base Script Scores.

	Descriptive statistics			
	N	M	SD	Range
Attachment scores				
AAI Coherence of Mind	44	4.97	2.13	1.00 – 8.00
ECR Avoidance	42	3.27	1.19	1.44 – 5.94
ECR Anxiety	42	3.62	0.97	1.72 – 6.22
Secure base script scores				
The Party	42	4.05	1.57	1.00 – 6.50
Acne/The Haircut	42	4.30	1.40	1.25 – 6.75
The Tennis Match	42	3.99	1.46	1.25 – 6.25
Studying for an Exam	42	3.79	1.45	1.50 – 6.25
Jane and Bob's Camping Trip	44	3.36	.91	1.00 – 5.25
Sue's Accident	44	3.76	1.32	1.00 – 7.00

Principal research questions

Do adolescents' secure base scripts generalize across different contexts and/or across different people?
To address this question, we conducted two sets of analyses. First, we examined whether
adolescents' secure base scripts for each parent generalized across different *contexts*. Two
separate correlations were conducted; one for the two mother secure base script scores (i.e.,
for *The Party* and either *Acne* or *The Haircut*), and one for the two father secure base script
scores (i.e., for *The Tennis Match* and *Studying for an Exam*). Significant correlations
emerged for the mother stories (*partial r* = .67, *p* < .001) and the two father stories (*partial
r* = .56, *p* < .001) after controlling for adolescents' vocabulary knowledge. These findings
support the possibility that adolescents possess a general secure base script for mother and
for father, and that they draw upon these scripts across different contexts.

Second, we examined whether adolescents' secure base scripts generalized across
different *people*. To examine whether adolescents' secure base scripts generalized across
mothers and fathers, we first calculated the mean of the two mother secure base script scores
and the mean of the two father secure base script scores. We then computed a correlation
between these two mean scores (controlling for adolescents' verbal knowledge), and found
that adolescents' secure base script mean scores for mother were associated with their mean
scores for father (*partial r* = .44, *p* < .005). The magnitude of this correlation suggests that
either (a) adolescents were tapping into a single generalized secure base script when telling
separate stories related to their mothers and their fathers, or (b) adolescents have engaged in
similar secure base experiences with mother and father.

Next, we examined how adolescents' mother and father secure base script scores related
to their nonspecific others script scores. We first calculated the mean for the two nonspecific
others scripts scores and entered these means into correlational analyses with the mother
secure base script mean scores and, separately, the father secure base script mean scores.
After controlling for adolescents' vocabulary knowledge, significant correlations emerged
between the nonspecific others secure base script mean scores and the (a) mother secure
base script mean scores (*partial r* = .66, *p* < .001), and (b) father secure base script mean
scores (*partial r* = .33, *p* < .05). The difference between these two correlations approached
significance (Fisher's *Z* = .07), and suggests that although both the mother and father scripts
were linked to the nonspecific others scripts, the link between the mother and adult scripts
might be stronger. Using a hierarchical multiple regression, we also examined the relative
strength of the mother and father secure base script mean scores in predicting the
nonspecific others secure base script mean scores. As can be seen in Table III, this analysis
revealed that after controlling for adolescents' verbal knowledge, adolescents' mother, but
not father, secure base script mean scores uniquely predicted adolescents' nonspecific others
secure base script mean scores; the amount of variance explained by the mother secure base
mean score was a sizeable 32%. These data are consistent with the notion that when forming
a secure base script about nonspecific others, adolescents rely on their secure base scripts
involving their mothers above and beyond their secure base scripts involving their fathers.

Are adolescent secure base scripts related to attachment? In order to address this question, we
conducted three sets of analyses. In the first set of analyses, we examined whether
adolescents' secure base scripts mean scores for mother, father, and nonspecific others were
linked to their AAI coherence of mind scores, after controlling for adolescents' vocabulary
knowledge. As expected, adolescents' coherence of mind scores were linked to their mean
mother (*partial r* = .51, *p* < .001), father (*partial r* = .26, *p* = .06), and nonspecific others
(*partial r* = .31, *p* < .01) secure base script scores. Using a hierarchical multiple regression,

we also examined the relative strength of each of these secure base script mean scores in predicting coherence of mind. This analysis was based on a model wherein scripts are viewed as the building blocks of internal working models of attachment (Bretherton, 1991). As can be seen in Table IV, after controlling for adolescents' vocabulary knowledge, the mother secure base script mean score was the strongest predictor of coherence of mind, predicting 13% of the variance. Adolescents' secure base mean scores for fathers and nonspecific others failed to explain substantial variance in their coherence of mind scores (i.e., the only contributions that the father and nonspecific others secure base mean scores made to coherence of mind stemmed from their correlation with the mother secure base script mean score).

In the second set of analyses, we examined whether adolescents' secure base script mean scores were linked to their AAI classifications. To this end, we conducted three one-way analyses of covariance (ANCOVAs) to determine whether secure adolescents, compared to insecure adolescents, had higher secure base script mean scores with respect to mother, father, and nonspecific others (after controlling for adolescents' verbal knowledge; see Table V). As expected, secure adolescents had higher secure base script mean scores for both mothers and fathers than insecure adolescents. Contrary to expectations, attachment-related group differences did not emerge with respect to scripts about nonspecific others.

In the final set of analyses, we examined whether adolescents' secure base script mean scores were linked to their ECR avoidance and anxiety scores, respectively, after controlling for adolescents' vocabulary knowledge (see Table VI). As expected, adolescents' avoidance

Table III. Predicting nonspecific others mean secure base scripts scores from mother and father mean secure base script scores (controlling for vocabulary knowledge).

Predictors	B	β	sr^2	ΔR^2	Total R^2
Step 1					
Shipley Vocabulary Score	−.02	−.10	.01		
				.02	.02
Step 2					
Mother Secure Base Script Score	.43***	.66	.32		
Father Secure Base Script Score	.04	.06	.00		
				.42***	.44

Note: $N = 42$.
***$p < .001$.

Table IV. Predicting AAI coherence of mind scores from mean scripts scores (controlling for vocabulary knowledge).

Predictors	B	β	sr^2	ΔR^2	Total R^2
Step 1					
Shipley Vocabulary Score	−.01	−.02	.00		
				.03	.03
Step 2					
Mother Secure Base Script Score	.83*	.53	.13		
Father Secure Base Script Score	.14	.09	.00		
Nonspecific Others Secure Base Script Score	−.31	−.13	.01		
				.22*	.25

Note: $N = 42$.
*$p < .05$.

Table V. AAI group differences in adolescents' mean script scores (controlling for vocabulary knowledge).

	AAI Group					
	Secure		Insecure			
Script Scores	M	(SD)	M	(SD)	F	η^2
Mother Secure Base Script	4.56	(1.38)	3.67	(1.21)	4.87*	.11
Father Secure Base Script	4.22	(1.19)	3.45	(1.32)	3.93[†]	.09
Nonspecific Others Secure Base Script	3.62	(0.79)	3.49	(1.05)	.22	

Notes: The *n*'s for the analyses regarding the mother and father secure base script scores were 24 secure and 18 insecure adolescents. The *n*'s for the analyses regarding nonspecific others secure base script scores was 24 secure and 20 insecure adolescents. The degrees of freedom for the mother and father secure base scripts scores were $df = 39$. The degrees of freedom for the nonspecific others secure base script scores were $df = 41$.
*$p < .05$, [†]$p = .05$.

Table VI. Correlations between adolescents' ECR scores and mean script scores (controlling for vocabulary knowledge).

	ECR Scores	
Script Scores	Avoidance	Anxiety
Mother Secure Base Script	− .38[†]	− .02
Father Secure Base Script	− .08	− .13
Nonspecific Others Secure Base Script	− .02	− .32[†]

Note: For all correlation coefficients, $n = 40$.
[†]$p = .05$.

scores were linked to their mean mother secure base script scores such that greater romantic attachment-related avoidance was linked to lower secure base script mean scores for mother; contrary to expectations, these avoidance scores were not linked adolescents' script mean scores for father or for nonspecific others. With respect to anxiety, anxiety was linked, as expected, to adolescents' nonspecific others secure base script mean scores such that greater romantic attachment-related anxiety was linked to lower secure base script mean scores for nonspecific others; contrary to expectations, these anxiety scores were not linked adolescents' mean script scores for mother or father.

Discussion

Evidence emerged that (a) adolescents' secure base scripts generalize across context and across persons, and (b) adolescents' secure base scripts are linked to attachment security.

Generalization

Results indicated that adolescents possess generalized secure base scripts about their mothers and about their fathers, and that these generalized secure base scripts hold true for each person across different contexts. In other words, adolescents appear to have scripts about their ability to seek and receive care from each parent at times of stress that do not vary by the specific context. For example, if an adolescent has a script that the mother will be supportive and helpful when the adolescent is feeling rejected, the adolescent is likely to also

have a script that the mother will be supportive and helpful in a situation in which the adolescent is embarrassed about his or her physical appearance. The magnitude of the partial correlations found for the mother – mother and father – father secure base scripts were similar to correlations found in previous (albeit unpublished) research on adolescents (Elliot, Tini, Fetten, & Saunders, 2003).

In addition to indicating generalization of secure base scripts within person across contexts, results offered support for the notion that adolescents may generalize secure base scripts across persons. A low correlation, which would indicate no generalization, did not emerge. Instead, a moderate partial correlation between secure base script scores for mother and for father emerged, and the magnitude of this association corresponded with associations found in previous unpublished research with adolescent girls (Steiner, Arjomand, & Waters, 2003; this finding also meshes with Furman & Simon's, 2004, findings regarding concordance in adolescents' attachment states of mind with respect to mothers and fathers). It is important to note that although the associations between mother and father secure base scripts provide support for a model in which secure base scripts are generalized across both parents, it is possible that generalization may not be occurring. For example, it is possible adolescents maintain separate representations of mothers and fathers, but that these representations are associated with one another because the underlying experiences that give rise to the representations are correlated. Adolescents' experiences across parents may be similar for any of several reasons. For instance, it may be that men and women with similar caregiving styles select one another, and subsequently offer similar levels of secure base provision to the child. It is also possible that an adolescent's relationship with one parent may influence the relationship with the other parent, such that the adolescent's relationship with each parent becomes more similar over time. For example, if the child has a secure relationship with one parent, the other parent may learn how to be more sensitive and responsive by watching their spouse provide sensitive care. Similarly, an adolescent's secure attachment with one parent may contribute to the adolescent's developing skills that would in turn enhance the relationship with the other parent. In all of these cases, the correlation between mother scripts and father scripts would reflect processes other than generalization. The associations found in the present study do not provide a way of distinguishing between the alternative explanatory models, and it is plausible that multiple processes account for the moderate correlation between mother secure base scripts and father secure base scripts.

In addition to finding support for the idea that adolescents may generalize secure base scripts across parents, there was support for the idea that adolescents generalize secure base scripts from parents to non-specific others. Both mother and father secure base script scores were significantly correlated with non-specific other secure base script scores, yet only mother script scores uniquely predicted non-specific other script scores. (In fact, the size of the correlation of the mother mean script score with the non-specific other mean script score was identical to the size of the correlation between the two mother script scores.) Moreover, the mother script scores uniquely explained a sizable amount of the variance in non-specific other secure base script scores (32%). The father secure base script scores appeared to relate to non-specific other script scores only to the extent that father script scores were correlated with the mother script scores. It remains to be seen whether future research will replicate these findings, so the results must be interpreted with some caution. These findings suggest, however, that when adolescents are faced with making sense of new information about hypothetical people about whom nothing is known, adolescents tap into familiar scripts about their mothers, rather than scripts about their fathers. An apparent reliance on mother-related secure base scripts may reflect the

fact that mothers are the primary caregivers in many families, and thus become the principal attachment figure within a hierarchy of multiple attachments (see Bowlby's, 1969/1982, notion of ''monotropy''); adolescents may rely on mother-related scripts because they are simply drawing on the scripts related to their principal attachment figure when generalizing about unknown others. We would expect that when fathers are the primary caregivers, their adolescents' would draw on their father-related scripts. Clearly, more work is needed to address these issues.

Links with attachment

The second study goal was to examine links between adolescents' secure base scripts and attachment security. As noted in the introduction, Bretherton's (1991) theoretical model contains the proposition that scripts are cognitive building blocks of internal working models of attachment, and one way of testing this proposition is to examine whether and how scripts are related to measures that claim to tap the quality of internal working models. Indeed, secure base scripts are not internal working models of attachment; we, like other attachment researchers, believe that internal working models are multifaceted, likely to contain various attachment-related cognitive, affective, and behavioral components (Bretherton & Munholland, 1999; Collins, 1996). This assessment of scripts is not an attempt to capture all aspects of these models, but rather an assessment of whether adolescents had knowledge of and access to a secure base script for mother, father, and non-specific others. Researchers interested in capturing other aspects of internal working models can do so with other assessments. With this is mind, the presence of a link between secure base scripts and measures that purport to tap internal working models provides support for the claim that secure base scripts may be building blocks of internal working models of attachment.

Attachment security was assessed in two ways: (a) state of mind with respect to attachment, assessed with the AAI, and (b) the two dimensions of romantic attachment, anxiety and avoidance, assessed with the ECR. As expected, secure base scripts were related to state of mind with respect to attachment. Although father and non-specific other secure base scripts were moderately associated with AAI coherence of mind, only mother secure base scripts uniquely predicted coherence of mind, with mother secure base scripts explaining 13% of the variance in coherence of mind. This finding of the unique predictive power of the mother secure base scripts mirrored the finding that only mother secure base scripts uniquely predicted non-specific other scripts.

As expected, secure base scripts were linked not only to coherence of mind but also to adolescent AAI attachment classification as either secure or insecure. Secure adolescents had higher mother and father secure base script scores than did insecure adolescents; contrary to expectations however, attachment classification was not linked to non-specific other script scores. The empirical links found in the present study between secure base scripts and attachment (including both coherence of mind and classification as secure/insecure) mirror findings from previous research with adults (Coppola et al., 2006). This pattern of findings provides support for the theoretical model proposed by Bretherton (1991) that scripts act as the building blocks of attachment representations. It is important to note, however, that the pattern of results is also consistent with other potential models. It may be that a third variable predicts both secure base scripts and adult attachment. For example, childhood experiences in a family that speaks coherently and sensitively about relationships may allow an adolescent both to create secure base narratives in response to the narrative task and also to speak coherently enough about childhood attachment experiences

to be classified as secure on the AAI. The current study cannot distinguish between the alternative models. Links between secure base scripts and attachment have been found across multiple studies, but further research will be necessary to establish how to best model the relations that have been found.

In addition to being associated with attachment state of mind, secure base scripts were also related to the two dimensions of romantic attachment, avoidance and anxiety. These links are particularly impressive given that the two measures were administered approximately four months apart. The finding that adolescents high on avoidance received relatively low mother secure base script scores is consistent with previous research that suggests that persons high on avoidance tend to report memories of mothers who were cold and rejecting in childhood (see Feeney, 1999). It makes sense that an adolescent with a cold and rejecting mother would be less likely to develop a secure base script for the mother than an adolescent with a more responsive mother. Contrary to expectation, however, avoidance was not associated with father or non-specific other secure base script scores. It may be that experiences with the mother are central in the development of attachment avoidance, but as stated earlier, examination of whether or not these results replicate will be particularly important.

Results concerning associations between the attachment dimension of anxiety and secure base scripts followed a different pattern. Contrary to our expectations, neither mother nor father secure base scripts was associated with anxiety. Non-specific other secure base scripts, however, were positively correlated with anxiety. This result may reflect the fact that individuals high in attachment-related anxiety tend to report that others are complex and difficult to understand (see Feeney, 1999). It may be that a tendency to view non-specific others as unpredictable and unreliable underlies the inability to construct a secure base script for interactions involving these others.

It is interesting to note that consistent with previous research, AAI attachment security shared only trivial overlap with ECR attachment security (see Roisman et al., 2006). Yet both the AAI and the ECR were linked to adolescents' secure base scripts. Therefore, although the AAI and ECR cannot be viewed as tapping the same components of internal working models of attachment, we found evidence that both are linked to what have been proposed as the building blocks of these models: secure base scripts. Future work is needed to more fully understand the ways in which these two measures (that share only trivial overlap) are both linked to a variety of theoretically-interesting constructs.

Limitations and future directions

The conclusions to be drawn from the present study must be considered in the context of a number of potential limitations. First of all, the sample size in the current study was relatively small, so it may be difficult to generalize with confidence from this single sample. The small sample size also prohibited us from examining the scripts of adolescents with different insecure AAI classifications (e.g., insecure/dismissing versus insecure/preoccupied); examining these scripts is clearly a next step for future research. Similarly, the small sample size may also have reduced statistical power to detect sex differences in adolescents' secure base scripts. Nonetheless, it is important to note that the lack of sex differences in our investigation mesh with the general lack of findings of sex differences in attachment research (Simpson, 1999).

Additional limitations concern the nature of the secure base story prompts. Although girls and boys were given the same story prompts in most cases, girls and boys were given different story prompts for one of the mother-related stories: girls were asked to create a

story concerning acne, whereas boys were given prompts for a story about a haircut. These differing story topics were selected because pilot testing had suggested that adolescents have differing gender-related sensitivities to these concerns about appearance. It is possible that the difference in the stories could have affected the results, but given the fact that no sex differences emerged, the difference in the stories is unlikely to be a problem with respect to results for the mother stories. Perhaps a more substantial problem is the fact that the nature of the content of the stories may have differed across mothers and fathers in ways that could have influenced the pattern of findings. The mother stories focus on situations in which the adolescent feels distress about a perceived rejection or about embarrassment about personal appearance. Thus, the mother stories center on nurturance in the face of potential social problems. The father stories, on the other hand, focus on situations in which the adolescent feels worried about performance on a task (i.e., a sporting event or an exam). The father stories are thus performance-oriented, rather than oriented to nurturance in the context of social difficulties. The differences in the construction of the mother and father story tasks reflects that fact that, during pilot testing, adolescents reported that they turned to their mothers and fathers for support under different circumstances. Moreover, there is evidence that adolescents' relationships with mothers and fathers do in fact differ in these ways (Larson & Richards, 1994). Nonetheless, it is conceivable that these story differences may have contributed to the differences found for mother and father secure base scripts. Future research could investigate whether having more similar stories across mothers and fathers results in more similar patterns of linkages between secure base scripts and attachment. It may be that if stories for father are as centered on nurturance and assistance with social problems as the mother stories, father secure base scripts might predict attachment as well as mother secure base scripts.

Another methodological issue that could be remedied in future studies is the fact that coders in the present study knew which stories were for mother and which for father. Although coders were always blind to an adolescent's scores for other stories, it is conceivable that coders could have been influenced by a nonconscious parent gender bias. Future research could eliminate this potential bias by having coders who are blind to parent gender during coding.

In addition to replications that address the limitations mentioned above, additional research could address several important questions. For instance, with regard to generalization: Is there generalization across parents or are secure base scripts similar because the parents are similar? If there is generalization, does the generalization happen from one parent to the other (if so, how does this work?). Does generalization involve an averaging across the two parents? It may be that generalization works differently for boys and girls. Typically, as mentioned above, attachment has not been linked to sex differences, but that does not mean that all processes are the same for boys and girls. It may be the case, for example, that girls generalize from the mother and boys generalize from the father. Alternatively, both boys and girls may generalize from the primary caregiver (when there is one) to the other parent. One way to answer questions such as these would be to conduct longitudinal studies in which children's actual experiences with parents are tracked from an early age and mother and father narratives in response to prompts are collected over time. Future research that is able to control for the caregiving provided by each parent over time would allow for an examination of evidence for generalization when mother and father provide similar or different types of caregiving. If mother and father narratives were collected over time, it would be possible to track changes in secure base scripts and find evidence for the nature and direction of generalization.

A longitudinal research design that incorporated narratives about non-specific others, in addition to narratives about mother and father, would allow for investigation of the process of generalization from parent secure base scripts to secure base scripts for non-specific others. In the present study, there is no way of knowing what kinds of relationships adolescents thought about when asked to consider non-specific others such as ''Jane and Bob'' camping and ''Sue and Mike'' with regard to an accident. Are these peer relationships or romantic relationships? Are these same age adolescents or older adults? Moreover, it is possible that adolescents draw on the quality of their parents' marital relationship when they construct secure base scripts about non-specific males and females. These narratives could potentially be influenced by what adolescents observe their own parents doing in their relationship with one another, rather than simply by how adolescents experience their parents behaving towards the adolescents themselves. Future research could examine the nature and development of secure base scripts involving non-specific others, as well as scripts involving specific others such as peers, romantic partners, or non-parental adults.

Finally, the longitudinal design described above would allow for investigation of the competing models of the associations between secure base scripts and attachment. Such a design, particularly if it incorporated potential third variables (e.g., the degree to which a family speaks coherently about relationships) that may be related to both secure base scripts and security of attachment on the AAI, might make it possible to address questions about the development of secure base scripts and the development of adult attachment.

Acknowledgements

References

Ainsworth, M. D. S. (1982). Attachment: Retrospect and prospect. In C. M. Parkes & J. Stevenson-Hinde (Eds.), *The place of attachment in human behavior* (pp. 3–30). New York: Basic Books.

Ainsworth, M. D. S. (1989). Attachments beyond infancy. *American Psychologist*, *44*, 709–716.

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.

Allen, J. P., Moore, C., Kuperminc, G., & Bell, K. (1998). Attachment and adolescent psychosocial functioning. *Child Development*, *69*, 1406–1419.

Belsky, J., & Rovine, M. (1987). Temperament and attachment security in the strange situation: An empirical rapprochement. *Child Development*, *58*, 787–795.

Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation.* New York: Basic Books.

Bowlby, J. (1980). *Attachment and loss: Vol. 3. Loss.* New York: Basic Books.

Bowlby, J. (1982). *Attachment and loss. Vol. 1: Attachment* (2nd ed.). New York: Basic Books (Original work published 1969).

Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development.* New York: Basic Books, Inc.

Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult romantic attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46–76). New York: Guilford.

Bretherton, I. (1991). Pouring new wine into old bottles: The social self as internal working model. In M. Gunnar & L. A. Sroufe (Eds.), *Minnesota symposia in child psychology: Self processes in development* (pp. 1–41). Hillsdale, NJ: Erlbaum.

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.

Bretherton, I., Ridgeway, D., & Cassidy, J. (1990). The role of internal working models in the attachment relationship: Can it be assessed in 3-year-olds? In M. Greenburg, D. Cicchetti, & E. M. Cummings (Eds.), *Attachment during the preschool years* (pp. 273–308). Chicago: University of Chicago Press.

Cassidy, J., Ziv, Y., Mehta, T. G., & Feeney, B. C. (2003). Feedback seeking in children and adolescents: Associations with self-perceptions, attachment representations, and depression. *Child Development, 74,* 612–628.

Collins, N. L. (1996). Working models of attachment: Implications for explanation, emotion, and behavior. *Journal of Personality and Social Psychology, 71,* 810–832.

Coppola, G., Vaughn, B. E., Cassibba, R., & Costantini, A. (2006). The Attachment Script Representation Procedure in an Italian sample: Associations with Adult Attachment Interview scales and with maternal sensitivity. *Attachment & Human Development, 8,* 209–219.

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* (pp. 434–468). New York: Guilford Press.

Elliott, M., Tini, M., Fetten, E., & Saunders, A. (2003, April). *Attachment scripts in adult and adolescent males.* Paper presented at the Biennial Meetings of the Society for Research in Child Development, Tampa, FL.

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: Guilford.

Feeney, B. C., & Cassidy, J. (2003). Reconstructive memory related to adolescent–parent conflict interactions: The influence of attachment-related representations on immediate perceptions and changes in perceptions over time. *Journal of Personality & Social Psychology, 85,* 945–955.

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.

George, C., Kaplan, N., & Main, M. (1984). *Adult Attachment Interview Protocol.* Unpublished manuscript, University of California at Berkeley.

George, C., Kaplan, N., & Main, M. (1985). *Adult Attachment Interview Protocol* (2nd ed.). Unpublished manuscript, University of California at Berkeley.

George, C., Kaplan, N., & Main, M. (1996). *Adult Attachment Interview Protocol* (3rd ed.). Unpublished manuscript, University of California at Berkeley.

Grice, P. (1975). Logic and conversation. In P. Cole & J. L. Moran (Eds.), *Syntax and semantics: Vol. 3. Speech acts* (pp. 41–58). New York: Academic Press.

Hesse, E. (1999). The adult attachment interview: Historical and current perspectives. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 395–433). New York: Guilford.

Kirk, J., & Rattan, G. (1992). Critique of the Shipley Institute of Living Scale. In D. J. Keyser & R. C. Sweetland (Eds.), *Test critiques* (Vol. 9). Kansas City, MO: Test Corporation of America.

Larson, R., & Richards, M. H. (1994). *Divergent realities: The emotional lives of mothers, fathers, and adolescents.* New York: Basic Books.

Main, M., & Goldwyn, R. (1998). *Adult attachment rating and classification systems.* Unpublished manuscript, University of California at Berkeley.

Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the representational level. In I. Bretherton & E. Waters (Eds.), *Growing points of attachment theory and research. Monographs of the Society for Research in Child Development, 50*(1–2), 66–104.

Nelson, K., & Gruendel, J. (1986). Children's scripts. In K. Nelson (Ed.), *Event knowledge: Structure and function in development* (pp. 21–46). Hillsdale, NJ: Erlbaum.

Roisman, G. I., Holland, A., Fortuna, K., Fraley, R. C., Clausell, E., & Clarke, A. (under review). *The Adult Attachment Interview and self-reports of attachment style: An empirical rapprochement.*

Schank, R. C., & Abelson, R. (1977). *Scripts, plans, goals, and understanding.* Hillsdale, NJ: Erlbaum.

Shaver, P. R., & Mikulincer, M. (2002). Attachment-related psychodynamics. *Attachment & Human Development*, *4*, 133–161.

Shipley, W. C. (1946). *Institute of Living Scale.* Los Angeles: Western Psychological Services.

Simpson, J. A. (1999). Attachment theory in modern evolutionary perspective. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 115–140). New York: Guilford.

Steiner, M. C., Arjomand, M., & Waters, H. S. (2003, April). *Adolescents' representations of close relationships.* Paper presented at the Biennial Meetings of the Society for Research in Child Development, Tampa, FL.

Thompson, R. A. (1998). Early sociopersonality development. In N. Eisenberg (Ed.), W. Damon (Series Ed.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (5th ed., pp. 25–104). New York: Wiley.

Vaughn, B. E., Coppola, G., Verissimo, M., Monteiro, L., Santos, A. J., Posada, G., et al. (in press). The quality of maternal secure base scripts predicts children's secure base behaviors at home in three socio-cultural groups. *International Journal of Behavioral Development.*

Ward, M. J., & Carlson, E. A. (1995). Associations among adult attachment representations, maternal sensitivity, and infant mother attachment in a sample of adolescent mothers. *Child Development*, *66*, 69–79.

Waters, E. (1995). The attachment Q-set (Version 3). In E. Waters, B. Vaughn, G. Posada, & K. Kondo-Ikemura (Eds.), *Caregiving, cultural, and cognitive perspectives on secure-base behavior and working models: New growing points of attachment theory and research, Monographs of the Society for Research in Child Development*, *60*(2–3, Serial No. 244), 234–246 (Original work published 1987).

Waters, E., & Cummings, E. M. (2000). A secure base from which to explore close relationships. *Child Development*, *71*, 164–172.

Waters, H. S., & Rodrigues-Doolabh, L. (2001, April). *Are attachment scripts the building blocks of attachment representations?* Paper presented at the Biennial Meetings of the Society for Research in Child Development, Minneapolis, MN.

Waters, H. S., Rodrigues, L. M., & Ridgeway, D. (1998). Cognitive underpinnings of narrative attachment assessment. *Journal of Experimental Child Psychology*, *71*, 211–234.

Appendix: Word prompt outlines used in the Adolescent Script Assessment

The Party

Friday night	sulk	Mom
party	couch	movie rental
uninvited	Mom	popcorn
miserable	talk	smile

Acne

Sunday	Mom	laugh
mirror	talk	bathroom
acne	herself	experiment
embarrassed	acne	make-up

The Haircut

weekend	Mom	we laugh
haircut	talk	fix
½ price	herself	clippers
embarrassed	bad haircut	hug

The Tennis Match

championship	opponent	losing
nervous	discuss	look
Dad	strategy	Dad
ask	game begins	thumbs-up

Studying for an Exam

studying	Dad	tutor
exam	newspaper	discuss
difficult	look up	smile
worried	help	sleep

Jane and Bob's Camping Trip

Jane	Tent	campfire
Bob	Wind	shadow
bags	Collapse	sounds
hurry	Upset	hug

Sue's Accident

Sue	Wait	home
road	Mike	dinner
accident	Tears	bed
hospital	Doctor	hug