

ATTACHMENT FEATURES AND FUNCTIONS
IN ROMANTIC RELATIONSHIPS

BY

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THESIS

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ABSTRACT

Although there has been much research on individual differences in adult attachment, less is known about the development of attachment bonds in adult romantic relationships. To address this issue, the present research utilized a cross-sectional Internet survey (Study 1) and a longitudinal study (Study 2). Results supported the idea that attachment features and functions emerge in a specific sequence that begins with proximity seeking, followed by safe haven, and finally secure base (Study 1). The data also indicated that people exhibited relatively little change in attachment features and functions over time (Study 1 and 2) and that adult attachment bonds can develop more quickly than was previously assumed (Study 1).

To my mom, dad, Kevin, and Mike

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CHAPTER 1

INTRODUCTION

Over the last few decades Bowlby's (1969/1982) attachment theory has emerged as one of the leading frameworks for understanding close relationships. Although the theory is often applied to the study of individual differences, or how secure or insecure people are in their relationships, it also offers a normative model for how relationships develop, how they function, and how and why they dissolve. Unfortunately, after a quarter of a century of research, we know relatively little about how attachment bonds are formed in romantic relationships (Simpson & Rholes, 2010). Clarifying the normative processes underlying attachment is important not only because the theory rests on the assumption of a normative pattern of development, but because the early phases of a relationship are the crucial junctures at which people begin to discern whether the partner is a viable attachment figure, caregiver, and sexual partner. Understanding how attachment bonds develop early in a relationship might provide theoretical leverage for understanding what kinds of factors allow relationships to flourish.

The objective of the present research was to help fill this gap by examining the normative development of attachment in romantic relationships. Specifically, we tested a widely accepted model of attachment development (Hazan & Shaver, 1994; Hazan & Zeifman, 1994) using both cross-sectional (Study 1) and longitudinal (Study 2) designs. We begin by reviewing briefly Bowlby's (1969/1982) attachment theory and its extension to adult romantic relationships.

CHAPTER 2

LITERATURE REVIEW

2.1 A Brief Overview of Attachment Development

Bowlby (1969/1982) observed that the young of many altricial species possess a strong propensity to seek and maintain contact to a caregiver. Drawing upon evolutionary theory, he hypothesized that this propensity was the result of an evolved motivational-behavioral system responsible for monitoring the physical and psychological proximity of the primary caregiver. According to Bowlby, such a system would be critical for the survival of individuals who are born with limited capacities for feeding, exploration, and defense. As such, human infants possess features (smiling, large eyes) and behaviors (clinging, crying) that promote contact with the caregiver. When the child senses that the attachment figure is nearby and accessible, the infant experiences “felt security” (Sroufe & Waters, 1977) and, behaviorally, is more sociable and more willing to explore the environment. In contrast, when the attachment figure is distant or inaccessible, the infant becomes distressed and behaves in ways that function to re-establish proximity to the attachment figure (e.g., by searching, crying, clinging).

One of the fundamental assumptions of adult attachment theory is that the same motivational system that is responsible for the bond between infants and their primary caregivers is responsible for the bond that develops between adults in romantic relationships (Hazan & Shaver, 1994). If this assumption is correct, we should expect to observe a number of parallels between infant-caregiver relationships and adult romantic relationships. In fact, previous research has demonstrated many similarities between the two types of relationships. For example, both adults and children (a) feel anxious and restless when separated from their

attachment figures, (b) feel at ease when their attachment figures are nearby and accessible, and (c) engage in “baby talk” with one another (Shaver, Hazan, & Bradshaw, 1988).

Furthermore, both infant-caregiver and adult romantic attachment relationships are characterized by three defining qualities, often referred to as the “features and functions of attachment”: proximity seeking, safe haven, and secure base. For example, infants *seek proximity* to their caregiver, and feel comforted and protected when their caregiver is nearby. Adults also desire frequent close contact with their romantic partners, especially in the initial stages of a romantic relationship when couple members begin to fall in love. Infants use their caregiver as a *haven of safety* when they are frightened or experience distress. Similarly, adults turn to their romantic partners for support in times of duress. Finally, infants use their caregiver as a *secure base* from which to explore new environments, people, toys, and activities. Correspondingly, romantic partners serve as a secure base for one another from which to explore not only the familiar environments of day-to-day life (Hazan & Zeifman, 1999), but also novel environments and activities, such as new career paths, going back to school, or running a marathon.

For infants, these attachment features and functions appear to emerge in an orderly sequence (Zeifman & Hazan, 2008). Initially, infants are indiscriminant in their proximity seeking and will socialize with anyone who engages their attention. Infants begin to preferentially seek proximity to their primary caregiver (i.e., attachment figure) between two and six months of age (Ainsworth, 1967; Marvin & Britner, 2008). They direct smiles and vocalizations toward the caregiver more than others, and also greet the caregiver more enthusiastically than other individuals. Around six to seven months of age, infants begin to use their primary caregiver as a safe haven, a source of soothing and comfort when the infant feels unwell or frightened. Typically by eight months of age, infants establish a secure base with the

primary caregiver, using this person as a base for exploration. They also protest separations from their primary caregiver (Zeifman & Hazan, 2008). Finally, sometime near the end of the second year, children establish a “goal-corrected partnership” (Bowlby, 1969/1982) with their primary caregiver in which they are able to negotiate prolonged periods of separation.

Hazan and Shaver (1994) suggested that the formation of an attachment bond at any age should involve the same sequence: proximity seeking, followed by safe haven, and finally the establishment of a secure base. This developmental sequence is often referenced in the attachment literature (Hazan & Zeifman, 1999; Mikulincer & Shaver, 2007), but, in fact, there has been relatively little research that has examined this developmental process empirically. In the sections below we review the few studies that have been done on this topic and highlight their key findings—along with some of the ambiguities they pose.

2.2 Review of Previous Research

Much of the existing work on attachment development in adulthood has examined how the attachment-related features and functions are transferred from parents to peers in adolescence and young adulthood. In one such study, Hazan and Zeifman (1994) administered an interview measure of attachment features and functions (proximity seeking, safe haven, secure base, and separation protest) to a cross-section of children and adolescents ranging from 6 to 17 years of age. They assessed each component with several questions (i.e., for proximity seeking, “Whom do you like to be close to, spend time with, etc.?”) and asked participants to name a preferred person for each question. They found that attachment-related features and functions are transferred from parents to peers in a step-wise fashion that begins with proximity seeking in childhood (6 to 7 years old), followed by safe haven in adolescence and young adulthood

(between 8 and 14 years of age). Parents continued to serve as the targets for secure base and separation protest until late adolescence (15 to 17 years old). In a second study, Hazan and Zeifman (1994) assessed attachment features and functions among people who had been in romantic relationships for varying lengths of time. Participants were assigned to one of two groups: those who were in romantic relationships that had lasted less than two years and those who were in romantic relationships that had lasted two years or more. Compared to those in shorter relationships, participants in relationships that had lasted two years or more reported greater levels of seeking proximity to their partners, using their partner as a safe haven during times of duress, and using their partner as a secure base from which to explore new environments. Hazan and Zeifman suggested this pattern of results implies that the development of an attachment begins with proximity seeking. Eventually the safe haven component is added, and if the relationship endures beyond two years, a secure base is established—indicating a full-fledged attachment.

Fraley and Davis (1997) also examined the way that attachment features and functions were transferred from parents to peers in a college student sample. Their results replicated those of Hazan and Zeifman (1994, Study 1). Using a survey measure of attachment features and functions, they found that a majority of college students reported seeking proximity to their peers (approximately 78%), a smaller proportion had transferred the safe haven function to their peers (approximately 54%), and a majority still used their parents as a secure base (approximately 60%). Additionally, they found that for participants involved in romantic relationships, the degree to which they had transferred attachment-related functions from their parents to their peers increased as a function of relationship length.

Instead of focusing on a single, primary attachment figure, Trinke and Bartholomew (1997) assessed the network of people that college-aged individuals used for attachment-related functions. Participants listed the significant people in their lives and then ranked those people in the order they would be used for various attachment components including proximity seeking, safe haven, and secure base. The authors focused on the safe haven and secure base features. Results indicated that participants tended to use their peers as a safe haven more so than their parents, but parents, especially mothers, were still primarily used as a secure base. This is consistent with Hazan and Zeifman's (1994) and Fraley and Davis' (1997) findings that young adults are in the midst of transferring safe haven needs to their peers, but that parents remain the target of secure base needs. Additionally, for participants involved in romantic relationships, relationship length was correlated with the partner's mean rank in the attachment hierarchy suggesting that the longer participants had been in their romantic relationships, the more likely they were to direct attachment needs, and particularly secure base needs, toward their partners.

In another study, Friedlemeier and Granqvist (2006) examined attachment features and functions in Swedish and German adolescent samples over a 12- to 15-month time span with two assessment points. In their cross-sectional analyses, their results replicated those of Fraley and Davis (1997). Approximately 90% of adolescents in both the Swedish and German samples were seeking proximity to their peers. As expected, a smaller proportion of each group (40%-60%) reported using their peers as a safe haven, and a majority of adolescents in both groups (54%-75%) still used their parents as a secure base. Based on the assumption that when the secure base feature has been transferred, the two "lower order" functions also should have been transferred, and similarly when safe haven has been transferred, proximity seeking also should have been transferred, the authors created a Guttman scale and computed the coefficient of reproducibility

for both German and Swedish samples at both assessment points. All coefficients were above .95, supporting the Hazan and Zeifman (1994) model of stepwise transfer of attachment features.

Friedlemeier and Granqvist's (2006) prospective analyses, however, did not support the stepwise model. The researchers used the coefficient of reproducibility to test the predicted pattern (from parent to peer) against the opposite pattern (from peer to parent) from Time 1 to Time 2. The coefficient of reproducibility was .84 indicating poor fit for the stepwise model. In fact, for those participants who reported changes in attachment functions, it was just as likely to be in the predicted direction (38%; from parent to peer) as the opposite (37%; peer to parent).

2.3 Summary and Outstanding Issues

In summary, previous research has provided some preliminary evidence that attachment features and functions generally emerge in peer relationships in ways that are similar to their emergence in infancy and early childhood. Nonetheless, there are a few ambiguities in this literature. First, previous studies do not provide a strong consensus on how these features and functions develop. For example, although Friedlemeier and Granqvist (2006) found evidence for the sequential development of attachment functions in their cross-sectional analyses, they did not find evidence for the sequential development of these functions in their prospective analyses. Second, much of this research has been focused on attachment to peers in a very general sense (i.e., including childhood friends) rather than on the development of romantic relationships *per se*. Conceptually, it would be desirable to be able to examine the development of attachment in romantic relationships explicitly rather than examining attachment development in peers more broadly. Third, a number of scholars (Fraley & Davis, 1997; Hazan, Gur-Yaish, & Campa, 2004; Hazan & Zeifman, 1999; Trinke & Bartholomew, 1997) have referenced or loosely replicated

Hazan and Zeifman's (1994) finding that it takes about two years, on average, for romantic attachments to fully develop. However, researchers have not demonstrated unambiguously that there is something unique or special about the two-year mark. Hazan and Zeifman (1994, p. 161) reported that the two-year threshold they highlighted was empirically derived, but they did not report data on alternative thresholds. It could be the case that attachments develop at a faster rate than what was implied by Hazan and Zeifman (1994). Alternatively, it could be the case that it takes considerably longer than two years for romantic attachments to fully develop.

2.4 Overview of the Present Research

The studies reviewed previously offer some insight into the development of attachment bonds in adult romantic relationships. However, these studies are limited in several ways. The objective of the present research was to address these issues by examining the normative development of attachment in adult romantic relationships. In Study 1, we used a cross-sectional design to examine the development of romantic attachment as a function of relationship length. In Study 2, we used a longitudinal design to assess attachment development in college students' romantic relationships over the course of one year.

CHAPTER 3

STUDY 1

We conducted a cross-sectional survey to examine the way in which attachment-related features and functions develop over varying time intervals. Participants provided relationship information and completed a measure of attachment features and functions (Fraley & Davis, 1997). Importantly, we treated relationship length in a more graded fashion than has been done in the past so we could examine how attachment features and functions change over increasing relationship length. In addition, we used Guttman scaling to analyze the theorized sequence of attachment development.

3.1 Methodology

Participants

Data from over 6,000 participants were collected through an Internet survey designed to assess attachment behaviors in past and current relationships. The survey was administered on the second author's web site, www.yourpersonality.net, which contains a variety of web studies related to personality, attachment, and close relationships. The host site can be found via key word searches for terms associated with personality and relationships. It receives approximately 100 to 200 visitors per day, however not all visitors participate in each study posted on the web site.

For the purposes of the present report, we focused on a subsample of 2,306 participants who reported that they were in a dating relationship. The sample comprised 1,899 women (82.4%). The average age was 27.48 years ($SD = 9.58$) and the average relationship length was

17.86 months ($SD = 15.97$). The average age was typical of Internet based studies (Gosling, Vazire, Srivastava, & John, 2004). The gender composition of our sample was slightly atypical, with more women than most Internet studies (see Gosling, et al., 2004, for a comparison of Internet samples and traditional undergraduate samples). We return to this issue in the Discussion. The majority of our sample was from the U.S. ($n = 1,429$), with the remainder of the sample from Canada ($n = 80$) and elsewhere ($n = 797$).

Materials and Procedure

To assess attachment features and functions, participants completed the six-item WHOTO survey by Fraley and Davis (1997)—a measure that was derived from the more extensive WHOTO assessment developed by Hazan and her colleagues (Hazan, Hutt, Sturgeon, & Bricker, 1991). Two items corresponded to each of three attachment features and functions: proximity seeking (e.g., “Who is the person you most like to spend time with?”), safe haven (e.g., “Who is the person you want to be with when you are feeling upset or down?”), and secure base (e.g., “Who is the person you would want to tell first if you achieved something good?”). Participants selected a target person for each of the six items. The options were: mother, father, partner, ex-partner, friend, sibling, and other. Only one option could be selected for each item.

We used a binary coding scheme to analyze attachment features and functions. If a participant selected his or her partner as the target of one or both of the WHOTO items for a particular attachment feature, we considered him or her to be directing that attachment feature toward the partner (coded as 1). If a participant did not select his or her partner as the target for either of the WHOTO items for a particular feature, we considered him or her to be directing that attachment feature toward someone other than the partner (coded as 0).

Participants provided demographic and relationship information, including relationship length. They also completed measures concerning attachment-related anxiety and avoidance, and questions about their past relationships. However, these data were not used in the present analyses.

3.2 Results

The proportions of participants selecting each target for all six questions are presented in Table 1. In the past, researchers (Hazan & Zeifman, 1994) have separated people into two groups: Those who have been involved with their partner for less than two years and those who have been involved for two years or longer. However, there may be some advantages to studying more fine-grained distinctions among people. For historical reasons, we first present some results based on “short” (i.e., < 2 yrs) vs. “long” (≥ 2 yrs) relationships. Next, we present similar analyses in which we treat relationship length in a more graded fashion. Finally, we follow Friedlmeier and Granqvist (2006) and use Guttman scaling to analyze the patterns of attachment features and functions that participants exhibited.

“Short” versus “Long” Relationships. Hazan and Zeifman (1994) suggested that there was a qualitative difference between relationships that had lasted two years or more (fully attached) and those that had lasted for less than two years (not yet fully attached). Following their protocol, we split the participants into two groups. The “short” relationships group comprised people who had been in their relationship for less than two years ($n = 1620$); the “long” relationships group comprised those who had been in their relationship for two years or more ($n = 686$). We then examined the extent to which people directed attachment features and functions toward their partner as a function of “short” versus “long” relationship length. The

results are displayed in Figure 1. For all three attachment features and functions, the two groups had similar proportions of participants who directed the feature toward the partner. In the short relationships group, 85.1% of participants were seeking proximity to the partner compared to 82.7% in the long relationships group, $\chi^2(1) = 2.23$, *ns*. Nearly identical proportions in each group reported using their partners as a safe haven during times of duress: 68.2% in the short relationship group, and 67.6% in the long relationships group, $\chi^2(1) = 0.72$, *ns*. The secure base feature demonstrated the largest difference between the two groups: 63.9% of participants in the short relationships group used their partner as a secure base from which to explore new things compared to 74.6% in the long relationships group, $\chi^2(1) = 25.21$ $p < .001$. Indeed, participants who were in “long” relationships were more likely to use the romantic partner as a secure base compared to participants in “short” relationships.

Attachment Features and Functions over Relationship Length. To better understand proximity seeking, safe haven and secure base as a function of time, we divided relationship length into a sequence of three-month blocks and determined the proportion of people directing each attachment feature toward the partner within each temporal block. There were twenty-one blocks total, with the twenty-first block indicating a relationship of just over five years. (We stopped at twenty-one blocks because several subsequent blocks contained fewer than twenty people.) The sample sizes for each relationship length block ranged from 366 (Block 1, 0-3 months) to 22 (Block 19, 55-57 months). Results are displayed in Figure 2. One way to address the question about the manner in which attachment-related features and functions emerge is to examine the initial block, which includes nascent relationships of three months or less. Seventy-five percent of participants in this group reported seeking proximity to their partner. A smaller proportion of participants reported using the partner as a safe haven during times of duress

(57.4%), and an even smaller proportion reported using the partner as a secure base from which to explore new things (48.4%). These results converge with the expected pattern based on the infant-caregiver model of attachment formation.

It is important to note that the three attachment features and functions are present in a large number of “new” relationships (i.e., relationships that have lasted less than a year). Until now, it has been assumed that people are not fully attached to their romantic partners until approximately two years (Hazan & Zeifman, 1994). Our results suggest that this may not be the case. People appear to become attached to their partners relatively quickly. We return to this issue and its implications for adult attachment theory in the Discussion.

When we examined the attachment-related features and functions over other temporal blocks, proximity seeking appeared relatively stable across relationship length. The proportion of people using the partner as a safe haven fluctuated as relationship length increased and did not show a clear trend. If anything, the association between relationship length and attachment is linear such that the proportion of participants using the partner as a secure base increased as relationship length increased. These results are illustrated with LOESS regression lines in Figure 2 (Cleveland, 1979; Cleveland & Devlin, 1988). These data suggest that, not only is there not a threshold at 2 years for using one’s partner as a secure base, there is no threshold at all. The proportion of people who use their partner as a secure base increases linearly as a function of relationship length, at least within the 5 year span studied here.

Patterns of the Features and Functions. We also examined the specific patterns of the three attachment features and functions that individuals exhibited. For example, one individual might seek proximity to his or her partner and use the partner as a safe haven, but not as a secure base. Another individual might use his or her partner as a safe haven and as a secure base, but

not seek proximity to the partner. Based on the emergence of these features in infant-caregiver relationships, we would expect the latter pattern to be relatively rare since we typically assume attachment features emerge sequentially with proximity seeking emerging first. Results are displayed in Table 2. In accordance with the infant-caregiver sequence, we expected Pattern 2 (proximity seeking only), Pattern 3 (proximity seeking and safe haven), and Pattern 4 (proximity seeking, safe haven, and secure base) to be the most prevalent patterns in our sample, with increasing relationship length for each. Indeed, that is what we found. Pattern 2 (proximity seeking only) accounted for 9.9% of our sample and corresponded to an average relationship length of 13.33 months. Pattern 3 (proximity seeking and safe haven) accounted for 13.0% of our sample and corresponded to an average relationship length of 15.02 months. And Pattern 4 (proximity seeking, safe haven, and secure base) accounted for 49.1% of our sample, and corresponded to an average relationship length of 19.21 months. Pattern 7 (proximity seeking and secure base) accounted for 12.4% of our participants. Importantly, people rarely used the partner as safe haven or secure base without seeking proximity to the partner: Patterns 5, 6, and 8 each occurred in less than 4% of our sample.

Following the analytic technique used by Friedlmeier and Granqvist (2006), we used the pattern data from Table 2 to create a Guttman scale and computed the coefficient of reproducibility. Patterns 5, 6, 7, and 8 all imply a violation of the proposed sequence in which attachment features are expected to emerge, and thus are counted as errors in the calculation of the coefficient of reproducibility (Pattern 5 involves two errors, both for safe haven and secure base). The coefficient of reproducibility was 0.92, indicating that, overall, the data conformed to the sequence expected theoretically.

Summary. In Study 1 our findings supported the proposed sequence of attachment development in which people first seek proximity to their romantic partners, then begin to use their partners as safe havens during times of duress, and finally use their partners as secure bases from which to explore new environments, opportunities, and ideas. We also demonstrated that people who have been in their relationships for less than two years do not differ in any qualitative way from those who have been in their relationships for more than two years. As such, it does not appear that there is anything exceptional about the two-year marker in relationships and that it does not necessarily distinguish between fully attached individuals and not-yet-fully attached individuals. Moreover, there does not appear to be any specific time point that usefully discriminates people who have formed attachments to their partners from those who have not. In fact, the most surprising finding from Study 1 was that many people exhibited the features and functions of attachment much earlier in their relationships than has previously been assumed.

CHAPTER 4

STUDY 2

We conducted a second study to examine the sequencing of attachment features and functions longitudinally. The cross-sectional design that we employed in Study 1, while providing important insight into this little studied topic, also had limitations. Most notably, relationship length was correlated with age ($r = .10$), suggesting that people who had been in their relationships for longer (e.g., those assigned to the later time blocks) also tended to be older than those participants who reported shorter relationship lengths. Thus, it is possible that increases in safe haven and secure base functions were due to an age effect rather than an increasing relationship length effect. Examining the features and functions longitudinally ameliorates this problem because relationship length increases uniformly for all participants.

We begin by presenting the descriptive data on the proportions of participants who selected the partner as the target of the attachment-related features and functions at each assessment point. Next, we use hierarchical linear modeling to fit linear growth models for each of the attachment-related features and functions while controlling for relationship length and age at the study initiation.

4.1 Methodology

Participants

Participants were recruited from the campus of a large Midwestern university as well as the surrounding community. Data from over 400 romantically involved participants were collected. Both dyad members participated. For the purposes of this study, we focused on those

participants who did not experience a breakup during the year-long study and who completed data at all five data collection points. Both dyad members did not have to qualify in order for one of their data to be used. For example if one dyad member did not complete assessments at all five time-points, but the other dyad member did, we included the latter participant's data in our analyses, but not the former participant's data. Our sample size was 121 (52.9% women). The average age was 20.31 years ($SD = 1.70$) and the average relationship length was 16.18 months ($SD = 15.87$). The majority of our sample was Caucasian (80.2%), followed by Chinese (8.3%), and Indian/Pakistani (3.3%).

Materials and Procedures

To establish rapport, explain the study's procedures, and obtain the first assessment, both couple members came to our laboratory for an initial visit. Following this visit, participants completed online assessments four more times over the course of one year. Participants completed the assessments individually and from their own homes. They were paid a portion of their total stipend upfront and received \$150 total if they completed the study. If they withdrew from the study early, they were paid in a way that was proportional to their participation. Each assessment consisted of multiple surveys to assess personality, relationship functioning, attachment, and intrapersonal functioning. For the purposes of the present study, we focus on a subset of these inventories related to attachment features and functions and relationship functioning.

Adult Attachment Features and Functions. At all five assessments participants completed the same 6-item WHOTO (Fraley & Davis, 1997) measure used in Study 1. This measure and the coding scheme are described in full under Study 1.

4.2 Results

The proportions of participants selecting their partner as the target for proximity seeking, safe haven, and secure base (WHOTO Fraley & Davis, 1997) at each time point are presented in Table 3. At Time 1, 95% of participants sought proximity to their partner, which decreased to 91.7% at Times 2, 3, and 4, and decreased further to 86.0% at Time 5 (see Figure 3). Based on these proportions, it appears that participants may seek proximity to their partners less frequently as relationships progress.

The trends for safe haven and secure base are less clear. At Time 1, 78.5% of participants reported using their partner as a safe haven in times of duress. This proportion fluctuated at the subsequent time points: 83.5% at Time 2, 77.7% at Time 3, 71.1% at Time 4, and 72.7% at Time 5. It appears that after an initial increase in the tendency to use the partner as a safe haven, there was a slight but steady decline in the proportion of participants whose partners served as a haven of safety. For secure base, at Time 1, 69.4% of participants reported their partner as the target. It is important to recall that the average relationship length at Time 1 was well under two years (16.18 months) and yet a majority of our participants at this time point already used the partner as a secure base. At subsequent time points, this proportion fluctuated without a clear trend: 68.6% at Time 2 and 3, 73.6 at Time 4, and 66.1 at Time 5.

However, there is one potential problem with examining these raw data. Participants entered the study at varying relationships lengths (less than one month to over five years) and ages (18-25). It is possible that the variation in relationship length and age obfuscated meaningful changes over the five time points. Therefore, we present next hierarchical models that take relationship length and age into account.

To examine the variation in the extent to which participants directed the specific features and functions toward their romantic partners over time, we used multilevel modeling. In these models, the “level one” equation represented the repeated measurements of attachment features within a person; the “level two” equations represented person-level variables, such as relationship length and age (Dai, Li, & Rocke, 2006). We fit separate models for each attachment feature: proximity seeking, safe haven, and secure base. Because our outcome variables were binary, we used hierarchical logistic models in which “1” was used to represent the direction of the attachment feature toward the romantic partner and “0” was used to represent the direction of the attachment feature toward someone else.

The basic form of the models used in each analysis was as follows:

Level 1 (within individual)

$$\text{logit}(\text{attachment feature/function}) = \beta_{0j} + \beta_{1j}(\text{time}) + R_{ij}$$

Level 2 (between individuals)

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(\text{age}) + \gamma_{02}(\text{relationship length}) + U_{0j}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}(\text{age}) + \gamma_{12}(\text{relationship length}) + U_{1j}$$

At level 1 we used time as a predictor for the attachment feature. Time was based on the five measurement occasions and was coded 0, 1, 2, 3, and 4. The Level 2 equations contained person-level predictors. Specifically, to examine the effect of participant age and relationship length at study initiation, we included these variables in the model as explanatory variables for the random intercept and the random slope of time.

For each attachment feature, we used SAS PROC GLIMMIX to estimate parameters for four multilevel logistic models: a null model, a random intercept model, a random slope model, and a random intercept and slope model. (The equations above represent the most inclusive of

these—the random intercept and slope model.) The random slope and intercept model was the best fitting model for each of the three attachment features and functions based on the -2 Log Likelihood, AIC, and BIC. Lower values of these indices indicate better fit. As such, we focus on the random intercept and slope models in the results that follow.

Proximity Seeking. We first examined the association between time and the probability that a participant sought proximity to his or her partner (see Table 4). The parameter coefficient for the effect of time was not significant, $\beta_{1j} = 3.01$, $t(481) = 1.06$, $p = .29$, indicating that the probability of seeking proximity to the partner did not change over time. The parameter coefficient for age was not significant, $\gamma_{11} = 0.53$, $t(118) = 1.25$, $p = .22$, suggesting that age did not influence the probability of seeking proximity to the partner. The parameter effect for relationship length was not significant, $\gamma_{12} = -0.06$, $t(118) = -1.35$, $p = .18$. This suggests that people who had been in their relationships for longer were no more or less likely to seek proximity to their partners than those who were in newer relationships. The two cross-level interactions between age and time and relationship length and time were not significant.

Safe Haven. In the next analysis we examined the association between time and the probability that a participant used his or her partner as a safe haven in times of duress. The parameter coefficient for the effect of time was not significant, $\beta_{1j} = -0.58$, $t(481) = -0.48$, $p = .63$, suggesting that the probability of using the partner as a safe haven did not change over time. Neither age, $\gamma_{11} = 0.04$, $t(118) = 0.22$, $p = .82$, nor relationship length, $\gamma_{12} = 0.3$, $t(118) = 1.24$, $p = .22$, predicted the probability of using the partner as a safe-haven. The cross-level interactions between age and time and relationship length and time were not significant.

Secure Base. Finally, we examined the association between time and the probability that a participant used his or her partner as a secure base from which to explore new environments

and opportunities. The parameter coefficient for the effect of time was not significant, $\beta_{1j} = 0.84$, $t(481) = 0.54$, $p = .59$, suggesting that the probability of using the romantic partner as a secure base did not change significantly over time. The coefficient for the effect of age was significant and positive, $\gamma_{11} = 0.55$, $t(118) = 2.83$, $p < .01$, which suggests that the probability of using the partner as a secure base was greater for older participants compared to younger participants. The partial odds-ratio for the effect of age is given by $e^{(0.55)} = 1.73$, indicated that for each unit increase in age (year), the odds of using the partner as a secure base are 1.73 times higher.

In summary, over increasing time in our year-long longitudinal study, there was no significant change in the probabilities of seeking proximity to the partner, using the partner as a safe haven in times of duress, or using the partner as a secure base from which to explore new environments. However, age predicted the probability of using the partner as a secure base. Older people were more likely to use their partner as a secure base compared to younger people. It is important to note that this is based on an analysis that jointly controls time, variation in relationship length, and age. Thus, the fact that people in longer relationships appear to be more likely to use their partner as a secure base compared to people in shorter relationships might be due to age: people in longer relationships tend to be older on average.

CHAPTER 5

DISCUSSION

The main objective of this research was to examine the normative process by which people become attached to romantic partners in adulthood. Specifically, we examined the sequence in which people come to seek proximity to a romantic partner, use the partner as a safe haven in times of duress, and use the partner as a secure base from which to explore new environments. We examined this process using both a cross-sectional study (Study 1) and a longitudinal study (Study 2). The studies yielded three major findings. First, we found support for the proposed sequence in which attachment-related features and functions are expected to emerge. Second, the extent to which these features and functions characterized the romantic relationship did not change much over time. Third, and perhaps most importantly, people showed signs of being attached to their partners early in their romantic relationships—earlier than might be expected on the basis of previous theory. We will address each of these findings in turn.

In Study 1, we demonstrated that for people in new relationships (e.g., in the initial relationship length block of 0-3 months), proximity seeking was the most prevalent attachment feature, followed by safe haven, and finally the establishment of a secure base. This supports the sequence in which these features were expected to emerge (Hazan & Shaver, 1994). Similarly, using Guttman scaling, we found a high coefficient of reproducibility indicating good fit of the sequential model with proximity seeking emerging first, followed by safe haven, and finally secure base.

The second major finding was that the extent to which people sought proximity to their partners and relied on their partners for safe haven and secure base functions exhibited relatively

little change over time. In Study 1 we employed a cross-sectional design to examine the attachment features and functions over increasing relationship length. The extent to which people sought proximity to their partners remained relatively stable over increasing relationship length. At each relationship length block, approximately 80% of our participants sought proximity to their partners. Safe haven exhibited an unclear pattern across varying relationship lengths. The proportion of participants using their partner as a safe haven fluctuated over time without a consistent or meaningful pattern. The proportion of participants using their partner as a secure base increased as relationship length increased, suggesting that people in more established relationships were more likely to use their partners as a secure base than those in newer relationships.

In Study 2, we addressed the issue of change over increasing relationship length longitudinally. We demonstrated that after taking relationship length and age into account, there were no significant changes in the proximity seeking, safe haven or secure base functions over the course of our yearlong longitudinal study. However, participant age predicted the probability of using the partner as a secure base. Older people were more likely than younger people to use the partner as a secure base. The effect of age is consistent with previous research showing that older people were more likely to have transferred attachment functions to peers (Fraley & Davis, 1997; Hazan & Zeifman, 1994).

The third and most important finding from our studies was the presence of attachment-related features and functions in relatively new relationships. There are at least two potential explanations might account for this finding. One possibility is that there is a problem with the way we commonly measure these constructs in adults. Even if attachment-related features and functions are relevant in the context of new relationships, it seems unlikely that they play the

same role in new relationships as they do in more established relationships. Perhaps our measures are not sensitive enough to distinguish between full-fledged attachments and attachments that are still developing. If our measures are too “easy” then nearly everyone with any degree of attachment to their partner will score at the high end of the scale. In other words, it is possible that the measurement of attachment functions used in this research is analogous to administering a simple test of addition to assess people’s skills in calculus. Most people would probably score high on the test, but the test would be unable to distinguish between those people with exceptional calculus skills and those with mediocre or poor calculus skills. It may be that we are measuring attachment features and functions in a way that is simply too lenient so we are unable to distinguish between people whose attachments are “full-fledged” and those whose attachments are at earlier levels of development. This might also explain why we detected very little change in attachment features and functions over time. If people score high on our measures of attachment features and functions in the beginning stages of a relationship, there is not much room to increase. As a field, we need to continue to work to better understand and solve this issue. Perhaps there are modifications that can be made to our measures that will make them more sensitive at higher levels of attachment. For example, it is possible that administering our measures using an experience sampling methodology would more adequately capture people’s attachment realities. That is, people would report on the people they *actually* sought proximity to, used as a safe haven, and used as a secure base throughout their daily lives, rather than their own general summary of who they tend to turn to for these attachment needs.

However, another possibility is that the measurement of these constructs is adequate and that the field (ourselves included) has simply overestimated the amount of time it takes for attachment relationships to develop. Why might attachment functions become relevant so early

in relationship development? One potential explanation may be derived from recent research by Eastwick and Finkel (2008). They found that attachment features and functions were relevant even in fledgling relationships that were not yet “official” dating relationships, and that the features and functions might take on a fantasy-like quality in the earliest stages of relationships. In their studies attachment anxiety within fledgling relationships was normative and it predicted engagement in partner-directed attachment features and functions in both correlational (Study 2) and experimental (Study 4) studies. Eastwick and Finkel observed: “It is almost as if a central component of the experience of passionate love is the fantasy that one will ultimately possess an attachment bond with the desired partner (p. 642).” A fantasy-like simulation of the relationship as if it were an attachment relationship might help people get a sense for the partner’s potential as an attachment figure. If people conclude the partner is a viable attachment figure, there would be little reason to delay the development of an attachment bond for two years.

Another issue to consider is that people might be quick to develop attachments to adult romantic partners because most adults already have established attachment bonds, typically with their parents. Perhaps then, establishing new attachments to romantic partners poses less of a risk because even if the new attachment bond ultimately fails, there is another attachment figure to fall back on for attachment-related needs. For instance, Fraley and Davis (1997) found that using a best friend as an attachment figure was positively correlated with having a secure working model of attachment, and negatively correlated with having a dismissing-avoidant model of attachment. This association might extend to the present findings. We are not suggesting that all adults have secure working models of attachment. Rather, previously developed attachments with parents, whether secure or insecure, may facilitate the formation of attachments with new partners because there is less to lose if the new attachment fails.

A final point is that, even in the infant attachment literature, infants do not take two years to become fully attached to their caregivers. Instead, infants are typically fully attached to their primary caregiver within the first year of life and the quality of that bond can be assessed in the strange situation procedure (Ainsworth, Blehar, Waters, & Wall, 1978). Furthermore, physical and cognitive milestones set the pace for infant attachment. For instance, an infant cannot use her caregiver as a secure base from which to explore her environment until she has the motor skills necessary to engage in exploration. In adult romantic attachment, there are no comparable pacemakers.

Limitations and Future Directions

There were several limitations in the present studies that could be addressed in future research. First, we had a high proportion of women participating in Study 1 (82.4%). This is comparable to the proportion of women participating in other Internet-based, relationship surveys (Fraley, Heffernan, Vicary, & Brumbaugh, 2011; Saavedra, Chapman, & Rogge, 2010). It is possible that women are more interested in taking an Internet survey of a relational nature like the current study because women are more interdependent and concerned with close relationships compared to men (Cross & Madson, 1997). This highlights a potential issue: whether the men in our sample are representative of men more generally. It is possible that men who participate in Internet studies like ours differ from men who do not participate in these types of studies. Unfortunately, we have no way of knowing this with our data. However, in Study 2 we had nearly equal proportions of men and women who participated. Thus interpreting results from Study 1 in conjunction with those from Study 2 mitigates this limitation. Future research should address this issue more directly to determine whether men participating via the Internet and in lab-based studies are generally the same.

A second limitation was in our assessment of relationship length in Study 1. We assessed relationship length in a way that did not permit comparisons between dating participants and married participants. As such, we focused on a subsample of dating people. Indeed, it is possible that this sample is ideal for studying the normative development of attachment bonds in romantic relationships because we might expect more developmental changes to occur in the early years of a relationship than after twenty-five years of marriage. However, examining attachment features and functions in married individuals would enhance our understanding of normative attachment development and is a potential direction for future research.

In closing, the current findings support the proposed *sequence* in which attachment features and functions are expected to develop, but suggest that the *timing* of attachment development might be much faster than has been previously assumed. It is critical that future research determine whether these attachments are indicative of a true attachment or if our measures are not sensitive enough to distinguish between full-fledged attachments and attachments that are still developing. Answering this question and discovering ways to increase the sensitivity of our measures are imperative to advance our understanding of the normative development of attachment in adult romantic relationships.

REFERENCES

- Ainsworth, M. D. S. (1967). *Infancy in Uganda: Infant care and the growth of love*. Baltimore: Johns Hopkins University Press.
- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment*. Hillsdale, NJ: Erlbaum.
- Bowlby, J. (1982). *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books. (Original work published in 1969)
- Cleveland, W. S. (1979). Robust locally weighted regression and smoothing scatterplots. *Journal of the American Statistical Association*, 74, (368): 829–836.
- Cleveland, W.S. & Devlin, S. J. (1988). Locally-weighted regression: An approach to regression analysis by local fitting. *Journal of the American Statistical Association*, 83, (403): 596–610.
- Cross, S. E., & Madson, L. (1997). Models of the self: Self-construals and gender. *Psychological Bulletin*, 122, 5-37.
- Dai, J., Li, Z., & Rocke, D. Hierarchical logistic regression modeling with SAS GLIMMIX. Available at: www.lexjansen.com/wuss/2006/Analytics/ANL-Dai.pdf, 2006.
- Eastwick, P. W., & Finkel, E. J. (2008). Attachment in fledgling relationships: An activating role for attachment anxiety. *Journal of Personality and Social Psychology*, 95, 628-647.
- Fraley, R. C., & Davis, K. E. (1997). Attachment formation and transfer in young adults' close friendships and romantic relationships. *Personal Relationships*, 4, 131-144.

- Fraley, R. C., Heffernan, M. E., Vicary, A. M., & Brumbaugh, C. C. (in press). The Experiences in Close Relationships-Relationship Structures questionnaire: A method for assessing attachment orientations across relationships. *Psychological Assessment*.
- Friedlmeier, W., & Granqvist, P. (2006). Attachment transfer among Swedish and German adolescents: A prospective longitudinal study. *Personal Relationships*, 13, 261-279.
- Gosling, S. D., Vazire, S., Srivastava, S., & John, O. P. (2004). Should we trust web-based studies? A comparative analysis of six preconceptions about internet questionnaires. *American Psychologist*, 59, 93-104.
- Hazan, C., Hutt, M. J., Sturgeon, J., & Bricker, T. (1991, April). *The process of relinquishing parents as attachment figures*. Paper presented at the biennial meetings of the Society for Research in Child Development in Seattle, WA.
- Hazan, C., Gur-Yaish, N., & Campa, M. (2004) What does it mean to be attached? In W. S. Rholes and J. A. Simpson (Eds.), *Adult Attachment: Theory, research, and clinical implications* (55-85). New York: Guilford Publications.
- Hazan, C., & Shaver, P. R. (1994). Attachment as an organizational framework for research on close relationships. *Psychological Inquiry*, 5, 1-22.
- Hazan, C., & Zeifman, D. (1994). Attachment processes in adulthood. In K. Bartholomew and D. Perlman (Eds.), *Advances in Personal Relationships, Vol. 5*. (151-178). London: Jessica Kingsley Publishers.
- Hazan, C., & Zeifman, D. (1999). Pairbonds as attachments: Evaluating the evidence. In J. Cassidy and P. R. Shaver (Eds.), *Handbook of Attachment: Theory, Research, and Clinical Applications*, 336-354. New York: Guilford Press.

- Marvin, R. S., & Britner, P. A. (2008) Normative development: The ontogeny of attachment. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of Attachment: Theory, Research and Clinical Applications*, 269-294. New York: Guilford Press.
- Mikulincer, M., & Shaver, P. R. (2007) Normative attachment processes. *Attachment in Adulthood: Structure, Dynamics, and Change*. New York: Guilford Press.
- Saavedra, M. C., Chapman, K. E., & Rogge, R. D. (2010). Clarifying links between attachment and relationship quality: Hostile conflict and mindfulness as moderators. *Journal of Family Psychology*, 24, 380-390.
- Shaver, P. R., Hazan, C., & Bradshaw, D. (1988). Love as attachment. In R. J. Sternberg and M. L. Barnes (Eds.), *The Psychology of Love*, 68-99. New Haven, CT: Yale University Press.
- Simpson, J. A., & Rholes, W. S., (2010) Attachment and relationships: Milestones and future directions. *Journal of Social and Personal Relationships*, 27, 173-180.
- Sroufe, L. A., & Waters, E. (1977). Attachment as an organizational construct. *Child Development*, 48, 1184-1199.
- Trinke, S. J., & Bartholomew, K. (1997). Hierarchies of attachment relationships in young adulthood. *Journal of Social and Personal Relationships*, 14, 603-625.
- Zeifman, D., & Hazan, C. (2008). Pair bonds as attachments: Reevaluating the evidence. In J. Cassidy and P. R. Shaver (Eds.), *Handbook of Attachment: Theory, Research, and Clinical Applications*, 436-354. New York, Guilford Press.

TABLES

Table 1

Study 1: Percentage of participants endorsing each person as the target for the six WHOTO (Fraley & Davis, 1997) items

WHOTO Items	Response Options						
	Mother	Father	Partner	Ex-Partner	Friend	Sibling	Other
Proximity Seeking							
Who is the person you most like to spend time with?	3.0	0.6	74.6	2.3	11.1	3.7	4.6
Who is the person you do not like to be away from?	8.2	2.0	68.0	3.4	4.7	3.5	9.4
Safe Haven							
Who is the person you want to be with when you are feeling upset or down?	6.5	1.2	64.0	3.9	14.4	3.5	6.2
Who is the person you would count on for advice?	19.9	6.2	28.6	3.0	29.4	7.6	4.9

Table 1 (cont.)

WHOTO Items	Mother	Father	Partner	Ex-Partner	Friend	Sibling	Other
Secure Base							
Who is the person you would want to tell first if you achieved something good?	20.4	7.6	60.4	1.7	5.5	2.5	1.7
Who is the person you can always count on?	27.2	8.6	34.0	2.3	13.5	7.2	6.5

Note. Rows may not add to 100% due to non-responses.

Table 2

Study 1 Proportions of participants in each pattern of attachment and corresponding average relationship length

	Attachment features			Percent of participants in this pattern	Average relationship length in months (SD)
	PS	SH	SB		
Pattern 1	-	-	-	7.4% (N = 170)	17.02 (17.00)
Pattern 2	✓	-	-	9.9% (N = 229)	13.33 (13.60)
Pattern 3	✓	✓	-	13.0% (N = 299)	15.02 (14.83)
Pattern 4	✓	✓	✓	49.1% (N = 1133)	19.21 (15.94)
Pattern 5	-	✓	✓	3.3% (N = 76)	19.38 (15.72)
Pattern 6	-	-	✓	2.3% (N = 53)	25.02 (20.91)
Pattern 7	✓	-	✓	12.4% (N = 285)	19.02 (16.35)
Pattern 8	-	✓	-	2.6% (N = 61)	12.64 (14.31)

PS = Proximity Seeking SH = Safe Haven SB = Secure Base

Table 3

Study 2: Percent of sample endorsing partner as target of WHOTO attachment features and functions (Fraley & Davis, 1997)

	Attachment Feature and Functions		
	Proximity Seeking	Safe Haven	Secure Base
Time 1	95.0%	78.5%	69.4%
Time 2	91.7%	83.5%	68.6%
Time 3	91.7%	77.7%	68.6%
Time 4	91.7%	71.1%	73.6%
Time 5	86.0%	72.7%	66.1%

Table 4

Study 2: Parameter coefficients and fit statistics for the three hierarchical logistic models

	Proximity Seeking			Safe Haven			Secure Base		
	Estimate	S.E.	p	Estimate	S.E.	p	Estimate	S.E.	p
Level 1									
Intercept	-2.77	8.11	0.73	1.11	3.40	0.74	-9.71	3.77	0.01
Time	3.01	2.83	0.29	-0.58	1.21	0.63	0.84	1.57	0.59
Level 2									
Age	0.53	0.43	0.22	0.04	0.17	0.82	0.55	0.19	0.01
Relationship Length	-0.06	0.04	0.18	0.03	0.02	0.22	0.00	0.02	1.00
Cross-level									
Age*Time	-0.16	0.15	0.26	0.02	0.06	0.76	-0.04	0.08	0.63
Relationship Length*Time	0.03	0.02	0.13	0.01	0.01	0.38	0.01	0.01	0.43

Table 4 (cont.)

	Proximity Seeking			Safe Haven			Secure Base		
	Estimate	<i>S.E.</i>	<i>p</i>	Estimate	<i>S.E.</i>	<i>p</i>	Estimate	<i>S.E.</i>	<i>p</i>
Variance									
Intercept	22.86	13.73		3.23	1.10		3.70	1.50	
Time	2.43	1.74		0.20	0.18		0.53	0.40	
Fit Statistics									
-2 Log Likelihood	270.08			561.78			595.94		
AIC	286.08			577.78			611.94		
BIC	308.45			600.14			634.31		

FIGURES

Figure 1

Study 1: Proportion of participants directing each attachment feature toward the romantic partner.

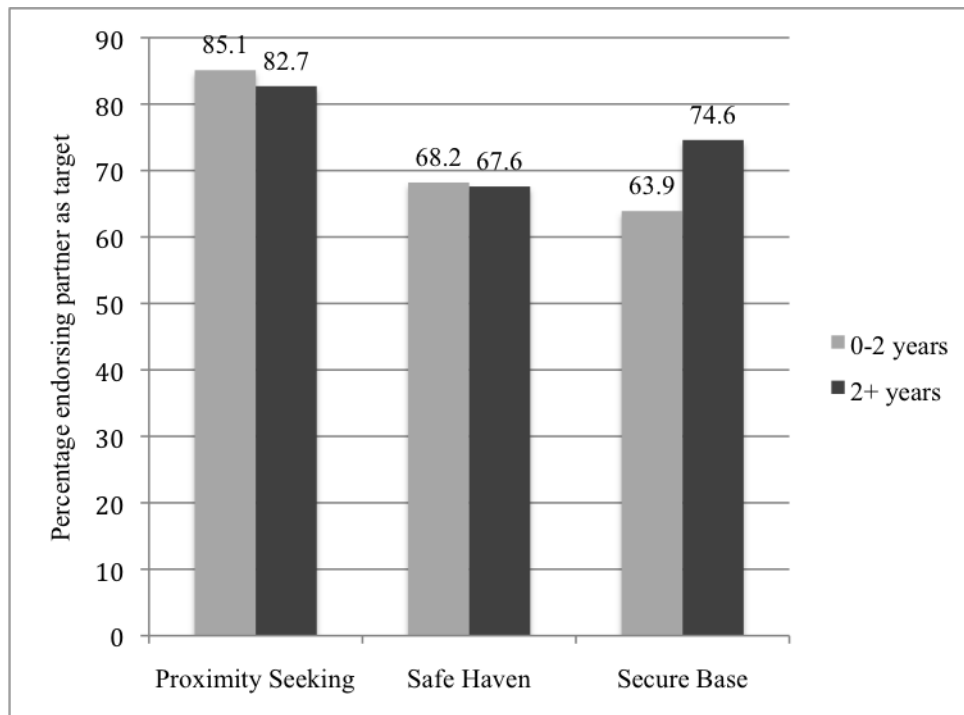


Figure 2

Study 1: Percent of participants directing each attachment feature toward the partner by relationship length with LOESS lines.

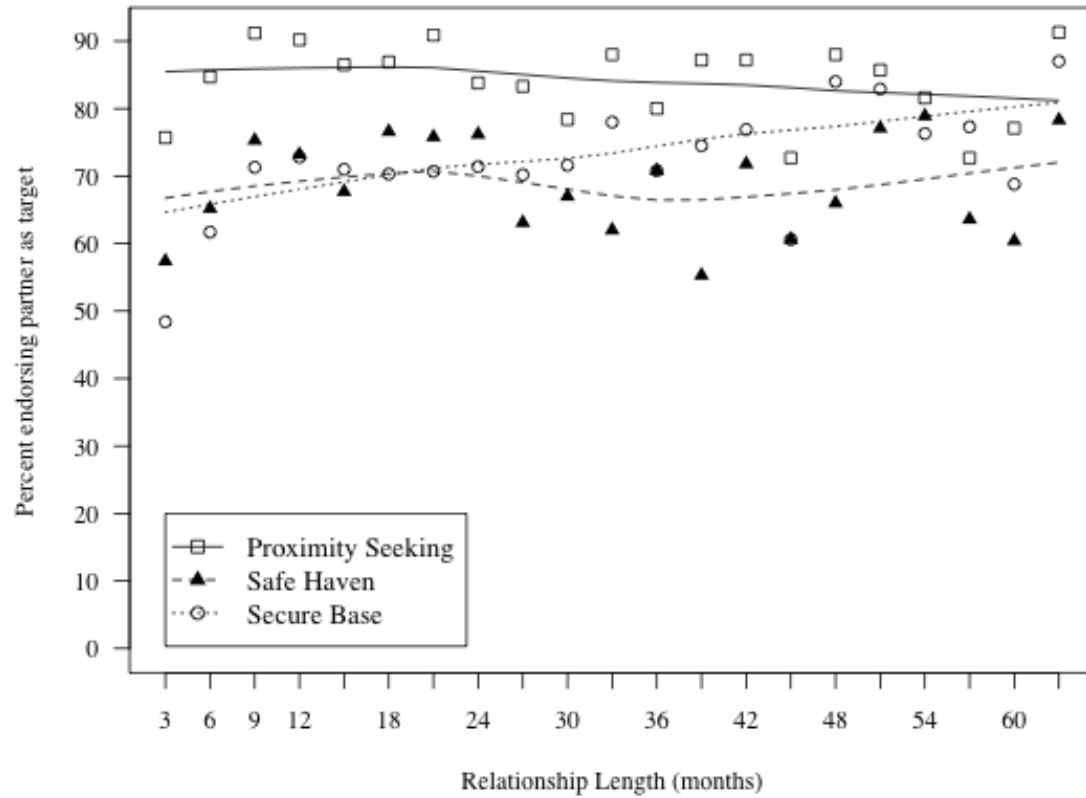


Figure 3

Study 2: Percent of sample directing each attachment feature toward the partner by assessment wave.

