making of romantic attachment bonds: Longitudinal trajectories and implications for relationship stability

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Abstract

The current study outlined the timing of romantic attachment formation and its implications for relationship stability. People came to prefer their romantic partners for proximity and as a safe haven roughly 4 months after commitment; it took over 2 years to prefer them as their primary secure base. More anxiously attached people preferred their partner for proximity earlier than less anxiously attached people; more avoidantly attached people reported less preference for their romantic partner for all attachment components at the time of initial commitment compared to less avoidantly attached people. Those who more quickly represented their romantic partner as a secure base were less likely to subsequently break up; accordingly, normative attachment development may be prognostic for relationship stability.

One of the most appealing aspects of adult attachment theory is that it provides a framework for relationship scientists to conceptualize both normative processes and individual difference patterns in adult romantic relationships (Hazan, Gur-Yaish, & Campa, 2004). Yet since the inception of adult attachment theory as a framework to understand romantic relationship dynamics, the field has almost exclusively focused on understanding how individual differences in attachment orientation are associated with relationship functioning. Thus, we know little about the development of behaviors that define all established attachment relationships (regardless of individual differences in attachment orientation), denoted normative attachment behaviors. Although researchers have consistently called for a closer examination of normative attachment (Hazan et al., 2004; Marvin & Britner, 1999; Simpson & Rholes, 2010), only a few studies have done so (e.g., Fraley & Shaver, 1997; Trinke & Bartholomew, 1997). This may primarily be due to the fact that variability in normative attachment occurs during the first 2 years of dating (Fraley & Davis, 1997; Hazan & Zeifman, 1994), and relationship researchers have historically ignored early relational processes (Eastwick & Finkel, 2008a).

Recently, researchers have focused increased attention on investigating early relational processes (Eastwick & Finkel, 2008b;
Schindler, Fagundes, & Murdock, 2010); in so doing, they have also started to evaluate normative attachment in addition to attachment orientation (Eastwick & Finkel, 2008a). However, this research is limited by the fact that we know very little about the time course of normative attachment development, as well as whether it is associated with long-term relational outcomes.

Normative attachment development

Normative attachments are defined by the presence of distinct types of behavior that Bowlby (1982) first recognized studying how infants behave toward their caregivers. These behaviors are as follows: seeking and maintaining closeness (“proximity seeking”), turning to an attachment figure for comfort and reassurance (“safe haven behavior”), experiencing distress when separated (“separation distress behavior”), and using an attachment figure as a reliable base of support “secure base behavior” (Bowlby, 1988b; Diamond, 2001; Hazan & Zeifman, 1999).

Bowlby’s research focused exclusively on the mother as the infant’s attachment figure. Subsequent empirical and theoretical work suggests that people typically have one primary attachment figure who is the most salient and influential person in their lives, followed by a number of secondary or tertiary attachment figures who are somewhat less influential and important (Bretherton, 1985; Trinke & Bartholomew, 1997). These attachment figures are thought to be arranged hierarchically based on who an individual prefers to orient toward for the behavioral-based attachment components (Hazan et al., 2004; Trinke & Bartholomew, 1997). For infants and children, parents are usually positioned at the top of this hierarchy followed by other caregivers such as grandparents. With advancing age, peers are utilized as attachment figures as well to a certain extent but are rarely primary attachment figures (Allen & Land, 1999; Diamond & Fagundes, 2008; Hazan et al., 2004). In adulthood, romantic partners typically take over the role of primary attachment figures for all attachment components (Doherty & Feeney, 2004; Fraley & Davis, 1997; Hazan & Zeifman, 1994; Trinke & Bartholomew, 1997). Thus, the most dramatic normative reshuffling of one’s attachment hierarchy is thought to occur when an individual enters into a serious romantic relationship. Surprisingly, we know very little about how (a) attachment components are transferred to romantic partners and (b) the normative time course for this transfer.

Hazan and Zeifman (1994) hypothesized that young adults sequentially transfer attachment components from parents to romantic partners such that people first utilize their romantic partner for proximity, then as a safe haven, and finally as a secure base. To test this hypothesis, Hazan and Zeifman (1994) developed a self-report questionnaire (the WHOTO) that assesses to whom an individual primarily directs attachment needs. Using cross-sectional data from people at different stages of a relationship, they found that virtually no one utilized his or her romantic partner as the primary target of proximity, safe haven, or secure base components before entering into a committed romantic relationship (exclusive dating relationship). During the first 2 years of a committed romantic relationship, approximately 50% of the people primarily utilized their romantic partner for proximity and 35% primarily utilized him or her for safe haven and secure base. After the first 2 years of a romantic relationship, they found that over 80% of the people primarily utilized their romantic partner for proximity seeking, safe haven, and secure base components (i.e., nominated their partner as the first person they utilize for the attachment components). This pattern of transfer corresponds to the stages of attachment development that Ainsworth (1972) described as “preattachment,” “attachment in the making,” and “clear-cut attachment” (Bowlby, 1982; Fraley & Shaver, 2000; Hazan & Zeifman, 1994). We sought to replicate and extend this finding.

Hazan and Zeifman (1994) demonstrated that, on average, it takes 2 years for a romantic partner to become preferred over parents or peers as a secure base and that the other attachment components are transferred to the partner much earlier in the dating relationship,
yet they did not model a time course for this development. Furthermore, by only examining primary attachment figures, they did not examine when romantic partners first become tertiary (or secondary) attachment figures. We sought to examine the precise time course that romantic partners ascend people’s attachment hierarchies for proximity, safe haven, and secure base components from early dating to 2 years after commitment. We expected differential rates of increase depending on whether people were casually dating in the beginning months of a committed relationship or in a more established relationship that has not reached 2 years.

**Individual differences in attachment orientation and normative attachment development**

When people have a history of interactions with attachment figures that are available, responsive, and supportive, the attachment system operates effectively. Yet when people’s attachment figures are not available, responsive, and supportive, they develop secondary attachment strategies. These strategies take the form of attachment system hyperactivation and/or deactivation (Mikulincer & Shaver, 2007). Hyperactivation is characterized by anxious and controlling attempts to force an attachment figure to provide better care and support. Deactivation is characterized by suppression and inhibition of support-seeking tendencies. A history of attachment experiences results in individual differences in attachment orientations, which are stable patterns of expectations and behaviors in interpersonal situations and close relationships (Fraley & Shaver, 2000; Mikulincer & Shaver, 2009). Adult attachment orientations are conceptualized in terms of the orthogonal dimensions of attachment anxiety and avoidance (Fraley & Shaver, 2000; Mikulincer & Shaver, 2003). The anxiety dimension is characterized by a preoccupation with the partner’s accessibility and excessive worry about rejection and abandonment. The avoidance dimension is characterized by being uncomfortable with closeness and a preference to remain highly independent and self-reliant. People who are more anxiously or avoidantly attached are referred to as insecurely attached.

In long-term relationships, insecure people are no less normatively attached to their attachment figures than those who are secure (Hazan et al., 2004). However, attachment researchers have long proposed that individual differences in attachment orientation influence the beginning stages of normative attachment formation. More anxiously attached people more quickly integrate new partners into their attachment hierarchies (due to their obsessive clinging and fears of abandonment) compared to less anxious people. In contrast, more avoidantly attached people less quickly transfer attachment components to new partners (due to their self-reliance) compared to less avoidant people (Morgan & Shaver, 1999).

Supportive evidence for this prediction can be found in a longitudinal study on attachment transfer from parents to peers during adolescence (Friedlmeier & Granqvist, 2006). Attachment anxiety in combination with an insecure attachment history to mother was related to a higher likelihood that adolescents would use their peers rather than their parents as attachment figures. In contrast, when high avoidance was combined with an insecure attachment history, adolescents were less likely to use their peers rather than their parents as attachment figures. Yet this study did not differentiate between romantic partners and other peers. Given that romantic relationships serve sexual functions, and are often accompanied by the expectation of exclusivity, their development may be qualitatively different from peer relationships. Using a cross-sectional methodology, Fraley and Davis (1997) found that young adults with secure working models were more likely to use their romantic partners and friends as attachment figures than those with insecure working models. Furthermore, in a study on early dating relationships, Eastwick and Finkel (2008a) found that more anxiously attached people reported they would be more likely to use a new romantic interest for their proximity, safe haven, and security provisions than less anxiously attached people. Yet these studies did not assess people over time to
Normative attachment and relationship stability

One of the most fundamental tenets of attachment theory is that the attachment system was designed to maintain secure base relationships because they facilitate personal growth, goal striving, and exploration (Bowlby, 1979, 1988a; Collins, Guichard, Ford, & Feeney, 2006). Researchers have long recognized that, unlike nonattachment bonds, attachment bonds do not easily dissolve even in cases where an individual is mistreated or ignored (Morgan & Shaver, 1999). In his early work on the infant–caregiver attachment bond, Bowlby (1973a) recognized that children do not habituate from their attachment figures even when nonattachment figures treat them with greater kindness and attention. Furthermore, he noticed that children who were neglected and/or abused still oriented toward their parents for their attachment-related needs. Similarly, in the adult literature, Weiss (1991) claimed that once a secure base bond exists, it is maintained without positive reinforcement leading to high stability even when relationship satisfaction declines.

Surprisingly, there has been no systematic investigation examining whether people who utilize their romantic partner as a secure base are less likely to break up. There is some work to suggest that people with a secure attachment orientation are less likely to subsequently break up compared to insecure people (Kirkpatrick & Davis, 1994). Yet in a recent longitudinal study of the U.S. couples, attachment orientation did not predict relationship stability (Hirschberger, Srivastava, Marsh, Cowan, & Cowan, 2009). Rather, it only predicted relationship satisfaction. Might normative attachment processes be more predictive of relationship stability than attachment orientations? We expected this to be the case. Specifically, we expected the development of the secure base component of the attachment bond to be prognostic of long-term relationship stability because, unlike proximity and safe haven provisions, secure base provisions are not easily replaced by other social network members (Sbarra & Hazan, 2008; Stroebe, Stroebe, Abakoumkin, & Schut, 1996).

Present study

We used an accelerated longitudinal design (or cohort-sequential design; S. Duncan, Duncan, & Hops, 1996; T. Duncan & Duncan, 2004; Meredith & Tisak, 1990) to examine people’s normative attachment hierarchies at different stages of their relationship development. We observed people’s romantic relationships between 5 weeks before relationship commitment to well over 2 years after commitment. Then, we contacted them approximately a year and a half after the study to determine if they were still together with their romantic partner. Based on Hazan and Zeifman’s (1994) original work, we used the 2-year mark after commitment as an important marker that attachment formation would be complete for most people. As has been done in previous studies on adult attachment formation (Fraley & Davis, 1997), we omitted the separation distress component from our theorizing and analyses given the conceptual overlap with the proximity seeking component in adult relationships.

We sought to (a) outline the timing of normative attachment formation both before and after committing to a romantic partner, (b) investigate how individual differences in attachment orientation are associated with normative attachment formation, and (c) determine whether normative attachment formation is associated with the likelihood of subsequent relationship dissolution. Our hypotheses were as follows:

1. People will come to prefer their romantic partners for proximity seeking functions first, then for safe haven functions, and finally for secure base functions (Hypothesis 1).
2. More avoidantly attached people will more slowly represent their romantic partners as attachment figures than less avoidantly attached people (Hypothesis 2a). In contrast, more anxiously
attached people will more quickly represent their partners as attachment figures than less anxiously attached people (Hypothesis 2b).

3. People who more quickly represented their romantic partner as a secure base will be less likely to subsequently break up compared to people who less quickly represent their romantic partner as a secure base (Hypothesis 3).

Method

Participants and procedure

An accelerated longitudinal design allows modeling changes over a long time interval (in our case 26 months) by combining longitudinal data collected over shorter, overlapping time intervals (here between 0, i.e., a single assessment, and 11 months; $M = 2.52$ months, $SD = 2.92$) with different starting points within the longer time interval (see S. Duncan et al., 1996; T. Duncan & Duncan, 2004; Meredith & Tisak, 1990). We obtained longitudinal data on 102 college-aged people. These participants were selected to represent various stages of romantic relationship development from not yet dating a future partner to more than 2 years into the relationship.

The data were obtained from three subsamples of college students from the Western United States. The first subsample was recruited to prospectively study partner selection processes (see Schindler & Tomasik, 2010, for more details), which included participants who were single at the beginning of the longitudinal study but hoping to start a romantic relationship. Once these individuals started dating a potential partner, they completed online assessments regarding this dating relationship on a weekly basis. These comprised various questions on how they perceived their relationship and partner, including their normative attachment to this partner, and each time asked them to indicate the current status of this dating relationship as terminated (stopped dating), casual, or committed. In contrast to a casual dating relationship, a committed relationship was defined as an exclusive relationship where both partners would say that they are “going steady” and are not dating other people. As soon as participants indicated that they considered their relationship committed, we followed this relationship with monthly online assessments of current partner attachment until the end of the 1-year longitudinal study or until the breakup of this relationship. We studied all dating relationships that each participant started during the study. For inclusion in this study, we selected those 32 participants (59.4% women; age range = 18–25 years, $M = 21.3$, $SD = 1.9$) who had actually started a committed relationship during the study. The normative attachment data from this sample covered the time span from 5 weeks before relationship commitment up to a maximum of 10 months into the committed relationship (only 4 participants provided data more than 5 weeks before commitment, which is why we limited our analyses to 5 weeks before commitment to avoid too sparse data).

The second subsample comprised 24 participants (70.8% women; age range = 18–25 years, $M = 20.3$, $SD = 2.2$) who were in a committed relationship at the beginning of the study. These participants completed monthly online assessments regarding their attachment to their partner that were identical to those used in Subsample 1 after commitment. If the initial relationship of these participants had been terminated, we studied subsequent dating relationships as part of the study, again leading to more than one partner being assessed with some participants. The attachment data in this subsample span the time from a minimum of 1 up to a maximum of 25 months into the committed relationship.

The third subsample was recruited to obtain people in more established relationships. The 46 participants (62.0% women; age range = 18–27 years, $M = 20.9$, $SD = 2.7$) in this sample had been in a committed relationship for at least 4 months at the beginning of the study. The participants completed two assessments of normative attachment to their partners 1 month apart.

Our full sample included observations on two committed relationships for 5 participants, increasing the number of cases for our
analyses to 107. Participants either received $10 for every hour of study participation (Subsamples 1 and 2) or course credit (Subsample 3). Thirty-two participants were single at the beginning of the study, 70 were in a committed relationship. At intake, length of these committed relationships ranged from 1 to 98 months, $M = 22.4$ months, $SD = 19.7$. We found no significant differences in the gender distribution, $\chi^2(2) = 0.83$, $p = .66$, or mean age, $F(2,98) = 1.23$, $p = .28$, of the three subsamples. In the combined sample, the majority of the participants were women (65.8%) and the average age was $M = 20.9$ years, $SD = 2.4$.

Across all subsamples, participants completed a measure of their general romantic attachment orientation (the Experiences in Close Relationships Scale–Revised [ECR–R]) during the intake assessment. Normative attachment to the current dating partner (WHOTO measure) was assessed during the intake assessment if people were in a dating relationship. Our normative attachment measure was further included in every longitudinal observation (i.e., weekly as well as monthly follow-ups). Approximately 1.5 years ($M = 17.4$ months, $SD = 1.7$) after the conclusion of the respective study, all participants in this sample were contacted again to determine their current relationship status. We knew the fate of 87% of the relationships assessed in this study within 1.5 years after the final assessment: Of the 107 relationships, 43 (40.2%) had been terminated and 50 (46.7%) were still intact; the fate of 14 (13.1%) remained unknown due to nonresponse.

Measures

Normative attachment

To assess the degree to which people treated their romantic partners as attachment figures, participants completed the WHOTO measure of attachment status (Hazan & Zeifman, 1994), a self-report measure based on Bowlby’s (1982) behavior-based definition of attachment. This scale has been used in previous research (Fraley & Davis, 1997; Hazan, Hutt, Sturgeon, & Bricker, 1991) to assess the degree to which people turn to various members of their social network for specific attachment components. The three items assessing proximity seeking are “Who is the person you most like to spend time with?” “Who is the person you most like to relax with?” and “Who is the person you like to be with as much as possible?” The three items assessing safe haven are “Who do you seek out when you’re worried about something?” “Who do you turn to when you are feeling down in the dumps?” and “Who has a relaxing effect on you when you are under stress?” The three items assessing secure base are “Who do you know you can always count on, through good times and bad?” “Who do you know who will always be there for you, no matter what?” and “Who do you know would do just about anything for you?” Respondents list up to three people in response to each question, in the order of importance. Each individual then receives a score according to his or her position on the list. Thus, if the romantic partner is listed first for a particular item, he or she receives a rating of 3; if he or she is listed second, he or she receives a rating of 2; and so on. If the romantic partner is not listed at all for a particular item, he or she receives a score of 0. Hence, higher scores reflect greater targeting of proximity seeking, safe haven, and secure base components to one’s partner. Scale scores for the three attachment components were computed by summing the partner scores for the three items per scale, which resulted in WHOTO scores ranging between 0

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1. Five participants had two partners during the course of the study (most of them ended a committed relationship that had lasted for several months and were subsequently observed while committing to a new partner); this results in $N = 107$ cases included in our analyses. Although these people dated different partners and, thus, showed some variation in how attachment developed, we were concerned that this inclusion of a second partner for 5 people may have created interdependencies in the data leading to biased results. Therefore, we repeated our data analyses with only one partner for the respective people included. As the pattern of findings remained very much the same, and as we further did not want to make an arbitrary selection as to which of the two partners to include, we decided to present our analyses based on all available data.
Attachment formation: Trajectories and implications

(romantic partner is not used for this component at all) and 9 (romantic partner is the primary person to fulfill this component). Across all WHOTO measurements included in the present analyses, we obtained good reliabilities for our partner-specific assessments of proximity seeking, $\alpha = .79$; safe haven, $\alpha = .87$; and secure base, $\alpha = .93$, components.

Attachment orientation

Romantic attachment orientation was assessed using the ECR–R (Fraley, Waller, & Brennan, 2000). The ECR–R is a 36-item self-report attachment measure containing two 18-item subscales assessing attachment anxiety and attachment avoidance on 7-point rating scales ranging from 1 (strongly disagree) to 7 (strongly agree). The Anxiety subscale includes items such as “I worry a fair amount about losing my partner” and “I do not often worry about being abandoned” (reverse scored). The Avoidance subscale includes items such as “I prefer not to show a partner how I feel deep down” and “I feel comfortable depending on romantic partners” (reverse scored). We averaged across the items of the anxiety, $M = 2.82$, $SD = 1.31$, $\alpha = .93$, and avoidance, $M = 2.61$, $SD = 1.16$, $\alpha = .94$, scales.

Statistical analyses

Our sample allowed us to investigate changes in normative attachment to a romantic partner from 5 weeks before participants considered their dating relationship as committed to an established romantic relationship after 2 years. As a result of our accelerated longitudinal design, no participant in our sample provided data on his or her relationship during the entire time span of 26 months covered by this study—rather, the longest individual time interval was 11 months. Such data can be analyzed with latent growth modeling (Duncan & Duncan, 2004; McArdle & Nesselroade, 2003), which allows putting together the observed pieces of longitudinal information to estimate the entire developmental trajectory (cf. Duncan et al., 1996; Meredith & Tisak, 1990). To accomplish this, we arranged the collected WHOTO assessments to represent time spent in the relationship relative to the time of commitment. That is, observations during casual dating were indexed as $t_{-5}$ to $t_{-1}$ representing how many weeks before the start of a committed relationship they had been collected (e.g., $t_{-2}$ indicates an assessment 2 weeks before committing to this partner). If someone was missing the $t_{-5}$ assessment but had provided an earlier assessment, the earlier assessment was used for $t_{-5}$. Assessments collected roughly at the time of commitment were indexed $t_0$ and assessments during the committed relationship were indexed as $t_1$ to $t_{25}$, representing observations during the 1st month up to the 25th month after commitment. The first assessment that was collected after month 25 of the relationship was coded as $t_{25}$ if the participant did not have a valid observation for month 25 of the relationship; all subsequent assessments were not used in our analyses. With participants who were beyond month 25 of their relationships at the intake assessment, we included only the first assessment and indexed it as $t_{25}$. This decision was based on the fact that relationships past 25 months typically did not show any systematic change in WHOTO functions (Hazan & Zeifman, 1994). We chose the label $t_{25+}$ to indicate that this observation includes WHOTO scores at 25 months and thereafter.

We employed Mplus version 5.1 (Muthén & Muthén, 2008) to estimate average growth trajectories of the three attachment components, test for interindividual variability and intercorrelations in these trajectories, and determine whether attachment avoidance and anxiety as well as subsequent breakup were related to changes in attachment components. The latent growth model depicted in Figure 1 illustrates the specific change function that we estimated. As we assumed that the rate of change in attachment transfer to a new partner would be fast initially and then slow down, we modeled change using a piecewise linear curve (also referred to as a linear spline; cf. Meredith & Tisak, 1990). Specifically, linear change before committing to a partner was estimated as Slope 1, linear change between commitment and month 4 into the relationship
C. P. Fagundes and I. Schindler

Figure 1. Latent growth model of change in attachment components, including predictive relationships with attachment style and relationship breakup. All level loadings are constrained at 1; Slope 1 loadings on $t_{-5}$ to $t_{-1}$ are $-0.625$, $-0.5$, $-0.375$, $-0.25$, and $-0.125$; Slope 2 loadings are $t_1$ at 0.5, $t_2$ at 1, $t_3$ at 1.5, and $t_4$ to $t_{25+}$ at 2; Slope 3 loadings on $t_5$ to $t_{25+}$ are 0.5, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and 10.5.

as Slope 2, and linear change after the 4th month up to the 25th month of the relationship and beyond as Slope 3. As further illustrated in Figure 1, we included attachment avoidance and anxiety together with their interaction as predictors of the level at the time of commitment as well as the observed changes (Slopes 1–3), which in turn predicted subsequent relationship breakup.

We arranged our data from $t_{-5}$ to $t_{25+}$, which led to 31 time points. As the data coverage toward the end of this time interval was sparse, we collapsed data of two adjacent months into one time point beginning at month 7 (e.g., the data included only one observation for months 7 and 8 or 11 and 12). This led to 22 time points at which participants could have been observed, with the number of actual observations per participant between 1 and 9, $M = 2.93$, $SD = 2.28$ ($29 \times 1$, $40 \times 2$, $9 \times 3$, $10 \times 4$, $4 \times 5$, $2 \times 6$, $3 \times 7$, $5 \times 8$, and $5 \times 9$ observations). Mplus (like other current structural equation modeling [SEM] software) handles incomplete data by utilizing all available observations to compute full information maximum likelihood parameter estimates, without either imputing or dropping data. Thus, only the observed data for each participant were employed to fit the models, while “missing” observations were treated as latent variables (as illustrated by the circles inside squares for $t_{-5}$ to $t_{25+}$ in Figure 1). It is further possible to account for varying time intervals between assessments by specifying the slope loadings on the time points accordingly. In our models, all slopes had the same metric representing the estimated change in attachment components per 2-month interval and can, therefore, be compared with each other.

The parameters that can be estimated with our latent growth model include the means $\mu$, variances $\sigma^2$, covariances $\sigma$ of the growth factors (i.e., level and Slopes 1–3), and the residual variances in WHOTO scores at each time point $\sigma^2_e$ (which are constrained equal across all time points). Specifically, the mean of the level factor $\mu_L$ gives the estimated average score on the respective WHOTO function at the time of commitment across the entire sample. The mean of the Slope 1 factor $\mu_{S1}$ estimates the average change in WHOTO scores before commitment that would be expected across 2 months (note that this metric was chosen for all slope estimates to be comparable; however, Slope 1 does not actually cover 2 full months, meaning that the observed change from $t_{-5}$ to $t_0$ is smaller
than $\mu_{S1}$. The mean for Slope 2 $\mu_{S2}$ gives the average change per 2 months between commitment and month 4 of the committed relationship, and the mean for Slope 3 $\mu_{S3}$ estimates the average change from after month 4 to month 25+ of the relationship. However, individual change trajectories in attachment functions often do not follow the estimated average curve, which is expressed by the growth factor variances $\sigma^2_L$, $\sigma^2_{S1}$, $\sigma^2_{S2}$, and $\sigma^2_{S3}$ estimating interindividual variability around $\mu_L$, $\mu_{S1}$, $\mu_{S2}$, and $\mu_{S3}$.

**Results**

**Change in normative attachment components**

Our first set of analyses estimated change in normative attachment components from 5 weeks before relationship commitment to more than 2 years after commitment. We estimated a set of nested models with increasing complexity for each of the three attachment components separately (the results are summarized in Table 1). When running the models, we initially set all slope variances and the covariances between level and slopes to zero, thereby estimating the average change trajectory with interindividual variability only in the WHOTO scores obtained at t0. For the best fitting model, we then proceeded to free up the slope variances and covariances.

We started with a baseline model assuming no growth in WHOTO scores across time, which only included the level factor depicting an average and unchanging WHOTO score across all time points. Our second model was a linear growth model estimating a constant linear increase between $t_{-5}$ and $t_{25+}$. As we assumed that attachment components do not increase at a constant rate but rather show accelerated change early in the relationship, which slows down toward the 2-year mark into the relationship when attachment to one’s partner is fully developed, we tested whether breaking the linear slope improved model fit. In our third model, we estimated one linear slope from $t_{-5}$ up to $t_0$ and one linear slope from $t_0$ up to $t_{25+}$, thereby testing whether the rate of change in attachment components differed before and after the dating relationship was considered as committed. The fourth model (depicted in Figure 1) included an additional split at $t_4$, thereby separating the first 4 months into the committed relationship from the remaining months. Month 4 was selected based on the consideration that during the first months of a committed relationship, people often intensely experience having fallen in love (Tennov, 1979). Finally, the fifth model estimated a latent growth trajectory, meaning that it included one slope for which the loadings on all time points except for $t_0$ (fixed at zero) and $t_{25+}$ (fixed at 12.5) were freely estimated. The output for the estimated models for the WHOTO components of proximity seeking, safe haven, and secure base are presented in Table 1.

In SEM models with incomplete data, −2LL values are used for model comparisons. For all three attachment components, we broke down the slope into pieces and thereby allowed for different rates of change during different phases of the relationship (Table 1), which provided a better fit to the WHOTO data than a linear growth model assuming a constant change. Specifically, splitting at $t_0$, that is, estimating one Slope 1 for the casual dating phase and another Slope 2 for time in the committed relationship, led to a significant improvement in fit for proximity seeking, $\chi^2(1) = 44.47$, $p < .01$, and safe haven, $\chi^2(1) = 22.41$, $p < .01$. Splitting at $t_4$ (separating the first 4 months of the committed relationship from month 5 to 25+) provided a better fit with safe haven, $\chi^2(1) = 24.72$, $p < .01$, and secure base, $\chi^2(1) = 14.18$, $p < .01$. To allow for direct comparisons of model parameters between attachment components, we chose model 4 comprising three linear slopes for all three WHOTO scales. We further constrained slope means that were not significantly different from zero to zero (see Model 4b in Table 1). As can also be seen in Table 1, latent growth models exactly replicating the observed change trajectories did not provide a better fit to the data than model 4b: proximity seeking, $\chi^2(19) = 8.36$, ns; safe haven, $\chi^2(19) = 26.03$, ns; and secure base, $\chi^2(19) = 11.41$, ns.


<table>
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<th>Model</th>
<th>$-2LL$</th>
<th>$N$ par.</th>
<th>$\Delta -2LL$</th>
<th>$\Delta N$ par.</th>
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<td>vs. 2:44.47**</td>
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<td>4a. Three linear slopes: S1: $t_{-5} - t_{0}$; S2: $t_{0} - t_{4}$; S3: $t_{4} - t_{25+}$</td>
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<td>4b. Model 4a with mean $\mu_{S3}$ set to zero</td>
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<td>vs. 4a:1.13</td>
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<td>4c. Model 4b with variance $\sigma^2_{S1}$ and covariance $\sigma_{L,S1}$ added</td>
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<td>vs. 1:26.54**</td>
<td>1</td>
</tr>
<tr>
<td>3. Two linear slopes: S1: $t_{-5} - t_{0}$; S2: $t_{0} - t_{25+}$</td>
<td>1375.21</td>
<td>5</td>
<td>vs. 2:22.41**</td>
<td>1</td>
</tr>
<tr>
<td>4a. Three linear slopes: S1: $t_{-5} - t_{0}$; S2: $t_{0} - t_{4}$; S3: $t_{4} - t_{25+}$</td>
<td>1350.49</td>
<td>6</td>
<td>vs. 3:24.72**</td>
<td>1</td>
</tr>
<tr>
<td>4b. Model 4a with mean $\mu_{S3}$ set to zero</td>
<td>1351.41</td>
<td>5</td>
<td>vs. 4a:0.92</td>
<td>1</td>
</tr>
<tr>
<td>4c. Model 4b with variance $\sigma^2_{S2}$ and covariance $\sigma_{L,S2}$ added</td>
<td>1287.53</td>
<td>7</td>
<td>vs. 4b:63.88**</td>
<td>2</td>
</tr>
<tr>
<td>5. Latent growth</td>
<td>1325.38</td>
<td>24</td>
<td>vs. 4b:26.03</td>
<td>19</td>
</tr>
<tr>
<td><strong>Secure base</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. No growth</td>
<td>1451.47</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Linear growth</td>
<td>1419.72</td>
<td>4</td>
<td>vs. 1:31.76**</td>
<td>1</td>
</tr>
<tr>
<td>3. Two linear slopes: S1: $t_{-5} - t_{0}$; S2: $t_{0} - t_{25+}$</td>
<td>1417.32</td>
<td>5</td>
<td>vs. 2:2.40</td>
<td>1</td>
</tr>
<tr>
<td>4a. Three linear slopes: S1: $t_{-5} - t_{0}$; S2: $t_{0} - t_{4}$; S3: $t_{4} - t_{25+}$</td>
<td>1403.13</td>
<td>6</td>
<td>vs. 3:14.18**</td>
<td>1</td>
</tr>
<tr>
<td>4b. Model 4a with mean $\mu_{S1}$ set to zero</td>
<td>1403.81</td>
<td>5</td>
<td>vs. 4a:0.68</td>
<td>1</td>
</tr>
<tr>
<td>4c. Model 4b with variance $\sigma^2_{S2}$ and covariance $\sigma_{L,S2}$ added</td>
<td>1375.14</td>
<td>7</td>
<td>vs. 4b:28.68**</td>
<td>2</td>
</tr>
<tr>
<td>5. Latent growth</td>
<td>1392.40</td>
<td>24</td>
<td>vs. 4b:11.41</td>
<td>19</td>
</tr>
</tbody>
</table>

Note. The final models are highlighted in italics. $-2LL = -2$ log-likelihood; $N$ par. = number of free parameters. **$p < .01$. We further freed the variances of the three slopes and covariances between the level and slopes and added those parameters to model 4b, which were significantly different from zero. We were not able to show significant interindividual variability for all three slopes across all attachment components. Nevertheless, we obtained significant variances for
Slope 1 of proximity seeking and Slope 2 of safe haven and secure base. Fit statistics for the resulting final models (4c) are included in Table 1 and the parameter estimates for these final models are presented in Table 2. In addition, Figure 2 depicts the estimated changes in attachment components from casual dating until 2 years into the committed relationship.

We highlight four findings illustrated in Table 2 and Figure 2. First, our data show that romantic partners were increasingly used for proximity seeking and safe haven components already during casual dating. At the time when a committed relationship was formed, partners, on average, had become the preferred targets of proximity seeking, \( \mu_L = 7.88 \), and had advanced to the status of a secondary attachment figure for safe haven components, \( \mu_L = 5.18 \). In contrast, secure base was the only attachment component that did not increase during casual dating. The estimated score of \( \mu_L = 3.18 \) for secure base at the time when a commitment was made is attributable to some participants starting to date a friend (we have data on the nature of some of these relationships before dating). These preexisting friendships further contributed to the trajectories of proximity seeking and secure haven not starting at zero 5 weeks before relationship commitment (Figure 2).

Second, proximity seeking and safe haven had more rapid increases during casual dating (Slope 1) as compared to the first 4 months of the committed relationship (Slope 2). The estimated 2-month increase of 6.47 for proximity seeking during casual dating was marginally greater than the increase of 0.26 up to month 4, \( \chi^2(1) = 3.47, p < .10 \). Safe haven showed a 2-month increase of 3.84 during casual dating that was significantly greater than the increase of 1.08 from commitment to month 4, \( \chi^2(1) = 7.38, p < .01 \).

Third, secure base was the only attachment component to demonstrate a significant increase of 0.14 for every 2 months after month 4 of the committed relationship (Slope 3). We did not find a significant increase in proximity seeking or safe haven after month 4, indicating that people had typically achieved their final levels for these attachment components already at this time. Fourth, although secure base kept increasing until year 2 of the committed relationship, this change was much slower compared to the one observed from commitment to month 4 (i.e., 1.08 WHOTO scores every 2 months), \( \chi^2(1) = 7.34, p < .01 \).

In our next step, we combined the identified best fitting models for proximity seeking, safe haven, and secure base components in one overall analysis to estimate the correlations between the respective growth factors (levels and slopes). This further allowed us to test whether the estimated mean scores, \( \mu_L \), for proximity seeking, safe haven, and secure base at the time of commitment were significantly different from each other. As would be expected based on Hypothesis 1, we found that constraining the \( \mu_L \) parameters to be equal led to a significant reduction in model fit: proximity seeking = safe haven, \( \chi^2(1) = 16.80, p < .001 \); proximity seeking = secure base, \( \chi^2(1) = 43.12, p < .001 \); safe haven = secure base, \( \chi^2(1) = 18.12, p < .001 \). Hence, our participants had transferred most of the proximity seeking component to their partner by the time they committed to this relationship, followed by some transfer of the safe haven component and even lesser or no transfer of the secure base component. After year 2 of the relationship, partners had obtained the status of a primary attachment figure (scores over 6) on all three components.

The levels at the time of commitment of all three attachment components were positively correlated, indicating that attachment components changed together, although at different rates. Moreover, a greater increase in the safe haven component from commitment until month 4 of the relationship (Slope 2) was associated with a greater increase in the secure base component during the same time interval. Slope 1 of proximity seeking was not significantly related to any other growth factor.

**Relationships of attachment avoidance and anxiety with change in normative attachment components**

Hypothesis 2a stated that more avoidantly attached people would be more reluctant to
Table 2. Parameter estimates for best fitting latent growth models of attachment components

<table>
<thead>
<tr>
<th>Attachment component</th>
<th>Proximity seeking</th>
<th>Safe haven</th>
<th>Secure base</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>95% CI</td>
<td>95% CI</td>
<td>95% CI</td>
</tr>
<tr>
<td></td>
<td>Estimate</td>
<td>LL</td>
<td>UL</td>
</tr>
<tr>
<td>Level at $t_0$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\mu_L$</td>
<td>7.88**</td>
<td>7.38</td>
<td>8.39</td>
</tr>
<tr>
<td>$\sigma_L^2$</td>
<td>1.73**</td>
<td>1.07</td>
<td>2.39</td>
</tr>
<tr>
<td>Slope 1 ($t_{-5} - t_0$)</td>
<td>$\mu_{S1}$</td>
<td>6.47*</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>$\sigma_{S1}^2$</td>
<td>109.89**</td>
<td>15.79</td>
</tr>
<tr>
<td>Slope 2 ($t_0 - t_4$)</td>
<td>$\mu_{S2}$</td>
<td>0.26*</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>$\sigma_{S2}^2$</td>
<td>0</td>
<td>: 0</td>
</tr>
<tr>
<td>Slope 3 ($t_4 - t_{25}$)</td>
<td>$\mu_{S3}$</td>
<td>: 0</td>
<td>: 0</td>
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<tr>
<td></td>
<td>$\sigma_{S3}^2$</td>
<td>: 0</td>
<td>: 0</td>
</tr>
<tr>
<td>Covariances</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\sigma_{L,S1}$</td>
<td>3.97</td>
<td>-2.35</td>
<td>10.28</td>
</tr>
<tr>
<td>$\sigma_{L,S2}$</td>
<td>: 0</td>
<td>-3.97**</td>
<td>-6.73</td>
</tr>
<tr>
<td>Residual variance</td>
<td>$\sigma_{e}^2$</td>
<td>1.21**</td>
<td>0.97</td>
</tr>
</tbody>
</table>

Note. 0, parameter is constrained to zero. 95% CI = 95% confidence interval for parameter estimates; LL = lower limit of 95% CI; UL = upper limit of 95% CI.

*p < .05. **p < .01.
transfer proximity seeking, safe haven, and secure base components to their romantic partners than less avoidantly attached people. In contrast, more anxiously attached people would more quickly represent their partners as attachment figures than less anxiously attached people (Hypothesis 2b). To test these hypotheses, we combined proximity seeking, safe haven, and secure base components into one model to account for the observed associations between the components. To ease computation, we constrained nonsignificant growth factor covariances to zero (see Table 3 for nonsignificant correlations). We then included all possible paths from attachment avoidance, attachment anxiety (centered at their mean), and the avoidance–anxiety interaction to the six growth factors with significant variability (i.e., level and Slope 1 of proximity seeking, level and Slope 2 of safe haven and secure base; this is illustrated in the top part of Figure 1), which resulted in a significant improvement in model fit, \( \chi^2(18) = 29.97, p < .05 \). Next, we constrained the obtained nonsignificant paths from attachment avoidance and anxiety to the growth factors to zero, which did not lead to a worse model fit, \( \chi^2(10) = 6.16, \text{ns} \). The findings of this reduced model are illustrated in Figure 3 presenting the standardized parameter estimates.

As predicted (Hypothesis 2a), attachment avoidance was negatively related to the levels of all three attachment components. That is, high scores on avoidance predicted lower proximity seeking, safe haven, and secure base components at the time when participants committed to their dating partners. Similarly, avoidance was marginally negatively related to Slope 1 of proximity seeking.

Table 3. Estimated correlations between growth factors of attachment components

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Proximity seeking level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Proximity seeking Slope 1</td>
<td>.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Safe haven level</td>
<td>.34*</td>
<td>-.23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Safe haven Slope 2</td>
<td>.18</td>
<td>.16</td>
<td>-.70**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Secure base level</td>
<td>.33*</td>
<td>-.18</td>
<td>.80**</td>
<td>-.56**</td>
<td></td>
</tr>
<tr>
<td>6. Secure base Slope 2</td>
<td>.18</td>
<td>-.15</td>
<td>-.33</td>
<td>.71**</td>
<td>-.32</td>
</tr>
</tbody>
</table>

*p < .05. **p < .01.
As recommended by Curran, Bauer, and Willoughby (2004), we interpreted this predictive effect of avoidance on Slope 1 as an interactive effect (i.e., avoidance interacting with the matrix of time) rather than as a main effect and, accordingly, followed up on this interactive effect. Specifically, we computed the simple trajectories of the growth curve of proximity seeking between 5 weeks before relationship commitment and commitment for people who were low (M − 1 SD), average (M), and high (M + 1 SD) on attachment avoidance. This analysis revealed that those who scored low on avoidance showed the greatest transfer of the proximity seeking component to their new partner by the time of commitment, μL,Avd_low = 8.30, p < .001; μS1,Avd_low = 14.21, p < .05 (note that Slope 1 is scaled to represent the amount of change during 2 months rather than only the 5 weeks actually covered by Slope 1, which is why the estimate is greater than 9). Average attachment avoidance was associated with an increase in proximity seeking during casual dating of μS1,Avd_mean = 7.17, p < .05, and a score of μL,Avd_mean = 7.91, p < .001, at commitment. In contrast, highly avoidantly attached individuals showed no significant transfer of proximity seeking on top of the proximity seeking score that already had been obtained 5 weeks before commitment, μS1,Avd_high = 0.13, ns, and scored at μL,Avd_high = 7.52, p < .001, at commitment.

In contrast to avoidance and in line with Hypothesis 2b, anxiety was marginally positively related to the level of proximity seeking and positively related to its Slope 1. When following up on this predictive effect of anxiety, we found no additional transfer of the proximity seeking function during the 5 weeks before commitment among those who scored low (M − 1 SD) on anxiety, μS1,Anx_low = −0.04, ns. The proximity seeking score at commitment was μL,Anx_low = 7.62, p < .001, with low anxiety. Average (M) anxiety was associated with an increase
in proximity seeking of $μ_{S1,Anx,mean} = 7.17$, $p < .05$, and a score of $μ_{L,Anx,mean} = 7.91$, $p < .001$, at commitment. High anxiety ($M + 1 SD$) was accompanied by the greatest transfer of the proximity seeking component to one’s new partner during casual dating, $μ_{L,Anx,high} = 8.21$, $p < .001$; $μ_{S1,Anx,high} = 14.37$, $p < .01$.

Attachment anxiety and attachment avoidance further interacted in predicting the level of safe haven (as illustrated in Figure 4). Attachment anxiety was not significantly related to safe haven scores at the time of commitment in those participants who were high ($M + 1 SD$), simple slope $B = −0.09$, $ns$, or average, simple slope $B = 0.18$, $ns$, on attachment avoidance. For people with low avoidance scores ($M − 1 SD$), however, anxious attachment was positively related to safe haven scores, simple slope $B = 0.44$, $p < .05$. That is, when avoidance was low, anxiety was associated with greater utilization of one’s dating partner for safe haven components at the time of commitment.²

2. We were concerned that the reported significant associations of avoidance and anxiety with changes in attachment components may have differed depending on whether avoidance and anxiety were assessed before dating or only after participants were already committed to their partners. We therefore ran additional tests comparing participants who were single at the beginning of the study and participants who were in a committed relationship at the beginning of study. These tests had to be limited to the time span from $t_0$ to $t_{b+10}$, as committed participants were not observed before making a commitment and no one who was single at the beginning of the study was observed for more than 10 months into the new relationship. This resulted in a sample size of $N = 57$ (single: $n = 33$; committed: $n = 24$) for these comparisons and a latent growth model with a level at $t_0$ and two linear slopes (Slope 1: $t_0−t_4$; Slope 2: $t_4−t_{b+10}$). When comparing parameter estimates between singles and committed participants at the beginning of the study, we found that the associations of avoidance and anxiety with the level of proximity seeking did not change depending on initial relationship status, $χ^2(2) = 0.99$, $ns$. Associations of avoidance, anxiety, and their interaction with the level of safe haven did not significantly differ between single and committed people, $χ^2(3) = 1.08$, $ns$. Finally, the relationship between avoidance and secure base level did not change with initial partner status, $χ^2(1) = 0.08$, $ns$. We were not able to conduct a similar comparison for associations with Slope 1 for proximity seeking as these findings were only based on data from participants who were observed during casual dating.

**Figure 4.** Interaction between attachment avoidance and anxiety in predicting level of safe haven at the time of commitment.

*Simple slope is significant at $p < .05$.

**Associations between changes in normative attachment components and relationship breakup**

Our final hypothesis was that people who more quickly represented their romantic partner as a secure base would be less likely to subsequently break up compared to people who less quickly represented their romantic partner as a secure base (Hypothesis 3). To test this hypothesis, we added a binary variable reflecting whether a relationship had ended within the approximately 1.5 years following the study (coded as 1; 43 relationships had been terminated) or not (coded as 0; 50 relationships continued). Attachment avoidance, $B = −0.21$, $ns$; attachment anxiety, $B = 0.24$, $ns$; and their interaction, $B = 0.05$, $ns$, were unrelated to breakup. Thus, we removed the direct paths from avoidance and anxiety to breakup from our model.

Our resulting final and most complex model showed that people who reported higher scores on secure base at the time of commitment were less likely to break up, $B = −0.28$, $p < .05$. When we added a path from secure base Slope 2, we found that both the level, $B = −0.21$, $p = .07$, and Slope 2, $B = −0.61$, $p = .06$, of secure base were marginally related to breakup. Considering that this is a two-tailed test and our
prediction would warrant a one-tailed test, we view this as support for Hypothesis 3. As can be seen from the respective odds ratios, \( \exp(B) \), a one-unit increase in the secure base score at the time of commitment reduced the odds of breaking up by 0.81. In addition, with a one-unit increase in secure base Slope 2, people were only about half as likely to subsequently experience the breakup of their relationship, \( \exp(B) = 0.54 \).

In an exploratory fashion, we further tested whether the growth factors of the remaining WHOTO components were related to breakup over and above the secure base component. Our tests showed that none of the other growth factors was predictive of breakup when secure base level and Slope 2 were included as rival predictors, \( Bs \) between −0.00 and 0.15, all \( ps > .40 \).

**Discussion**

The current study adds to our understanding of how attachment relationships form, how individual differences in attachment orientation are associated with attachment formation, and how attachment formation is associated with long-term relationship stability. First, we sought to replicate Hazan and Zeifman’s (1994) original findings that each component of the attachment bond is formed sequentially starting with proximity, then safe haven, and then secure base (Hypothesis 1). As hypothesized, people preferred their romantic partners for proximity seeking functions first, then for safe haven functions, and finally for secure base functions. This finding replicates previous work showing that each component of the attachment bond is formed sequentially (Fraley & Davis, 1997; Hazan & Zeifman, 1994).

The current study also outlined the normative time course for adult romantic attachment development. People showed the greatest increase in their preference for their romantic partner for proximity seeking and safe haven functions before commitment. In contrast, people showed no increase in their preference for their romantic partners as secure bases until after they committed to them. It is possible that it takes an act of commitment for people to trust their partners enough to represent them as a secure base. It is also possible that representing one’s partner as a secure base facilitates commitment to this partner.

The second goal of the current study was to gain a better understanding of whether attachment orientations are associated with normative attachment development. In accord with Hypothesis 2a, more avoidantly attached people reported less preference for their romantic partner for all attachment components at the time of initial commitment compared to less avoidantly attached people. This is in line with Fraley and Davis’s (1997) argument that more avoidantly attached people are reluctant to adopt new people as attachment figures. Furthermore, those who scored high on attachment avoidance showed no increased proximity to their dating partner from 5 weeks before commitment until commitment, while those who scored low on attachment avoidance showed increased transfer of proximity seeking to their new partner during this time period. Compared to less avoidant people, those who are more avoidantly attached strive to maintain independence and self-reliance (Mikulincer & Shaver, 2007). Accordingly, they may refrain from seeking proximity from a romantic partner early in a dating relationship.

In line with Hypothesis 2b, more anxiously attached people showed increased preference to use their romantic partner for proximity seeking functions during casual dating than less anxiously attached people. More anxiously attached people also preferred their romantic partner for proximity more at the time of commitment than less anxiously attached people (albeit at trend level). Furthermore, compared to less anxiously attached people, more anxiously attached people were more likely to prefer their romantic partner for safe haven functions at the time of commitment if they were also low on avoidance (but not otherwise). However, more anxiously attached people were not more likely to prefer their romantic partners for secure base functions at the time of commitment compared to less anxiously attached people. Accordingly, their insecurities may be reflected by both their greater willingness to seek out their romantic partner for support provisions.
and their reluctance to trust them enough to represent them as a secure base.

As predicted (Hypothesis 3), people who showed more preference for their romantic partner as a secure base at the time of commitment were less likely to subsequently break up than people who showed less preference for their romantic partner as a secure base at the time of commitment. Furthermore, people who showed more increased preference for their romantic partner as a secure base in the early months after commitment were less likely to break up compared to people who showed less increased preference for their romantic partner as a secure base. The findings support theoretical claims that secure base relationships are more difficult to break up in comparison with nonsecure base relationships. As outlined by Bowlby (1973b), when people lose an attachment figure, they first protest the loss, typically exhibiting agitation, heightened distress, and attempts to reestablish contact with the attachment figure. This behavior may maintain proximity and prevent relationship dissolution in adulthood.

The secure base measure we adopted represents a high degree of perceived long-term partner commitment. From an interdependence perspective (Rusbult, 1983; Rusbult & Van Lange, 2003), this implies a willingness to sacrifice and endure relationship costs. Alternatively, the safe haven and proximity components do not imply perceived partner commitment or a willingness to ensure relationship costs. It is possible that people who more quickly represent their partners as secure bases are less likely to subsequently break up because they more quickly view their partner as someone worth sacrificing for. This alternative explanation in no way negates the current findings. Rather, it offers a new perspective on what the secure base component of the attachment bond represents.

**Limitations**

This study is not without limitations. First, latent growth models rest on several assumptions that are not always tenable or testable (McArdle & Nesselroade, 2003). Most importantly, all individual trajectories are assumed to belong to the same overall group curve such that all people may be described by the same general change component (but variability in change is permitted). Thus, although the reported trajectories represent the average development in attachment components between casual dating and 2 years into a committed relationship, they may not provide a good estimate of how attachment components of one particular individual develop. For instance, someone may report a temporary decline in the secure base component during the 2nd year of the relationship when experiencing relationship problems (e.g., being cheated on or a major disagreement). If the relationship problems can be resolved, the person’s secure base score may return to its original or an even higher level. As the timing of such changes is highly idiosyncratic, they cannot be reflected in a model of average attachment development during the formation period of a relationship. The selected individuals representing each section of the curve further may not be a normative selection, which may have led to estimates for the average curve that diverge somewhat from the “true” curve in the population. While we therefore would not expect our parameter estimates to exactly replicate in future studies, we think that this study is a valuable first step to determine the rough shape of change trajectories in normative attachment to a new partner.

Second, statistical power of latent growth models to detect significant variability in slopes or to demonstrate slope covariances is low when the sample size is relatively small (100 or less), measurement occasions are few (four or less), and growth curve reliability is less than perfect (under .90; Hertzog, Lindenberger, Ghisletta, & von Oertzen, 2006; Hertzog, von Oertzen, Ghisletta, & Lindenberger, 2008). Given that all these conditions apply in this study, it was not surprising that we did not have enough power to detect all slope variances and associations with slopes that may actually exist. Therefore, it would be premature to draw conclusions from our nonsignificant findings. However, the significant slope variances we did obtain as well as associations with the slopes speak to considerable interindividual variability during the
transfer of attachment components to a new partner and show that predictors and consequences of such differences are an interesting area for future research with larger samples.

Third, the current research is limited by the fact that participants were college students. As a result, it is not possible to determine the degree to which the findings generalize to other populations. We could not address the role of age, cohort, or culture effects with our data.

Fourth, single participants were required to update us on their dating status weekly until they decided to exclusively date someone. This constant questioning may have put undue demands on them, which could have theoretically changed the commitment process. Yet we doubt this significantly altered the natural time course of commitment given the demands friends, family, and dating partners place on people in the beginning stages of romantic relationships.

Strengths and future directions

This work has numerous strengths that have important implications for future research. First, we prospectively tracked people as they developed attachment bonds to their romantic partners starting with the earliest stages of relationship formation. Thus, we were able to determine both the rate and variability in which people came to represent their romantic partners as preferred attachment figures. These findings extend Eastwick and Finkel’s (2008a) argument that the “features and functions” of the attachment bond emerge relatively early.

By knowing the precise time period when each attachment component develops fastest (and with most variability), researchers can make informed decisions when picking the appropriate developmental window to study phenomena that require intense participant demands.

An additional strength of the current study is that it is the first to show an association between normative attachment development and a long-term relationship outcome. Until now, research on adult attachment has focused almost exclusively on associations between attachment orientation and long-term relationship outcomes (Kirkpatrick & Davis, 1994; Kirkpatrick & Hazan, 1994). It is possible that variability in normative attachment development has more implications for long-term relationship outcomes than attachment orientations. Interestingly, in the current study, attachment orientation was not associated with relationship stability, which is in accord with another recent longitudinal investigation showing no association between attachment orientation and relationship stability (Hirschberger et al., 2009). Yet secure base development during the early phases of a relationship was predictive of subsequent breakup. Future research should examine whether variability in normative attachment is predictive of other important relationship outcomes such as future relationship satisfaction, relationship conflict, and divorce.

References


