Attachment Security and Available Support: Closely Linked Relationship Qualities

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ABSTRACT

Perceived security of attachment to mother, father, same-sex peers, and opposite-sex peers, and perceived available support from members of the individual network of relationships were related to each other both cross-sectionally and longitudinally in a four-wave longitudinal study of 171 students. Security of attachment and available support were closely linked within particular relationships such as the relationship to mother, and modestly linked for categories of relationships such as same-sex peers; their consistency across relationships was much lower. Furthermore, longitudinal changes in attachment and support were correlated within relationships, but not between relationships. Thus, perceptions of attachment security and support availability reflected the fluctuating quality of the relationships. Consequences for research on attachment and support are discussed.

KEY WORDS ● attachment ● social relationships ● social support

Social support and adult attachment have been major themes of research on personality and social relationships over the last decade. Although linkages between support and attachment have been a subject of both theoretical discussion (e.g., Sarason, Pierce, & Sarason, 1990) and recent empirical study, these linkages have been established between different levels of analysis. Attachment has been conceptualized in these empirical studies mainly as a global characteristic of individuals, whereas support has

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been conceptualized at different levels of specificity. Studied were (i) behavior in particular situations (seeking support, or providing support to a particular person, e.g., Mikulincer, Florian, & Weller, 1993; Simpson, Rholes, & Nelligan, 1992), (ii) perceptions of support from categories of relationships such as relationships with family members or friends (e.g., Ognibene & Collins, 1998), or (iii) simultaneously at this more specific and the global level (e.g., Davis, Morris, & Kraus, 1998).

In contrast, the present study is an attempt to conceptualize both attachment and support at the same level of high to moderate specificity: at the level of particular relationships (with mother and father) and at the level of categories of relationships (with same-sex and opposite-sex peers). Our study was guided by two key assumptions. First, in line with the view of Sarason et al. (1990), we assumed that among the many facets of social support, perceived available support would show the strongest link to security of attachment. Second, in contrast to most research on adult attachment, we assumed that individual differences in the security of attachment show strong inconsistencies across different types of close relationships. Therefore, we studied security of attachment separately for different types of relationships.

Social support and attachment security

Sarason et al. (1990) proposed a model of support that is organized around the central personality variable 'sense of acceptance'. According to these authors, 'sense of acceptance' is the extent to which an individual generally feels valued, unconditionally accepted, and loved by others. It is viewed as the core construct underlying perceptions that others are available if one needs them (perceived available support) and the propensity to interpret behaviors of others as supportive (perceptions of received support). This view was based on empirical findings that those items of the Social Support Questionnaire (SSQ; Sarason, Levine, Basham, & Sarason, 1983) that were most predictive of the total score also reflected a sense of acceptance, and that this questionnaire showed particularly high correlations with other measures of perceived available support. Furthermore, different measures of perceived available support were found to correlate to the extent to which their items reflected a sense of acceptance, and measures of received support and structural characteristics of support networks showed only low correlations with scales assessing perceived available support (Sarason, Shearin, Pierce, & Sarason, 1987).

Sarason et al. (1990) did not however equate perceived available support and the sense of acceptance at the construct level. Instead, they formulated an interactionistic model of support wherein perceived available support in a particular stressful situation is a function of (i) the sense of acceptance, (ii) the type of the stressful situation, and (iii) the quality of the current primary relationships. To whom one turns for help depends on the type of stressor, and whether one believes that this person would be helpful depends not only on one's general sense of acceptance, but also on the quality of one's current relationship with this person. However, this quality

will be influenced by one's sense of acceptance: a strong sense of acceptance is more likely to lead to relationships from which one can expect help.

In their description of this model of support, the authors explicitly referred to the concept of an 'inner working model of relationships' that Bowlby (1973) had borrowed from object relation theorists (Sandler & Rosenblatt, 1962). According to this core concept of traditional attachment theory, children acquire a general schema for social relationships through their early experience with their parents, and this schema guides their expectations and perceptions of all close relationships later on, including relationships with peers and love partners. Adopting this traditional attachment perspective, Sarason et al. (1990) assumed that the sense of acceptance in adulthood is deeply rooted in experiences with parents in early childhood. This would explain why perceived available support is a stable personality trait that has a key function in the expectation and perception of received social support.

On the basis of this hypothesis, it is rather obvious how constructs of support and attachment can be directly linked. The bridge rests at the support side on the construct of perceived available support, and at the attachment side on the sense of acceptance. Attachment researchers would consider the sense of acceptance as a central part of attachment security. Indeed, operationalizations of attachment security in relationships among adults explicitly refer to feelings of being accepted by others, among other indicators such as feelings of closeness and trust (Bartholomew & Horowitz, 1991; Collins & Read, 1990; Hazan & Shaver, 1987). Therefore, the first key hypothesis of the present study was that individual differences in perceived available support would be closely correlated with perceived security of attachment in adults.

Relationship specificity of support and attachment

Pierce, Sarason, and Sarason (1991) studied general (i.e., relationship-non-specific) and relationship-specific perceived support from mother, father, and a friend in undergraduates. Support was more consistent between the parents (a correlation of .51) than between the parents and a friend (median correlation of .21), but even the consistency between the parents was clearly lower than the reliability of the measures. Davis et al. (1998) assessed students' support perceptions by six different items separately for global, family, friend, romantic partner, and faculty support. A factor analysis confirmed these five domains. Lakey, McCabe, Fisicaro, and Drew (1996) studied the generalizability of support perceptions across perceivers, supporters, and their interaction. In three studies, the perceiver by supporter interaction was by far the strongest effect. Thus, there is clear evidence that perceptions of support are highly relationship-specific.

In Sarason et al.'s (1990) model of support, sense of acceptance and perceived available support are personality traits and hence relationship-non-specific constructs. Consistent with this trait orientation is the authors'

adoption of the traditional attachment perspective that 'the' sense of acceptance can be traced back to early experiences with parents.

Similarly, Sandler and Rosenblatt (1962), Bowlby (1973, 1980), and more recent applications of attachment theory to relationships among adults (Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987) have not always been clear about the relationship specificity of internal working models. For example, Hazan and Shaver (1987) were mainly interested in attachment to love partners, but they operationalized their three attachment styles by prototypic descriptions that referred — in a seemingly unsystematic manner — both to relationships to love partners and to relationships with people in general. Bartholomew and Horowitz (1991) provided prototypic descriptions of four attachment styles that were completely relationship-non-specific, referring to 'others' or 'close relationships' in general.

Such operationalizations of attachment styles attest to the conviction of many researchers that attachment styles are by and large consistent across different types of relationships because they are strongly influenced by 'the' early developing internal working model of relationships. However, more recent empirical findings on the relationship specificity of attachment perceptions in adulthood question this assumption, and, therefore, there is a clear trend in the literature to treat attachment as a relationship-specific construct.

For example, Collins and Read (1990) found that attachment to a romantic partner was not significantly correlated with attachment to the same-sex parent, and only weakly correlated with attachment to the opposite-sex parent. Bartholomew and Horowitz (1991) reported a correlation of .39 between interview-based ratings of attachment security with parents and peers. Each of the two relationship-specific attachment measures contributed uniquely to the prediction of interpersonal problems. Baldwin, Keelan, Fehr, Enns, and Koh-Rangarajoo (1996) let students decide which of three attachment styles best described their 10 most important relationships, which always had to include ratings for mother, father, and at least one love partner. Two different styles were chosen by 88%, and all three styles were reported by 47% of the sample. Approximately 40% of the participants in an ongoing romantic relationship reported an attachment style to the partner that was different from the attachment style to one of the parents. Trinke and Bartholomew (1997) studied specific attachment relationships in undergraduates. The students reported a mean of 5.4 different attachment figures. When they were involved in a romantic relationship, this relationship was ranked highest in attachment by 62% of the participants. The students without a current romantic relationship ranked their relationship with their mother (48%), best friend (22%) , father (16%), or sibling (13%) highest in attachment. Thus, the students differed considerably in their individual attachment hierarchies.

These findings have fuelled discussions about the appropriate level of analysis for attachment: persons or relationships (Kobak, 1994; Lewis,

1994). Collins and Read (1994) proposed a hierarchy of working models for relationships comprising both a general model at the highest level, and relationship-specific models at a lower level. Baldwin et al. (1996) proposed that self-rated attachment styles be considered as reflecting relationship schemata (e.g., internal working models with the quality of specific relationships that are less enduring than personality traits; Baldwin, 1992). It seems clear that attachment in close relationships cannot be sufficiently captured by relying only on a relationship-non-specific trait view.

Stability of attachment and support

Concerning attachment, Baldwin and Fehr (1995) provided evidence for a relatively low temporal stability of attachment styles to love partners (across many studies using Hazan & Shaver's (1987) three styles, approximately 30% of the participants changed their style within 2 years). Davida, Burge, and Hammon (1997) found a 2-year stability of only $\kappa = .37$ for the self-rated attachment style in a representative sample of young women. Similarly, test–retest correlations of continuous measures of attachment styles are only moderately high even over periods of only a few months (approximately .60 to .70; see Feeney, Noller & Callan, 1994; Fuller & Fincham, 1995; Scharfe & Bartholomew, 1994). The fairly low temporal stability of attachment style ratings can be explained partly by the low reliability of these measures (often one-item scales). When only multiple-item measures are considered and the stabilities are corrected for attenuation, the estimated true 1-year stability is approximately .80. This is clearly lower than the estimated true 1-year stability of typical personality traits such as extraversion and neuroticism, which is approximately .98 (see Conley, 1984, for a meta-analysis of the stability of personality). Thus, the perceived attachment security with love partners is clearly lower than the stability of personality traits. We are not aware of studies on the stability of attachment styles with regard to other categories of relationships.

Concerning support, Sarason, Sarason, and Shearin (1986) reported 2-month stabilities between .78 and .86 for various global features of the social support network as assessed by the Social Support Questionnaire. Larose and Boivin (1998) found that, during the transition from high-school to college, perceptions of support from friends were less stable than their perceptions of security to parents. Therefore, the stability of peer attachment and support can be expected to be lower than the stability of parental attachment and support.

Because changes in one relationship may be often compensated by opposite changes in other relationships, we expected a lower stability for perceptions of support from specific relationship categories. Thus, the stability for particular peer relationships should be particularly low.

Furthermore, changes in attachment perceptions are expected to correlate with changes in support perceptions for the same category of relationships. Such correlations indicate that the attachment and support measures are sensitive to the same changes in the relationship's quality. Finally, changes in attachment are not necessarily expected to correlate with

changes in support across different categories of relationships. Such an additional inconsistency between the changes in attachment and support would further support the relationship specificity of these constructs. It seems that these change-related hypotheses have not been tested.

The present study

The present study was not originally designed to study links between support and attachment. It was designed to explore personality influences on social relationships and vice versa. A sample of students was followed for 18 months, beginning with their first week at the university, with multiple assessments of personality and social relationships (the number and quality of all important relationships were assessed from a social network perspective); see Asendorpf and Wilpers (1998). Because multiple and separate assessments of attachment security to mother, father, same-sex, and opposite-sex peers, and multiple and separate assessments of perceived available support from all relationships were available from this study, we reanalysed the data for the present purpose.

The strength of this approach is that links between attachment and support could be explored not only cross-sectionally, but also longitudinally. In particular, we could test the assumption that changes in perceived attachment and support over time would be related to each other. The limitation of the present study is that the assessments of attachment and support were not always matched with regard to the relationships to which they referred. Support was rated separately for each relationship, whereas attachment was assessed by brief scales for relationship types (e.g., mother, same-sex peers). Although the support and attachment ratings were closely matched for the parental relationships (only a few participants reported more than one mother or father because of separation of their parents), it was not possible to discern to which specific peer relationships the attachment ratings referred.

This limitation offered, however, the possibility to study how the students might have arrived at their attachment ratings for categories of relationships. Did they base these ratings more on the average support from all members of the category (e.g., all opposite-sex peers), or on the most supportive relationship within this category (e.g., a romantic partner)? Also, because we had detailed information about the continuity of each peer relationship (whether it remained intact or was dissolved), it was possible to relate the continuity of the peer relationships to the level and change of the perceptions of attachment and support. We expected that the continuity of the most supportive relationships (but not necessarily the continuity of all relationships) would be positively related to both the initial perceptions of attachment and support and to their increase over time because (i) attachment and support may foster continuity, and (ii) discontinuity of an important relationship within a relationship category may foster perceptions of less attachment and support for this category of relationships.

Perceived available support was assessed by a single item for each

relationship because of the large number of relationships in the participants' social networks. To increase reliability, security of attachment was assessed by brief scales with identical items except that they referred to a different type of relationship. The items tapped three core aspects of secure attachment: feeling accepted, feeling close, and trust. None of the items measured perceived support. To further increase the reliability of the scale, we asked both about the presence and about the absence of these aspects of security. The validity of the scale was confirmed by two studies with students and married couples where high correlations were found between the scale and endorsements of prototypic descriptions of the secure style versus the insecure styles provided by Bartholomew and Horowitz (1991) (see Methods Section). Thus, the scale measured secure versus insecure attachment.

Hypotheses

We expected that (i) perceptions of attachment security and available support would be more strongly correlated within than between the four types of relationships at each point in time, (ii) changes in perceptions of attachment and support over time would be more strongly correlated within than between the four types of relationships, and (iii) both the level and the perceptions of increased attachment and support for a particular type of relationship would be positively related to the continuity of these relationships.

Method

Participants and assessments

When students of Humboldt University, Berlin, enrolled a few weeks before their first term opened, they were personally contacted and asked to participate in a longitudinal study on students' social relationships. They were promised a lottery with an average prize of approximately US$25 after 1 year of participation, approximately US$35 at the end of the study, and personal feedback on their individual results. Only students below 23 years of age were included. During the second week of their first term, 173 females (age 18–22 years, M = 20.0) and 64 males (age 18–22 years, M = 20.4) participated in the first session. They represented 28% of the female, but only 12% of the male first year students below 23 years of age. Because of the smaller male sample, we repeated the study one year later with a second sample of 75 males (age 19–24 years, M = 20.8). Because the results for the two male samples were virtually identical with regard to all major variables, we pooled the two male samples, resulting in a more balanced study with regard to participants' sex (173 females, 139 males).

Seven assessments over a period of 18 months were scheduled. Support was assessed every 3 months and attachment and personality every 6 months. The sample for the present study consisted of those 171 subjects (92 females, 79 males) who participated in the first and the last assessment. Because we tolerated one missing participation, the sample sizes for the 2nd–6th assessments varied between 162 and 170.

Measures

Security of attachment. Security of attachment to mother, father, same-sex peers, and opposite-sex peers during the last 3 months were each measured by a 6-item scale every 6 months. The items were identical across scales, except that they referred to a different type of relationship. The items were selected on the basis of a factor analysis from a larger item pool that was derived from the prototypic descriptions of the four attachment styles provided by Bartholomew and Horowitz (1991); see Asendorpf, Banse, Wilpers and Neyer (1997) for details. The 6 items were: 'It is easy for me to become emotionally close to X'; 'I am comfortable with depending on X'; 'I feel accepted by X'; 'I am uncomfortable getting close to X'; 'I find it difficult to trust X completely'; 'I worry that I am not accepted by X' (where X referred to mother, father, male peers, and female peers, respectively). Each item was answered on a 5-point Likert scale (*Not at all true–Completely true*). The last three items were reverse coded such that high scores indicated secure attachment. Thus, this measure of security of attachment is a bipolar scale that contains items derived from Bartholomew's secure and fearful prototype (the latter items were reverse coded).

The reliability and validity of the scales were explored in two pilot studies. The scales were compared with self-ratings of prototypic descriptions of the secure, fearful, preoccupied, and dismissing attachment styles that were presented in a relationship-specific format (German adaptation of the Bartholomew & Horowitz prototypes by Doll, Mentz, & Witte, 1995). Attachment to the mother was studied in 170 psychology students, and attachment to the spouse in 98 men and women from the general population who were married for 3 years (age 25–35 years, mean relationship duration of 7 years). The internal consistency of the scale was (Cronbach's α) .82 (students) and .83 (spouses). The following correlations were found between the attachment security scale and the 5-point ratings of the attachment prototypes, or their combinations, for the student (spouse) sample: .83 (.60) with the secure style, −.57 (−.61) with the fearful style, −.59 (−.68) with the insecure style (average rating of the three insecure styles), and .84 (.73) with the difference between the secure style and the insecure style. Thus, the attachment scale measured attachment security (versus insecurity) with satisfactory reliability and validity (see Asendorpf et al., 1997, for additional reliability and validity data).

Support measures. In the first assessment, the participants were asked to list all persons who were currently personally important to them. All listed persons were identified by their initials, relationship category, sex, and age. Also, the quality of the participant's relationship with each person during the last 3 months was rated on 8 Likert scales. For the present study, only one scale is relevant: *perceived available support* (5-point scale 'If I have problems, I would turn to this person to talk about my problems'; rated on a scale ranging from *never* to *always*) (see Asendorpf & Wilpers, 1998, for more details).

In the six later assessments, the participants received a printout of their last questionnaire, excluding the eight ratings of relationship quality. They were asked to delete those persons who they considered not important any more, to check the data of the remaining persons for correctness, and to add new persons who were currently important to them. Subsequently, they rated the revised list of persons on the 8 scales for relationship quality since the last assessment.

Results

Selectivity and attrition of the sample

The representativeness of the initial sample ($n = 312$) was tested by comparing the means and standard deviations of the NEO-FFI (NEO-Five-Factor Inventory) scales with the norms that are based on 2112 individuals in the German population (mean age 29 years; Borkenau & Ostendorf, 1993). The initial sample had significantly higher scores in openness to new experience, $t(2422) = 6.28$, $p < .001$, and in agreeableness, $t(2422) = 5.72$, $p < .001$, than the normative sample, but the effect sizes of these differences were modest (d below .26 in both cases). The variances in the Big Five factors of personality were unrestricted (mean SD .60 versus .58 in the normative sample).

Attrition effects were evaluated by comparing the 141 drop-outs with the 171 participants in the longitudinal sample in the first assessment of the Big Five, the four attachment scales, and the 4 support indices (see below). Conscientiousness was higher in the longitudinal sample, $t(310) = 4.69$, $p < .001$; the differences for the other 12 measures were not significant. The conscientiousness effect is not surprising for an intensive longitudinal study. No restrictions of range caused by attrition were observed (mean SD for drop-outs/longitudinal sample was .60/.59 for the Big Five, .73/.75 for the attachment scales, and 1.02/1.12 for the support indices).

Types of relationships and support measures

Of the 171 participants, 98% reported a relationship with a (step)mother and 94% with a (step)father. A few reported two mothers or fathers because a parent had remarried. In these cases, we chose the ratings for the parent with the higher support at the first and the last assessment (if the support ratings were different between the parents, the difference was consistent over time in all seven cases). Thus, these support measures referred to particular, concrete relationships.

Nearly all participants reported more than one peer of either sex (a peer was defined as having the age of 18–27 years). Because of these multiple nominations, we analysed the mean, the maximum, and the sum of all support ratings separately for same-sex and opposite-sex peers. The maximum support scores showed consistently higher correlations with attachment security, probably because the participants answered the attachment items with regard to the most supportive peer. Therefore, we selected the maximum support scores as measures of support from categories of relationships. These measures of support did not necessarily refer to the same peers at different points in time; they refer to looking at only the most supportive concrete relationships.

At all measurement points, approximately one-third of the sample reported a romantic partner (this proportion tended to increase slightly from 30% at the first measurement to 37% 18 months later). For these participants, we additionally evaluated the consistency between support from the partner and maximum support from opposite-sex peers. These consistencies were as high as the reliabilities of the measures (see next section); the median consistency across the four measurements was .72. This high consistency is because in most cases the partner was a peer and was perceived as the most supportive opposite-sex peer. Therefore, the opposite-sex peer measure captures well the support from romantic partners.

Because the sexual orientation of the participants was assessed in this study,

and same- versus opposite-sex peers have a different meaning for homosexuals and bisexuals as compared with heterosexuals, we restricted the analyses of the peer relationships to the 139 participants who reported a heterosexual orientation (15 reported a homosexual or bisexual orientation and 17 chose not to answer this question).

Reliability and consistency across relationships

Table 1 contains the reliabilities and cross-relationship consistencies for attachment security and perceived support. For attachment, the reliabilities are internal consistencies for the attachment scales (Cronbach's α). For support, no internal consistencies could be computed. Instead, 3-month test–retest reliabilities (Pearson correlations) were computed between the first and second assessments, and between the 3rd, 5th and 7th assessments and the preceding assessment; they represent lower-bound estimates of reliability for the 1st, 3rd, 5th, and 7th assessments, respectively. Because the indices were similar across the four assessments, medians across the four assessments are reported.

Given the briefness of the attachment scales, and the lower-bound estimates for the support ratings, the reliabilities were sufficient. The reliabilities were somewhat higher for the parents than for the peers. In contrast, as expected, the cross-relationship consistencies were much lower. Also, the consistencies were higher for relationships of the same type (parental relationships, peer relationships) than across parents and peers. This pattern of results was the same for females and males. All in all, both attachment security and perceived available support were highly relationship-specific.

Concurrent correlations between attachment and support

Table 2 contains the concurrent Pearson correlations between attachment and support. Because they were highly similar for all four assessments within relationships, medians across the four assessments are reported.

TABLE 1
Reliability and consistency of attachment and support across relationships (medians for four assessments)

Measure	Relationship			
	Mother	**Father**	**Same-sex peers**	**Opposite-sex peers**
Security of attachment				
Mother	*.82*	**.38**	.25	.35
Father		*.86*	.24	.26
Same-sex peers			*.72*	**.38**
Opposite-sex peers				*.71*
Perceived available support				
Mother	*.78*	**.53**	.19	.12
Father		*.81*	.17	.04
Same-sex peers			*.75*	**.38**
Opposite-sex peers				*.70*

Note. *n* varies between 127 and 139. Reliabilities (α) in italics, consistencies between similar relationships in boldface.

For the parental relationships, the correlations were high within the same relationship (median of .64 for eight correlations) and much lower between parents (median of .28 for eight correlations). For peer relationships, the correlations were also higher within peers of the same sex (median of .34 for eight correlations) than between peers of different sex (median of .10 for eight correlations). That the level of these correlations was lower than for the parental relationships can be attributed partly to the fact that the attachment ratings might have referred to different peers than the support ratings. Thus, the consistency of attachment and support for peers was probably underestimated. Therefore, the results suggest that attachment and support are closely linked for parents and at least moderately linked for peers.

Changes in the mean level of attachment and support

Table 3 contains the means and standard deviations for the attachment and support measures for the four time points.

Changes in the mean level of attachment and support were evaluated for linear and quadratic trends over time by linear and quadratic contrasts within repeated-measures ANOVAs for each variable. The results were consistent across attachment and support. For both opposite- and same-sex peers, both security of attachment and available support showed a linear increase over the 18-month period, $F(1,131) = 19.89, p < .001$, attachment to opposite-sex peers; $F(1,130) = 8.09, p < .01$, support from opposite-sex peers; $F(1,130) = 19.73, p < .001$, attachment to same-sex peers; and $F(1,131) = 4.04, p < .05$, support from same-sex peers. The linear changes in support from the parents were not significant for both attachment and support. Also, all eight quadratic changes were non-significant. The smaller effects for the support measures may be caused by a ceiling effect for these measures of maximum support.

Continuity of the relationships

The continuity of the relationships can be viewed from two perspectives: forward and backward. Forward continuity refers to the percentage of relationships of a particular type at the first assessment that are intact from the first to the last assessment. Backward continuity refers to the percentage of relationships of a particular type at the last assessment that existed already at the first assessment. Because more peer relationships and love relationships were initiated than terminated (see also Asendorpf & Wilpers, 1998, Fig.1), it was expected that forward continuity would be higher than

TABLE 2
Correlations between attachment and support (medians for 4 assessments)

Security of attachment to	Perceived available support from			
	Mother	Father	Same-sex peers	Opposite-sex peers
Mother	**.65**	.35	.15	.06
Father	.18	**.62**	.00	−.07
Same-sex peers	.15	.19	**.37**	.10
Opposite-sex peers	.18	.16	.10	**.31**

Note. n varies between 127 and 139. Correlations within relationships in boldface.

TABLE 3
Means and standard deviations of attachment and support for four time points

Measure	Time 1		Time 2		Time 3		Time 4	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Security of attachment								
Mother	3.99	0.88	4.01	0.75	4.03	0.74	4.07	0.76
Father	3.59	0.97	3.72	0.90	3.63	0.94	3.63	0.89
Same-sex peers	3.63	0.61	3.74	0.57	3.76	0.58	3.83	0.58
Opposite-sex peers	3.48	0.55	3.52	0.57	3.62	0.59	3.67	0.60
Perceived available support								
Mother	3.69	1.26	3.74	1.16	3.69	1.05	3.76	1.07
Father	3.02	1.24	3.18	1.22	3.14	1.19	3.08	1.22
Same-sex peers	4.07	0.89	4.16	0.94	4.21	0.92	4.22	0.89
Opposite-sex peers	3.92	1.05	4.04	1.00	4.09	0.97	4.13	0.95

Note. n varies between 127 and 139.

backward continuity for peers and love partners. For example, if a participant began with 10 peer relationships and ended up with 15, forward continuity can be 100 percent but backward continuity cannot exceed 67 percent. Table 4 presents the mean continuity across participants for the different relationship types.

The continuity was highest for the parents, second-highest for the love partner, and lowest for opposite-sex peers. This hierarchy was identical for forward and backward continuity. That the continuity was lowest for peers is readily explained by the fact that many of the peer relationships were of less psychological significance and therefore easily terminated. As expected, forward continuity was higher than backward continuity for love partners and peers. This pattern was the same for males and females.

Stability of attachment and support

The stability coefficients decreased with increasing test–retest interval lengths for both attachment and support. The stabilities showed a hierarchy that was identical for attachment and support: highest for the parents, intermediate for same-sex peers, and lowest for opposite-sex peers. Thus, as expected, stability was lower for peers than for parents. This hierarchy was also identical to the hierarchy for the continuity of relationships (see Table 4). The stabilities were slightly lower for support than for attachment. Again, this pattern of results was the same for females and males.

The stability of the most stable relationships (with the parents) was somewhat lower than the stability of the Big Five factors of personality in the same sample. The mean raw 18-month stability of the Big Five factors was .75. When this stability was corrected for attenuation, the mean estimated true 18-month stability was .94 (see also Asendorpf & Wilpers, 1998). In contrast, the mean estimated true 18-month stability for the relationship with the parents was .89 for attachment and .81 for support.

The stability of the peer measures cannot be easily compared with the stability of the parental measures because the peer measures referred to the maximum support from all peers of a particular sex, not to a particular relationship. Thus, an initially highly supportive relationship with a best friend may deteriorate and be replaced by a more supportive relationship over the course of the study. Therefore, it may be expected that the stability of support for particular peer relationships is lower than the stability of the maximum support, even when only the most supportive concrete relationship is considered (this fact would not change the conclusion, however, that the stability is lower for peers than for parents).

To address this question, we identified for each participant those peers who were rated as maximally supportive at the first assessment separately for the sex of the peers. We then restricted these best friends to those who were still in the network at the last assessment. At least one same-sex continuous friend could be identified for 88.4% of the participants, and at least one opposite-sex continuous friend for 67.6% of the participants. For each participant and sex of friend we selected a continuous best friend, defined by the highest support score of all continuous friends. This procedure may or may not identify romantic partners as best opposite-sex friends, depending on their age, the perception of support from them, and the continuity of the relationship.

Table 5 indicates that the stability of support from these continuous best friends was indeed somewhat lower than the stability of the maximum support from peers. It may be argued that the stability of the maximum support scores cannot be compared with the stability of the support from a continuous best friend because some participants had no continuous best friend. However, whether participants had a continuous best friend or not was unrelated to the stability of maximum support scores (the stabilities were very similar; for participants who had a continuous best friend, the stabilities of the maximum support scores were .58 for same-sex peers and .57 for opposite-sex peers). Thus, as expected, the stability of support from a category of relationships was higher than the stability of support for the most supportive relationship within this category.

TABLE 4
Continuity of relationships by relationship type

Relationship type	Continuity	
	Forward[a]	Backward[b]
Mother	97.6	99.4
Father	98.8	97.6
Romantic partner	78.8	45.8
Opposite-sex peers	40.8	27.9
Same-sex peers	48.5	35.4
All	53.5	39.6

[a] Percentage of continuous relationships in first network.
[b] Percentage of continuous relationships in last network.

TABLE 5
Stability of attachment and support

Relationship type	Stability over 18 months	
	Attachment	Support
Mother	.72	.67
Father	.78	.63
Same-sex peers	.66	.60
Opposite-sex peers	.60	.53
Continuous best same-sex friend[a]	—	.49
Continuous best opposite-sex friend[a]	—	.40

Note. n varied between 94 and 139. All correlations are significant ($p < .001$).
[a] Identified by high support at the first and the last assessment; see text.

Correlations between attachment change and support change

Table 6 contains the Pearson correlations between the change in attachment and the change in support over the 18 months of the study (for shorter test–retest intervals, the correlations tended to be somewhat lower), both within and across relationships. Reported are both simple difference scores between the last and the first assessment, and residualized change scores that control for possible influences of the initial status on change (regression of the final score on the initial score).

The correlations were without exception higher within relationships than between relationships, confirming once more the relationship specificity of the constructs, this time with regard to change. The correlations were slightly higher for the residualized differences. They were somewhat higher for parents than for peers, which can be attributed to the higher reliability of the parental measures. Note that differences in reliability between relationships are amplified for change scores because change scores, whether residualized or not, accumulate the unreliability of two measurements.

In fact, the correlations approached the reliability of the change scores. The reliability of a simple difference score can be computed from the reliabilities and standard deviations of the two assessments and the stability between them (e.g., Burr & Nesselroade, 1990). For parental relationships, the median reliability for the four 18-month change scores was .38; for peers, the median reliability was .31. Thus, the reliabilities of the change scores were very close to the correlations between the changes in attachment and support. This finding indicates that the attachment scales and the support scales were sensitive to similar changes in relationship quality. This pattern of results was found for both females and males.

Continuity of close peer relationships and attachment and support

The overall individual continuity for same-sex or opposite-sex peers does not seem central for attachment and support because these constructs refer only to a few close relationships. Therefore, we tested the hypothesis that the continuity of peer relationships would be positively related to the level of and the increase in attachment and support by comparing participants who had a continuous best friend with participants who did not have such a friend.

TABLE 6
Correlations between attachment change and support change over 18 months

Change of security of attachment to	Change of perceived available support from			
	Mother	Father	Same-sex peers	Opposite-sex peers
Simple difference scores				
Mother	**.33*** **	.20*	−.01	−.05
Father	.21**	**.30*** **	.00	−.06
Same-sex peers	.00	.08	**.27*** **	−.02
Opposite-sex peers	.10	.02	.07	**.28*** **
Residualized difference scores[a]				
Mother	**.37*** **	.21**	.03	.10
Father	.20*	**.29*** **	−.04	−.01
Same-sex peers	.16	.20*	**.30*** **	.09
Opposite-sex peers	.23**	.08	.04	**.33*** **

n varies between 127 and 139. Correlations within relationships in boldface.
[a]Residuals of regressions of final scores on initial scores.
$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

Differences between these two groups of participants were evaluated with 2 × 2 mixed ANOVAs, where the within-subject factor was the time of assessment (first or last). The dependent variable was attachment or support for same-sex peers or for opposite-sex peers. Thus, four ANOVAs were performed. The level of both attachment and support was at least marginally higher for participants who had a continuous best friend for opposite-sex peers (for attachment, $F(1,137) = 6.88, p < .01$; for support, $F(1,137) = 3.11, p < .08$) and same-sex peers (for attachment, $F(1,137) = 1.69, p < .10$; for support, $F(1,137) = 8.86, p < .01$). Thus, as expected, having a continuous best friend was associated with higher attachment and support.

In contrast, all effects for the interaction between having a continuous best friend and time were not even marginally significant. Thus, contrary to expectation, having no continuous best friend did not decrease perceptions of attachment and support.

Discussion

The findings of this longitudinal study provide evidence for a high relationship specificity of both security of attachment and available support, and for a close link between these two constructs within parental relationships; the evidence for such a link was mixed for peer relationships. The results suggest that relationship-specific perceptions of attachment security and available support reflect the fluctuating quality of relationships rather than stable personality characteristics.

Relationship specificity of attachment and support

As expected, (i) both attachment and support showed a low consistency

across different types of relationships, (ii) attachment and support were correlated more strongly within the same type of relationship than between different types of relationships, and (iii) changes in attachment and support were correlated more strongly within the same type of relationship than between different types of relationships. Together, these findings clearly support the first hypothesis of the study that perceptions of both attachment and support would be highly relationship-specific.

Two other results of the present study strengthen this conclusion. First, the stability of attachment and support was lower than the stability of typical personality traits, such as the Big Five factors of personality, particularly for peers. The lower stability of attachment and support could not be explained by a lower reliability; it prevailed even after the stability correlations were corrected for attenuation. Also, in line with the results by Larose and Boivin (1998), the stability for parental attachment and support was higher than the stability for peer attachment and support.

Second, the changes in the mean levels of security of attachment and support varied between the parental and the peer relationships. Whereas the peer relationships were perceived as increasingly supportive and secure, the parental relationships did not show such an increase. The increasing quality of the peer relationships can be attributed to the fact that the total number of peer relationships increased strongly during the study (see Asendorpf & Wilpers, 1998), which offered more opportunities for close peer relationships.

Third, the individual change scores showed higher correlations between attachment and support within relationships than between relationships. Thus, the differential changes in attachment and support were consistent despite the very different methods of assessment (scale versus network approach). This finding lends particularly strong support to the view that the changes in the attachment and support measures reflected changes of relationship quality rather than measurement error. That personality traits would show such clear changes over an 18-month period in adulthood neither fits current conceptualizations of personality as stable individual tendencies of behaviour, and cognition (e.g., Costa & McCrae, 1994), nor is consistent with the finding by Asendorpf and Wilpers (1998) that personality traits such as the Big Five were highly stable and completely immune to relationship change. But that the quality of a close relationship changes over a period of 18 months during an important life transition where the participants experienced a major reorganization of their social network is not surprising.

There was also some evidence for the cross-relationship consistency of both attachment and support. The highest consistency was found between the two parental relationships, the lowest between parental and peer relationships. The consistency between parents and peers was somewhat higher for the attachment scales than for the support measures. This difference suggests that the consistency for the attachment scales may be somewhat inflated because categories of relationships rather than particular relationships were judged.

All in all, we favour an interpretation of the results that views attachment security and available support as relationship qualities. As other relationship qualities, the qualities themselves, and the subjective perception of these qualities in particular are determined by multiple factors, including stable, relationship-non-specific personality traits of the perceiver. The latter give rise to cross-relationship-consistency. Other sources of cross-relationship consistency are similarities of the relationship partners' personality (e.g., shared attitudes and behaviours of mother and father toward their child). However, these factors only partially determine the quality of one's relationships because multiple factors make one's relationships different from one another: differences between the relationship partners in terms of their age, sex, and personality, and the unique interaction history with these persons. In the case of attachment security and support availability, the factors that make relationships different from one another dominate those that make them similar, but do not fully suppress their effects.

Link between attachment and support within relationships

As expected, perceptions of security of attachment and available support showed high concurrent correlations within the parental relationships, and correlations between changes in attachment and support that approached the reliability of these changes for all types of relationships. These correlations cannot be attributed to an overlap of the content of the items because none of the attachment items explicitly referred to available support. Instead, the correlations indicate a strong overlap of the constructs of attachment and support.

Two reviewers had concerns about item overlap between our attachment and support measures. The attachment item with the highest similarity to the support item is probably 'I am comfortable with depending on X', although depending on someone and looking for emotional support in times of stress are not identical constructs. Our attachment scale represented, however, multiple aspects of secure and insecure attachment, such as fear of closeness, dependence, and fear of negative evaluation, and our consistency findings did not depend on any particular item of the attachment scale. If any single item was dropped from the scale, the consistency with the support measure decreased only slightly, and this decrease could be attributed mainly to the lower reliability of the shorter attachment scale. For example, when the dependence item was dropped, the consistency between attachment and support regarding the mother decreased from .65 to .61. Taking into account that the reliability of the attachment scale dropped from .82 to .78, the consistency decreased after correction for attenuation only from .79 to .78.

Thus, the high similarity between security of attachment and available support that we found for the relationships with the parents cannot be attributed to item overlap. Instead, security of attachment and perceptions of available support seem to overlap at the construct level to a considerable extent. This overlap is not perfect because the consistency was clearly

below 1 after correction for attenuation. Future studies are needed that explore the discriminant validity of security of attachment versus available support. Because this discriminant validity may vary between different types of relationships, we suggest that this question is explored relationship by relationship.

For peers, the concurrent correlations were clearly lower than the reliability of the attachment and support measures. This may be caused by a measurement problem rather than to a lower coherence of attachment and support at the construct level. Because most participants reported many peers, it is not certain that the participants based their attachment judgements only on the most supportive relationships (to which the support measure referred). Thus, there was only partial overlap in the relationship reference of the attachment and the support measures. This partial overlap may have suppressed the correlation between attachment and support. Because of this possibility, the results are not inconsistent with the hypothesis of a close link between attachment and support also for peers. Studies where attachment and support are assessed with regard to one specific peer relationship (e.g., one's best friend) could settle this point.

Although linkages between attachment styles and perceived support have also been found in other empirical studies, attachment and support referred in these studies to different types of relationships. Blain, Thompson, and Whiffen (1993) related perceived support from peers and family to global measures of attachment style, Larose and Boivin (1997) related attachment to parents to a global measure of perceived support, which, in turn, was then related to perceived support from a same-sex friend, and Davis et al. (1998) related global ratings of attachment style to global and relationship-specific support measures. In these studies, the relations between attachment and support were less strong than the relations for the parental relationships in our study. This discrepancy suggests that global judgements and asymmetric approaches with regard to the level of analysis underestimate the linkage between attachment security and available support within the same relationships.

Although perceptions of attachment security and available support appear to be closely linked, they should not be identified as identical at the construct level. We consider available support from a relationship as one very important, but only one, aspect of a secure relationship. Other aspects of secure relationships include feelings of closeness and acceptance. Although these characteristics appear to be empirically linked to support availability, they are conceptually distinct and can be dissociated in rare cases (e.g., when a dominant person feels secure with a submissive, insecure partner).

Continuity of relationships and attachment and support

In the present study, only about half of the relationships at the initial assessment remained intact over the next 18 months. This high turnover rate was mainly caused by peer relationships. It cannot be attributed to a

low reliability of the network questionnaire because all relationships of a previous assessment were offered as potential relationships for the next assessment. Thus, the participants had to make an explicit decision to drop a relationship from their network. This method favours continuity rather than incontinuity. Instead, the high turnover rate can be attributed to the fact that this was a study of a serious life transition. All participants entered the new social world of the university and approximately two-thirds of them had left their home only recently.

As expected, those who entertained a continuous best friendship reported more secure attachment and more maximum support for peers. This difference may be because of two different effects. First, those who had a highly supportive friend were more motivated to continue this relationship than those whose friends were less supportive. In this case, continuity is a consequence of relationship quality. Second, personality factors might have negatively affected both the relationship quality and the continuity (e.g., unreliability in social relationships). Both effects may have coexisted and amplified each other.

Contrary to expectation, discontinuity of all maximally supportive peer relationships at the beginning of the study was not associated with a decreasing maximum in attachment and support. It seems that most of the participants who lost or terminated supportive friendships engaged in new, equally supportive ones. This is less surprising when one considers the fact that 54% of the romantic partners at the end of the study were not part of the network 18 months before and that this was the case even for 72% of the opposite-sex peers. Thus, students engaged in many new relationships that offered enough opportunities for new best friendships when old ones were dissolved.

Problems and limitations

The high turnover rate of peer relationships in this study may not be generalized to older adult samples. The analyses of the effects of discontinuity suggest, however, that a higher turnover of relationships does not decrease the stability of perceptions of attachment and support because terminated supportive relationships can be replaced by new supportive relationships. In addition, the stability of perceived support even for continuous best friends was only moderately high. Thus, the low continuity of the peer relationships does not seem to threaten the generalizability of the findings on stability and on the consistency of the change in attachment and support.

The results on the consistency between the perceptions of attachment and support for peers are limited by the fact that these perceptions probably refer to only partly overlapping relationships; therefore, the consistencies for the peer relationships are probably underestimated. This problem does not, however, affect the results for the parental relationships, the cross-relationship consistencies of attachment and support, and the continuity and stability findings.

Our one-item measure of support does not cover all aspects of support

such as the social provisions discussed by Weiss (1974). However, this does not seem to be a serious limitation for our interindividual analyses because different aspects of support are highly correlated (e.g., the high correlations reported by Davis et al., 1998). If the reliability is acceptable, as in the present study, it is more efficient to assess only one aspect of support, particularly if participants are asked to judge support from many particular relationships.

This study has relied on direct ratings of attachment and available support that are susceptible to defensive self-presentation tendencies of the participants. Alternatively, interview-based procedures such as the Adult Attachment Interview (Main & Goldwin, 1994) may undermine these tendencies. However, it seems practically impossible to study attachment to more than one or two different attachment figures in one study because of the extremely costly procedure in terms of participants' and researchers' time.

The problem that both attachment and support were rated by the same persons, resulting in shared method variance, was limited in the present study by the fact that attachment and support were assessed through different procedures (a traditional scale approach that suggests comparisons between persons versus a network approach that suggests comparisons between relationships). Even more convincing would be a replication of the core findings on stability and relationship specificity through interview procedures, or direct testing of the relationship representation through priming procedures. In contrast, we are sceptical about acquaintance ratings of attachment security or perceived support because these intrinsically subjective constructs are not fully transparent to acquaintances, including the relationship partners.

Implications for research on attachment

The present study yields three implications for research on adult attachment. First, it seems useful to conceptualize, and study empirically, attachment styles as qualities of relationships rather than personality (see also the conclusions of Baldwin et al., 1996). One consequence is to apply instruments, such as the prototype ratings by Hazan and Shaver (1987) and Bartholomew and Horowitz (1991), or the attachment scales by Collins and Read (1990), in a relationship-specific format. Thus, from each original instrument, a family of relationship-specific instruments can be derived. Recent studies increasingly use this approach (e.g., Collins, 1996; Scharfe & Bartholomew, 1994; Trinke & Bartholomew, 1997).

A second consequence would be that researchers refrain from conducting factor analyses of pools of items with heterogeneous or unknown relationship reference (e.g., Brennan, Clark, & Shaver, 1996). Instead, the structure of attachment styles should be investigated relationship type by relationship type because the possibility cannot be excluded a priori that this structure varies across different types of relationships.

A third implication for research on adults' attachment is that researchers should pay more attention to the change of attachment styles over time.

How do attachment styles typically change over the course of a close relationship, from its early phases until its dissolution? Do the correlates of attachment styles vary with such relationship phases? Is there transfer from attachment in one relationship to the next when the earlier is dissolved (e.g., stepparents, new best friends, remarriage)? What are the antecedents and consequences of changes in attachment in a particular type of relationship? These questions about the dynamics of attachment styles within types of relationships have rarely been studied (but, see Baldwin & Fehr, 1995).

Implications for reseach on social support

The present study also has two implications for research on social support. First, it seems useful to conceptualize, and study empirically, perceived available support as a quality of relationships rather than personality (see also Pierce et al., 1991, and Brock, Sarason, Sarason, & Pierce, 1996). Often it is assumed in studies of support that different supportive relationships are interchangeable: if the spouse is unwilling, turn to a good friend. In the rare cases where available support from different types of relationships has been studied, the results did not support interchangeability. For example, Stroebe, Stroebe, Abakoumkin, and Schut (1996) found that the support from one's spouse cannot be replaced easily by other relationships after the spouse's death, and van Aken and Asendorpf (1997) reported that, for children, lack of support from the parents could not be compensated by supportive peer relationships and vice versa. It seems that different types of close relationships fulfill different support functions. Therefore, they should not be pooled in studies of support.

Second, the study confirmed more recent views in stress research that perceived available support is less stable over longer test–retest intervals than assumed by Sarason et al. (1990). The lower stability can be attributed to the fact that available support is not only an antecedent, but also a consequence of external stress (e.g., Lepore, Evans, & Schneider, 1991; Norris & Kaniasty, 1996). Similarly, a low stability of available support from a relationship may be studied as a consequence of problems within the relationship that, in turn, often arise from external life stresses or threats to the relationship.

REFERENCES

Asendorpf, J. B., Banse, R., Wilpers, S., & Neyer, F. J. (1997). Beziehungsspezifische bindungsskalen für erwachsene (Relationship-specific attachment scales for adults). *Diagnostica*, *43*, 289–313.

Asendorpf, J. B., & Wilpers, S. (1998). Personality effects on social relationships. *Journal of Personality and Social Psychology*, *74*, 1531–1544.

Baldwin, M. W. (1992). Relational schemas and the processing of social information. *Psychological Bulletin*, *112*, 461–484.

Baldwin, M. W., & Fehr, B. (1995). On the instability of attachment style ratings. *Personal Relationships*, *2*, 247–261.

Baldwin, M. W., Keelan, J. P. R., Fehr, B., Enns, V., & Koh-Rangarajoo, E. (1996). Social-cognitive conceptualization of attachment working models: Availability and accessibility effects. *Journal of Personality and Social Psychology, 71*, 94–109.

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61*, 226–244.

Blain, M. D., Thompson, J. M., & Whiffen, V. E. (1993). Attachment and perceived social support in late adolescence. *Journal of Adolescent Research, 8*, 226–241.

Borkenau, P., & Ostendorf, F. (1993). *NEO-Fünf-Faktoren Inventar (NEO-FFI)* [NEO-Five-Factor Inventory]. Göttingen, Germany: Verlag für Psychologie.

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

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

Brennan, K. A., Clark, C. L., & Shaver, P. R. (1996, August). *Development of a new multi-item measure of adult romantic attachment: A preliminary report.* Poster presented at the 8th International Conference on Personal Relationships, Banff, Canada.

Brock, D. M., Sarason, I. G., Sarason, B. R., & Pierce, G. R. (1996). Simultaneous assessment of perceived global and relationship-specific support. *Journal of Social and Personal Relationships, 13*, 143–152.

Burr, J. A., & Nesselroade, J. R. (1990). Change measurement. In A. von Eye (Ed.), *Statistical methods in longitudinal research* (Vol. 1, pp. 3–34). Boston: Academic Press.

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

Collins, N. L., & Read, S. J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology, 58*, 644–663.

Collins, N. L., & Read, S. J. (1994). Cognitive representations of attachment: The structure and function of working models. In K. Bartholomew & D. Perlman (Eds.), *Advances in personal relationships* (Vol. 5, pp. 53–90). London: Jessica Kingsley.

Conley, J. J. (1984). The hierarchy of consistency: A review and model of longitudinal findings on adult individual differences in intelligence, personality and self-opinion. *Personality and Individual Differences, 5*, 11–25.

Costa, P. T., Jr, & McCrae, R. R. (1994). Set like plaster: Evidence for the stability of adult personality. In T. F. Hetherton & J. L. Weinberger (Eds.), *Can personality change?* (pp. 21–40). Washington, DC: American Psychological Association.

Davida, J., Burge, D., & Hammen, C. (1997). Why does attachment style change? *Journal of Personality and Social Psychology, 73*, 826–838.

Davis, M. H., Morris, M. M., & Kraus, L. A. (1998). Relationship-specific and global perceptions of social support: Associations with well-being and attachment. *Journal of Personality and Social Psychology, 74*, 468–481.

Doll, J., Mentz, M., & Witte, E. H. (1995). Zur Theorie der vier Bindungsstile: Meßprobleme und Korrelate dreier integrierter Verhaltenssysteme [On the theory of four attachment styles: Measurement problems and correlates of three integrated behavioural systems]. *Zeitschrift für Sozialpsychologie, 26*, 148–159.

Feeney, J. A., Noller, P., & Callan, V. J. (1994). Attachment style, communication and satisfaction in the early years of marriage. In K. Bartholomew, & D. Perlman (Eds.), *Advances in personal relationships* (Vol. 5, pp. 269–308). London: Jessica Kingsley.

Fuller, T. L., & Fincham, F. D. (1995). Attachment style in married couples: Relation to current marital functioning, stability over time, and method of assessment. *Personal Relationships, 2*, 17–34.

Hazan, C., & Shaver, P. (1987). Conceptualizing romantic love as an attachment process. *Journal of Personality and Social Psychology, 52*, 511–524.

Kobak, R. (1994). Adult attachment: A personality or relationship construct? *Psychological Inquiry, 5*, 42–44.

Lakey, B., McCabe, K. M., Fisicaro, S. A., & Drew, J. B. (1996). Environmental and personal

determinants of support perceptions: Three generalizability studies. *Journal of Personality and Social Psychology*, *70*, 1270–1280.

Larose, S., & Boivin, M. (1997). Structural relations among attachment working models of parents, general and specific support expectations, and personal adjustment in late adolescence. *Journal of Social and Personal Relationships*, *14*, 579–601.

Larose, S., & Boivin, M. (1998). Attachment to parents, social support expectations, and socioemotional adjustment during the high school–college transition. *Journal of Research on Adolescence*, *8*, 1–27.

Lepore, S. J., Evans, G. W., & Schneider, M. L. (1991). Dynamic role of social support in the link between chronic stress and psychological distress. *Journal of Personality and Social Psychology*, *61*, 899–909.

Lewis, M. (1994). Does attachment imply a relationship or multiple relationships? *Psychological Inquiry*, *5*, 47–51.

Main, M., & Goldwyn, R. (1994). *Adult attachment rating and classification system (Version 6.0)*. Unpublished manuscript, University of California at Berkeley.

Mikulincer, M., Florian, V., & Weller, A. (1993). Attachment styles, coping strategies, and posttraumatic psychological distress: The impact of the Gulf War in Israel. *Journal of Personality and Social Psychology*, *64*, 817–826.

Norris, F. H., & Kaniasty, K. (1996). Received and perceived social support in times of stress: A test of the social support deterioration deterrence model. *Journal of Personality and Social Psychology*, *71*, 498–511.

Ognibene, T. C., & Collins, N. L. (1998). Adult attachment styles, perceived social support and coping strategies. *Journal of Social and Personal Relationships*, *15*, 323–345.

Pierce, G. R., Sarason, I. G., & Sarason, B. R. (1991). General and relationship-based perceptions of social support: Are two constructs better than one? *Journal of Personality and Social Psychology*, *61*, 1028–1039.

Sandler, J., & Rosenblatt, B. (1962). The concept of the representational world. *Psychoanalytic Study of the Child*, *17*, 128–145.

Sarason, B. R., Pierce, G. R., & Sarason, I. G. (1990). Social support: The sense of acceptance and the role of relationships. In B. R. Sarason, I. G. Sarason, & G. R. Pierce (Eds.), *Social support: An interactional view* (pp. 97–128). New York: Wiley.

Sarason, B. R., Shearin, E. N., Pierce, G. R., & Sarason, I. G. (1987). Interrelations of social support measures: Theoretical and practical implications. *Journal of Personality and Social Psychology*, *52*, 813–832.

Sarason, I. G., Levine, H. M., Basham, R. B., & Sarason, B. R. (1983). Assessing social support: The Social Support Questionnaire. *Journal of Personality and Social Psychology*, *44*, 127–139.

Sarason, I. G., Sarason, B. R., & Shearin, E. N. (1986). Social support as an individual difference variable: Its stability, origins, and relational aspects. *Journal of Personality and Social Psychology*, *50*, 845–855.

Scharfe, E., & Bartholomew, K. (1994). Reliability and stability of adult attachment patterns. *Personal Relationships*, *1*, 23–43.

Shaver, P. R., & Brennan, K. A. (1992). Attachment styles and the 'Big Five' personality traits: Their connections with each other and with romantic relationship outcomes. *Personality and Social Psychology Bulletin*, *18*, 536–545.

Simpson, J. A., Rholes, W. S., & Nelligan, J. S. (1992). Support seeking and support giving within couples in an anxiety-provoking situation: The role of attachment styles. *Journal of Personality and Social Psychology*, *62*, 434–446.

Stroebe, W., Stroebe, M., Abakoumkin, G., & Schut, H. (1996). The role of loneliness and social support in adjustment to loss: A test of attachment versus stress theory. *Journal of Personality and Social Psychology*, *70*, 1241–1249.

Trinke, S. J., & Bartholomew, K. (1997). Hierarchies of attachment relationships in young adulthood. *Journal of Social and Personal Relationships*, *14*, 603–625.

van Aken, M. A. G., & Asendorpf, J. B. (1997). Support by parents, classmates, friends and

siblings in preadolescence: Covariation and compensation across relationships. *Journal of Social and Personal Relationships*, *14*, 79–93.

Weiss, R. S. (1974). The provisions of social relationships. In Z. Rubin (Ed.), *Doing onto others: Joining, molding, conforming, helping* (pp. 17–26). Englewood Cliffs, NJ: Prentice–Hall.