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Toward a Life Span Theory of Close Relationships: The Affective Relationships Model

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Attachment · Close relationships · Life span development · Social network model

Abstract
This article addresses how close relationships can be conceptualized so that they can be accurately understood over the life span. First, two typical clusters of theories of close relationships, the attachment theory and the social network theory, are compared and discussed with regard to their fundamental but controversial assumptions regarding the scope of lifelong development. Second, previous research into close relationships among mature adults is reviewed. Third, a new social network model, the affective relationships model, and its assessment instrument are proposed. This model describes the nature of individual close relationships consisting of multiple significant others, and condenses the complexity of each social network by typological classifications. Fourth, new evidence based on the model is reviewed. Finally, fundamental assumptions about close relationships and emerging topics for future studies are discussed.

Nowadays, most researchers will agree that, from the cradle to the grave, humans need others not only for their survival but also for a flourishing life. To date, empirical studies have revealed that humans have close relationships with significant others, and most of these studies have focused on dyadic relationships, such as child-mother [e.g., Ainsworth, Blehar, Waters, & Wall, 1978; Bretherton & Waters, 1985; Cassidy & Shaver, 1999; Kobak & Hazan, 1991], child-friend [e.g., Dodge, Pettit, McClasky, & Brown, 1986; Jones & Vaughan, 1990; Parker & Gottman,

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1989; Urberg, Degirmencioglu, Tolson, & Halliday-Scher, 1995], adolescent-romantic partner [e.g., Hazen & Shaver, 1987, 1990; Shaver, Hazen, & Bradshaw, 1988], and the marital relationship [e.g., Actelli, 1996; Erickson, 1993; Weiss, 1975]. These researchers have clipped a particular dyad from other social interactions that a target child or adult must have had. Moreover, in the last few decades, some researchers have broken fresh ground, beyond the conventional dyadic paradigm, to take into account that each individual has concurrent close relationships with multiple significant others throughout life [e.g., Antonucci, 1976; Hinde, 1981; Kahn & Antonucci, 1980; Lang & Carstensen, 1994; Lewis, 1982, 1984; Pierce, Sarason & Sarason, 1996; Takahashi, 1974, 1990a, 2004].

Attachment Theory versus Social Network Theory

From the perspective of lifelong development, theories of close relationships can be divided into two clusters. They differ from each other in two fundamental assumptions: (1) how essential the role of the mother figure is, and (2) to what extent early childhood experiences of social interactions constrain the subsequent development.

Attachment Theory Cluster

The first cluster, which has been influenced heavily by psychoanalytic theories, claims an indispensable role of the mother figure, and lasting influences of experiences of early childhood on future development. This theory highlights a specific and narrow aspect of close relationships mostly with the primary caregiver. As a natural consequence, these studies focus on the child and mother figure dyad. A paragon of this cluster is the attachment theory proposed by Bowlby [1969/1982, 1973, 1980].

Definition of Attachment. The attachment theory is characterized by a single focus on a narrow and limited aspect of close relationships, i.e., the relationships providing humans with their mother figure's protection, for comfort and security, as clearly stated by Ainsworth [1989] and Main [1999], and by its claim of a long-term effect of the early attachment. This perspective on close relationships emphasizes and zooms in on the role of the mother figure. Recently, beyond the 'monotropy (the seeking of one figure, the mother figure)' hypothesis by Bowlby [1969/1982], some attachment theorists have assumed a plural form of attachment and even implicitly suggest that there will be other attachment figures than the mother [e.g., Cassidy, 1999; Kobak, 1999]. Some others have started to discuss 'an attachment hierarchy' with the assumption that the mother figure is primary and other figures secondary in the hierarchy [e.g., Cassidy, 1999, Main, 1999]. However, according to their rationale, the attachment theory mainly focuses on the role of the mother figure.

Continuity of Development. Bowlby proposed internal working models of attachment as a groundbreaking device to explain the long-term consequences in later life of the initial special bonding between mother and child, because he hypothesized that 'the attachment has the vital role in the life of man from the cradle to the

grave' [Bowlby, 1969/1982] and 'attachment is a lifespan phenomenon' [Main, 1999]. It is posited that the internal working models are only constructed through accumulative interactions in young childhood with a principle attachment figure, through 'monotropy,' as Bowlby put it [Bowlby, 1969/1982]. It is also hypothesized that these internal working models constrain subsequent development, although to some extent the researchers indicate the possibility of modifying insecure attachment through clinical treatment [Bretherton, 1993; Marvin, Cooper, Hoffman & Powell, 2002] or reinterpretations of experiences with the mother [Main, Kaplan, & Cassidy, 1985].

Attachment Types. The attachment theory is concerned with interindividual patterns of attachment and conceptualizes the individual differences among infants, children, and adults by typology through sophisticated qualitative analyses [Ainsworth et al., 1978; George, Kaplan, & Main, 1984–1996; George & Solomon, 1990–2000].

Social Network Theory Cluster

Most researchers who have constructed theories of social network systems belong to the second cluster. These researchers, including myself, are concerned with the fact that each individual, from infancy to old age, simultaneously has close relationships with multiple significant others, including not only family members but also nonfamily persons who are close to them [e.g., Kahn & Antonucci, 1980; Lewis, 1982, 1984; Pierce et al., 1996; Takahashi, 1974, 1990a, 2004]. Similar to the theories of the first cluster, they posit an important role of the mother figure, especially at the beginning of social relationships, and recognize its influence on later development. However, at the same time, they take flexible stances regarding the two fundamental assumptions and conceptualize close relationships differently.

Definition of Close Relationships. Social network researchers postulate that close relationships, which support our survival and being, consist of not only attachment relationships, i.e., asymmetrical relationships in which humans ask to be protected by the mother figure, but also other close relationships: reciprocal relationships (e.g., sharing emotions and experiences with others), and another direction of asymmetrical relationships (e.g., giving nurture toward others). Accordingly, they simultaneously look at multiple figures, including the mother figure, surrounding humans from birth.

Role of the Mother Figure. These researchers take a broad view of social figures surrounding an individual [Antonucci & Akiyama, 1987; Feiring & Lewis, 1989; Kahn & Antonucci, 1980; Levitt, Guacci-Franco, & Levitt, 1993; Lewis, 1982]. They premise that the mother figure is the most important figure for many people, but not all, and not for the same reason. The mother is one of the significant figures, and her psychological role is definitely related to and determined by the roles of the remaining significant figures of close relationships.

Continuity and Discontinuity of Development. Similar to the attachment theory, social network theories hypothesize the continuity of development, because they posit that the preestablished social relationships of each individual mediate and constrain the present and coming social interactions. However, as the theories have a wider perspective than that of the attachment theory, they admit changes can

occur in close relationships when individuals encounter new, more appropriate figures, lose significant others, or reevaluate the old figures according to their development [Carstensen, 1992; Kahn & Antonucci, 1980; Lewis, 1982; Weiss, 1975]. Thus, these theorists hypothesize both continuity and discontinuity of close relationships. On the one hand, as current close relationships constrain ongoing social interactions, they recognize the stability of relationships. On the other hand, as losses, reevaluations, or encounters with other social figures change the social relationships, they acknowledge the flexibility and resilience of development.

Strength and Weakness of Each Theory

Both clusters of researchers are similarly concerned with the core social relationships that support our survival and enhance well-being. However, the researchers of the two clusters conceptualize close relationships differently. The attachment theory premises that establishing a healthy dyadic relationship between an infant and the mother figure signifies a safe haven for the infant, and thus, the reliable availability of the attachment figure is the most crucial component of close relationships. In this vein, they discriminate between the qualities of individual attachment types as to whether the mother figure provides a secure base for exploration or living. In contrast, the social network theory assumes that humans, who are born and live in social arenas from birth, naturally have a variety of social relationships with multiple others beyond the dyad for their survival and well-being. The researchers hypothesize that close relationships necessarily include not only the attachment kind but also relationships that involve sharing emotional experiences with others and helping others in difficult situations.

From a life span perspective, the attachment theorists have traditionally examined the nature of the infant-mother figure dyad with a magnifying glass, and have successfully conceptualized the particulars of the dyad of the early years. In contrast, the social network theorists have mainly focused on the lives of adolescents and adults, and have striven to conceptualize their wider and more complicated social relationships than those of infants and young children. Thus, the differences in the conceptualizations of the two clusters may be attributed to their interests in subjects of a different age. The former are specialists in infancy and toddlerhood, whereas the later are specialists in adolescence and adulthood.

Can we somehow combine the two clusters into a life span developmental theory? Or, can we have a third unifying theory that describes close relationships from infancy to old age? Hereafter, I will try to answer this question. For this trial, we should start with close relationships among adolescents and adults, because our new theory must describe the complexity of social relationships among them.

Social Networks of Mature Human Beings

Previous empirical evidence of social network studies indicates that a mature human being has close relationships with multiple significant others for her/his survival and well-being. More particularly, these studies show: (1) to maximize or to ensure their psychological safety, individuals select multiple social figures and

assign different psychological roles/functions to each of them, and (2) individuals construct by themselves their own internal framework of close relationships consisting of a set of figure-function pairs.

Articulations of Psychological Functions among Multiple Significant Others

In conceptualizing close relationships (of which the main goal is to maintain our survival and to enhance well-being), some researchers have differentiated several pathways to closeness in terms of psychological functions [Lewis, 1982], social roles [Kahn & Antonucci, 1980], or relational provisions [Weiss, 1974]. They have also assumed that these psychological functions are assigned differently to different significant figures. More precisely, each figure is assigned a few functions among which some are dominant. For instance, among the close relationships of an adult, the spouse will be dominantly assigned critical functions for her or his well-being, but simultaneously the figure will fulfill other functions such as sharing experiences, and being given pleasant experiences.

To assign different psychological functions to each figure, a person needs to possess multiple figures simultaneously. Moreover, because of the distribution of psychological functions among limited numbers of significant others, a person must insure that there are appropriate and available figures for every expected situation. If a person attaches to only one figure or attaches to everybody, he or she may be overly dependent on or easily influenced by the others accordingly, and this will impair his or her ability to live as an autonomous individual. Previous research on social networks has successfully documented the articulations of these psychological functions among multiple significant others. For example, Antonucci and her colleagues propose the convoy model to conceptualize social relationships as individuals' hierarchical social support networks, in which social figures are distinguished by the degree of importance they have to the individual [Antonucci, 1985; Kahn & Antonucci, 1980]. Operationally, using a hierarchical mapping technique [Antonucci, 1986], they first ask individuals to map close and important persons in their lives and to classify them into three concentric circles. Each of the circles is considered to represent a different level of importance to the interviewees. They then ask the subjects what functions each figure provides. Their studies [e.g., Antonucci & Akiyama, 1987; Antonucci & Jackson, 1987] revealed that healthy adults nominated nearly 10 figures on average and one third of them were placed into the inner circle of people who provided higher proportions of all kinds of critical support fulfilled by the attachment relationship, such as confiding, reassurance, care when sick, and talk when upset, whereas the middle-circle figures provided care when sick and respect, and the outer-circle members mainly provided respect.

Thus, the research has clearly indicated the existence of the articulations of psychological functions among significant others such as parents, children, grandparents, friends of both genders and others. Studies performed using the Convoy interview with various participants of different age groups and cultures have replicated the functional articulations of social figures [e.g., Antonucci, et al., 2001; Lang, Staudinger, & Carstensen, 1998; Levitt, Guacci-Franco, & Levitt, 1993]. The hierarchical structure is common across samples, but the content, i.e., which figures are nominated at which level, is different according to ages and cultures.

Internal Framework of Close Relationships

Nowadays, researchers enjoy the consensus that humans as young as toddlers can construct and use mental models, which they use to interpret immediate situations and plan actual and appropriate behaviors in given contexts [Bretherton, 1993; Nelson, 1986; Piaget, 1954; Schank & Abelson, 1977]. In other words, from the second year of life on, humans are competent to be representational rather than situational. Because of this ability, it is reasonably assumed that social interactions and relationships are not synonymous [Lewis, 1982]. We can observe social interactions, but such observation does not necessarily lead to our understanding of close relationships that form an internal framework. We must somehow access this representational framework of close relationships. Some researchers have proposed an internal framework of social relationships, such as relational schema [Baldwin, 1992; Yee, Santoro, Paul, & Rosenbaum, 1996], social network systems [Lewis, 1982] or trust [Rempel, Holmes, & Zanna, 1985]. In this connection, it should be noted that a successful theorization of the representational framework is done in the attachment theory. The attachment theorists have proposed the representation of the attachment relationship [Bretherton, 1985; Main, 1994; Main, Kaplan, & Cassidy, 1985]. They invented assessing instruments beyond toddlerhood by introducing the concept of mental representations of attachment rather than attachment behavior. These previous findings and devices suggest that we can conceptualize social relationships as representations of a set of actual interactive relationships. We can hypothesize that the representational framework of close relationships provides a mental model underlying the everyday social interactions of each person.

Interindividual Differences of the Representational Framework

When people are interviewed about their close relationships by being asked who is close to them and how important each person is to them, their selections of significant others show interindividual differences; there are individual differences in the configurations of the framework of close relationships. However, for a long time, researchers of social networks have mainly summarized their findings in terms of the normative tendencies of groups of people. In contrast, the attachment theory has identified individual qualities of attachment by the classifications of A-B-C-D types, based only on a narrow sense of a close relationship with a single figure, i.e., the mother figure. Identifying individual patterns may be possible if we classify individuals as to the quality of their relationships with the single figure.

Just recently, some innovative researchers of social networks have proposed ways to identify individual patterns of close relationships. For example, Antonucci and her colleagues have proposed the total network size or the composition of a network (family vs. friends ratio) as indicators of individual patterns [Antonucci, Fuhrer, & Dartigues, 1997]. Wenger [1991, 1996] and Litwin [2000, 2001] have identified individual network types among elderly people based on the frequency of contact with children, friends, or neighbors and their attendance of social activities. Although this quantitative summary of social frameworks is convenient, important characteristics of close relationships that are expressed associations between social figures and psychological functions might be lost. We should describe the whole

relationship profile for an individual, in which the psychological functions of each figure must be related to or vary with the assignments of functions of other figures. We should treat all the figures as a related whole and understand how individuals' configurations of close relationships differ. That is, we must describe individual patterns of close relationships as a set of figure-function pairs. At the same time, we must explore ways to condense the rich information from each individual: we need a neat index of the individuality.

How to Conceptualize Close Relationships: Affective Relationships Model

How densely can we describe how figures and functions are related to each other in each individual's personal framework? I have taken up the challenge of constructing a model within the social network cluster that describes the individual patterns of representational frameworks. This model, the affective relationships model, and the assessment instrument that is used to implement it are described in the next section. In this model, I offer typological classifications to condense the rich information of each social network [Takahashi, 1973, 1986, 1990a, 2004; Takahashi & Sakamoto, 2000].

Affective Relationships Model

The notion of affective relationships focuses on the core and relatively stable close relationships that are assumed to be important for the survival and well-being of humans. The affective relationships include a variety of intimate relationships that have been studied under such rubrics as attachment, trust, love, close relationships, and romantic relationships. In particular, affective relationships are defined as those interpersonal relationships that satisfy our needs for emotional interactions with significant others; they include the needs for emotional support, exchanging warm attention, and giving nurture. More concretely, the affective relationships model can examine the following essential natures of the close relationships that previous social network studies have partly investigated: (1) each person has a framework of close relationships consisting of multiple significant figures; (2) the framework constitutes a hierarchical structure; (3) there are interindividual differences in the frameworks, and (4) the framework can be transformed.

Implementing the Affective Relationships Model

The Affective Relationships Scale. To implement the affective relationships model, a new self-report type of assessment instrument, the Affective Relationships Scale (ARS), for adolescents and adults was proposed. The ARS was constructed to assess representations of close relationships as a complex set of figure-function pairs, using the same set of questions to ask about supposedly major social figures. More concretely, the ARS requires a participant to give separate ratings on the same set of items, which describes each of six psychological functions. The ARS

consists of statements describing concrete affective behaviors that are grouped according to the following six psychological functions: (a) seeking proximity; (b) receiving emotional support; (c) receiving reassurance for behavior and/or being; (d) receiving encouragement and help; (e) sharing information and experience, and (f) giving nurture. Participants are asked to give separate ratings of the 12 items (i.e., 6 functions × 2 items), for each of their 5–8 figures using a 5-point scale. The figures are selected from several social categories based on preliminary studies identifying the most important persons for adults. In most cases, participants are asked to rate the mother, the father, the closest sibling, the closest same-gender friend, the most favored opposite-gender friend or romantic partner, and a respected person. For married people, the spouse and the closest child are included. Thus, the ARS can be flexibly adjusted to different populations by including or excluding figures, depending on the respondents' social and societal conditions and the aims of the research. The ARS is designed to yield two kinds of score: the total score for all 12 items for each major figure, and a set of subscores for each of the six functions for each figure. The former reflects the strength of the subject's need for affective behaviors from each figure, and the latter, the major functions of that figure [Takahashi, 1990a, 2004; Takahashi & Sakamoto, 2000].

Affective Relationship Types. There are many potential ways to condense the rich information obtained from each individual by the ARS. We have proposed typological classifications, as an intermediate description of the data falling between live case depictions and normative summaries of the entire data set for the group. After various statistical trials aimed at defining the affective relationship types, we have tentatively concluded that the most highly scored figure by the ARS can be regarded as a useful, though simple, indicator of each personal framework. Thus, we have proposed using a typology based on the dominant or focal figure to which affective need is dominantly directed. This figure is highly rated as to almost all functions, especially critical ones. By identifying the focal figure, we can classify respondents into several types, such as the mother, sibling, spouse, child, friend, and romantic partner type. These types are categorized into two major groups, i.e., family or nonfamily group. In addition to a great majority of people who are interested in human beings, we can identify persons who are not very much interested in others. Operationally, they report a very low affective need for all figures in the ARS, or do not rate a sufficient number of social figures, saying, 'I don't need others because I can do whatever I need done myself,' 'I am an independent person,' or 'I am not particularly close to anyone.' These persons, whom I have specifically named the 'lone wolf type,' have been similarly identified in the previous literature under such rubrics as isolation, withdrawal, loneliness, and attachment disorganization [e.g., Main & Solomon, 1990; Rotenberg & Hymel, 1999; Solomon & George, 1999].

Using the ARS, we have discerned different affective relationship types for subjects ranging from junior high school students to elderly people in Japan [Inoue & Takahashi, 1999; Takahashi & Majima, 1994; Takahashi, Ohara, Antonucci, & Akiyama, 2002; Takahashi & Sakamoto, 2000; Takahashi, Tokoro & Yokosuka, 1999]. We found a prominent type for each age group: among junior and high school students, a same-gender friend was the typical focal figure; among college students, a romantic partner occupied the most significant status, and after marriage, the spouse was reported as the focal figure. In addition, we found gender

differences in the frequencies of types: among females, there are more mother types across all ages; among males after high school age, a larger number of romantic partner or spouse types were found. In sum, about 80% or more of each group of participants were classified into the family group (mother, father, spouse, or child type) or nonfamily group (friend, romantic partner, or respected person type), and about 3–10% were identified as the lone wolf type. Moreover, it is worth noting that under these normative developmental trends of the appearances of focal figures, each individual constructed her or his own framework of affective relationships. It is assumed that through negotiating with the cultural expectations according to age and/or gender, individuals voluntarily select suitable social figures for themselves and construct their own framework of relationships.

Nature of Close Relationships: Findings Based on the Affective Relationships Model

In this section, I will describe the nature of close relationships regarding the four essential characteristics of close relationships, which were clarified by the affective relationships model and its assessment instrument.

Multiplicity of Affective Relationships

As social network studies clearly indicate, each person has multiple concurrent significant figures [e.g., Antonucci & Akiyama, 1987; Antonucci & Jackson, 1987; Furman, Simon, Shaffer, & Bouchery, 2002; Feiring & Lewis, 1989]. To examine this fact, the ARS asks participants to rate 4–8 figures who are assumed to be significant, based on our previous research. Our data clearly indicate that each person needs multiple others. For instance, among senior college students (n = 478, mean age = 22.20 years, SD = 1.83), who were asked to rate 4 figures (mother, father, friend of the same gender, and romantic partner), 76% rated all 4 or 3 figures at greater than the midpoint of the 5-point scale, whereas only 7% rated all figures at less than the midpoint. In addition, among elderly persons (n = 112, mean age = 69.3 years, SD = 5.03), who rated 4 figures (mother, spouse, child, friend), 66% rated 4 or 3 figures at greater than the midpoint, whereas 4% rated all 4 figures at less than the midpoint. Thus, humans across ages exhibit a fairly strong affective relationship need toward multiple significant figures.

Hierarchical Structure of the Framework of Affective Relationships

As the Convoy questions, a hierarchical mapping technique [Antonucci, 1986], admirably extract, the framework of relationships constitutes a clear hierarchical structure. In particular, there is a focal figure that satisfies almost all of the psychological functions, and provides the scaffolding of being for each person by fulfilling the most critical functions. In addition to the focal figure, there is a limited but sufficient number of significant others who satisfy a variety of psychological functions for a stable and autonomous life, so that the focal figure's influence could be re-

duced by the influence of the others. It is assumed that the focal figure of each representational framework, irrespective of who the figure is, commonly fulfills most of the psychological functions, including critical functions for ensuring safety and well-being, whereas the remaining figures fulfill some of the less critical functions. In other words, it is posited that the same figure will be assigned different psychological functions depending on whether she or he is the focal figure or not and who else is the focal figure in the framework.

Our ARS data from subjects ranging from adolescence to old age indicate that the focal figure, whether the figure is, for example, the mother, a friend of the same gender, or a romantic partner, commonly fulfills all of the psychological functions, including these critical ones: proximity seeking, receiving emotional support, and receiving reassurance for behavior and/or being. That is, among female college students (n = 279, mean age = 21.13 years, SD = 2.52), the top, focal figure was significantly more strongly assigned these critical functions than the remaining figures. In particular, there were significant differences even between the top figure and the 2nd figure in the scores of proximity seeking and receiving emotional support. The remaining figures were highly rated in giving nurture, but not in critical functions. This tendency was obvious for the lower ranked figures. Thus, as adults, the participants highly rated the function of giving nurture in figures of all ranks, but they discriminately rated figures of different ranks for critical functions.

Another analysis indicates the same figure is treated differently depending on whether she or he is the focal figure or not. The ARS scores for the mother and the romantic partner of mother types and romantic partner types among female college students (n = 414, mean age = 19.34 years, SD = 1.62) were compared. The patterns of the six function scores of each focal figure, i.e., the mother of the mother type and the romantic partner of the romantic partner type, were similar: the scores of the critical functions of each of the focal figures were relatively higher than those of the remaining figures. Therefore, the score patterns of the mother in the mother type and the romantic partner type were different. Thus, we cannot anticipate the psychological functions of each figure by the figure's social category, such as mother, friend, or romantic partner. In other words, we cannot generally assume the psychological meanings of the mother, for instance, because her meaning varies with and depends on her status in each affective relationship framework.

More evidence of the structural nature of affective relationships is that the psychological status of each figure in the framework is similar among people of the same affective relationship type, but different for different types. Therefore, if we identify a focal figure, we can extrapolate the importance of the remaining figures in the framework. For example, among the romantic partner type students, 96% of their parents were given scores lower than same-gender friends. Thus, romantic partner type students have a nonfamily dominant nature.

Interindividual Differences of the Frameworks

As each person chooses the figures that are most appropriate and available to her or him to fulfill each of the psychological functions, there are interindividual differences in the frameworks. I have proposed typological classifications to summarize the individual nature of close relationships that is captured by these figure-

function pairs. Our studies indicate that individuals belonging to different types of affective relationships behave differently. We have examined a variety of behaviors among the types in subjects ranging from young adolescents to elderly people, and found that the affective relationship type can be used to summarize and anticipate behaviors in a given social context. So far, these studies have indicated that, consistent with the theoretical propositions of the affective relationships model, each affective relationship type has a different, very important role in the individual's interactions with new figures, the adjustment to new environments, her or his narratives or interpretations of life stories, and psychological adjustment and well-being. As I have reviewed in detail the findings elsewhere [Takahashi, 2004], I will mention here only relevant observations.

The Role of the Preestablished Affective Relationship Type. Our studies indicate that the preestablished personal framework mediates and affects ongoing social interactions. For instance, in a 26-week longitudinal study among first-year college students (n = 104, age range: 18–19 years), we examined how their preestablished affective relationship types, assessed by the ARS at their entrance to college, predicted their adjustment to the transition from home to college dormitory and campus life [Takahashi & Majima, 1994]. The results indicate that friend type students developed relationships with new fellow students more easily and reported fewer difficulties in making the transition than their family group (mother type and father type) counterparts. It seems likely that the friend types possessed rich representations of relationships with age-mates, and thus had an advantage in adjusting to such age-mate-dominant situations as attending college and living in a dormitory. A friend type framework may fit the transitional circumstance of going to college, whereas the family group student will show superiority over the friend type in situations where social interactions are characterized as family-like or in intergenerational transactions.

Differences in the Interpretation of Life Experience. Other studies of ours suggest that the established affective relationships function as a filter, both when people retrieve past experiences and when they anticipate their future life. In some of these studies among college students and elderly persons, we aimed to examine how each framework of affective relationships would affect the encoding and retrieval of past experiences of social relationships when the participants narrated their life stories. More precisely, we hypothesized that an individual's framework would tend to lead her or him to interpret the past experiences of social interactions and to reconstruct life stories in ways that are consonant with the framework. The data supported these hypotheses. In one study, female college students (n = 104, age range: 19–20 years) were asked to write their life stories from young childhood to the present, focusing on human relationships. The life stories of mother types and friend types were selected for analysis: the participants provided anecdotes from their life, both past and present, especially those involving the focal figure. Mother type college students included in their life stories positive interactions with the mother and family members throughout all developmental periods; they reported that they were called 'mama's girl' in young childhood and felt strong influences from family members, even in the selection of the college they attended, whereas they described many difficulties in adapting to school from an early age and in making friends in school. In contrast, friend type students consistently emphasized their interactions with age-mates, including those of the opposite gender,

from young childhood to the present. Even in kindergarten, they reported that they had enjoyed their life with peers rather than with the mother. They recalled pleasant scenes in kindergarten and very easy adaptation to school [Takahashi, 1989]. Moreover, students of the two groups, especially male students, reported different strategies for coping with hypothetical, future life events such as promotions, unemployment, marriage, childbirth, and illness. A greater proportion of mother type students anticipated that their parents would share life events with them; in contrast, friend type students preferred age-mates as supporters in their future life over family members [Kobayashi, 1993].

Differences in Psychological Adjustment. Another issue is whether there are differences in psychological adjustment and general well-being among the individual types. In the conceptualization of affective relationships, it is hypothesized that humans voluntarily select suitable figures for themselves and assign appropriate psychological functions to each of them. This implies that there should be no differences in the quality of psychological adjustment among individuals displaying different types of affective relationships, irrespective of who the focal figure is. It is plausible that each person has a personal framework that supports her or his well-being. However, it seems likely that the lone wolf types, who do not have sufficient social resources, would suffer from difficulties in psychological adjustment, as has been suggested by previous research [Antonucci & Jackson, 1987; Krause, 1987; Lang & Carstensen, 1994; Main & Solomon, 1990; Solomon & George, 1999]. Our investigations among college students [Inoue & Takahashi, 1999; Takahashi & Majima, 1994] and elderly people [Takahashi, Tamura, & Tokoro, 1997; Takahashi & Yokosuka, 1997] support this expectation. That is, there were no differences in psychological adjustment between individuals who had the mother type and friend type of affective relationships, but the lone wolf types indicated lower adjustments in several psychological measurements.

Continuity of and Changes in the Framework

Individuals' frameworks will necessarily change through encounters with more appropriate figures than the existing ones, reevaluations of the figures, or the loss of figures through separation, death, aging, and/or development. Thus, it is reasonably assumed that each person continuously transforms her or his own framework throughout life. On the other hand, because the preestablished framework mediates new encounters and experiences of social relationships, and the existing figures will (even if not as well) fill in for the psychological functions once provided by a figure who has been lost, we can assume some continuity of the framework. The stability of and changes in the framework are best observed in longitudinal studies. Female sophomores (n = 66, 19–21 years old) were assessed for their affective relationship types twice with an interval of 7 months. Almost 80% were coherently classified into the same group (family group or nonfamily group) at both assessments. Of the rest, all but 5% reported what they believed to be the causes of the score change for each of the figures. That is, they reported that the occurrence of ordinary contacts (via dating, calling, writing to, and quarrelling with the figure) tended to reduce the score of the target figure; on the other hand, deprivation of contact with the figure, and also special events, such as being cared for when sick

or having a lengthy conversation leading to deepened understanding or renewed feelings of love, were identified as the reason for increasing the ARS score and for changes in the focal figure [Takahashi, 1989]. Another investigation among college students using a life story questionnaire replicated the findings [Takahashi, 1990b]. Moreover, among middle-aged adults (n = 38, aged 34–54 years), who were investigated with respect to their social relationships for 2 years, 7% changed from being in the family group to the nonfamily group; these individuals reported a variety of reasons for changing the strength of their affective relationships toward each figure, such as bereavement, the independence of a child, participation in social activities, and aging [Hamanoue, 1999]. Twenty-three cancer patients (aged 36–65 years) reported that after an operation, they had a different view of their close relationships [Fukui, 1999]. Most of these patients said that they were acutely aware of the importance of a focal figure as an efficient supporter of their critical experiences, and changed (either included or excluded) some other figures through reevaluations of their existing figures.

Toward an Integrated Theory of Close Relationships: Beyond the Mother-Child Dyad

The evidence, provided by the affective relationships model and its assessment instrument, has supported the idea that there are four important characteristics of close relationships: (1) a personal framework consists of multiple social figures; (2) the framework has a hierarchical structure usually with regard to a focal figure; (3) there are interindividual differences in the framework, and (4) the framework is stable, but can change with a person's circumstances. These empirical investigations strongly suggest that we need a view beyond the mother figure and child dyad for understanding the complex nature of close relationships among adults. In my view, the attachment theory, which has highlighted a narrow and limited component of close relationships, and has necessarily focused on the role of the mother figure, will be aptly incorporated into social network theories in the future. From this perspective, let me revisit the two key assumptions of the attachment theory: the importance of the mother figure, and the continuity of the development. Then, I will discuss future directions toward an integrated theory.

Is the Mother Figure Special?

Attachment theorists insist that humans throughout life have only a few attachment figures at the most, and that the mother is primary for many people [Cassidy, 1999; Kobak, 1999; Main, 1999]. Theoretically, they posit that other figures such as the father could be an attachment figure. However, as early attachment to the father was not significantly related to the adult attachment representational status assessed by the Adult Attachment Interview, and as the mother was dominantly preferred as the primary figure by almost all subjects, the father was treated not as 'meaningless,' but as secondary [Main, 1999]. If we consider the conventional caregiving customs in which the mother is a central figure in caring for infants and young children [Hays, 1996; Hrdy, 1999], the preference for the mother over other

figures among young subjects is not surprising, although whether she should be was a different question even in those days, as feminists have pointed out [e.g., Chodrow, 1978; Ueno, 1996]. In this vein, this is a valuable question: aren't psychologists caught in the trap of assuming conventional concepts of the mother and caregiving systems? Furthermore, I think it might be worth considering another question: if Bowlby [1951] had not started his story of attachment using his investigations of war orphanages by putting 'maternal deprivation' as a central concept [Rutter, 1981], would the story have been different? As is often pointed out [e.g., Funabashi, 1995; Weisner & Bernheimer, 1998; Weisner, Garnier, & Loucky, 1994], the systems of family and marriage are drastically changing in present societies.

The affective relationships model opposes the 'monotropy' proposed by Bowlby, and recently some attachment theorists have also become suspicious of this premise [Main, 1999]. In my conceptualization, it is assumed that even in the conventional, two-parent family, the father will surely have a chance to be dominantly assigned attachment functions by a child, but simultaneously he will also be assigned other functions. Our studies indicate that some other significant figures are assigned certain psychological functions (including attachment functions) with different dominance from the focal figure, and thus, other figures could somehow manage to fulfill the attachment functions if the focal figure is not available.

We need a more accurate understanding of how indispensable the mother figure is for healthy development, and if so why. For instance, investigations among children and adults living in nontraditional families, such as a nonbiological parent and child family, a single-parent family, and a family living in a commune, will open a new perspective for which characteristics of relationships between the mother figure and a child are essential in the establishment and development of close relationships. These natural experiments suggest that there are many possible ways to develop human relationships [e.g., Weisner et al., 1994]. Moreover, clinical applications of theories and research will be useful for the understanding of the nature of the mother figure. In fact, after identifying subjects with a disorganized attachment pattern [Main & Solomon, 1986, 1990], some attachment researchers are actively concerned with the deviated cases [e.g., Lieberman & Zeanah, 1999; Lyons-Ruth & Jacobvitz, 1999; Soloman & George, 1999], and find that their theory is well validated among clinical patients [e.g., Main, 1996; West & George, 2002].

Continuity versus Discontinuity of the Development of Close Relationships

Bowlby claimed that the mother-child relationship is the root of the attachment relationship throughout life. Bowlby and others [e.g., Bretherton, 1985; Main, Kaplan, & Cassidy, 1985] have suggested a direct link between early attachment experiences with the mother and the state of attachment in later life. To explain the stability, they propose internal working models. The models are supposed to be products of accumulative attachment experiences with the mother in infancy, and provide an individual with foundations for anticipating and interpreting the attachment behavior and intentions of attachment figures and her/himself in later life. The attachment theorists assume that internal working models are resistant to change, although there are exceptional people who succeed in getting an 'earned secure' attachment [Pearson, Cohn, Cowan, & Cowan, 1994; Phelps, Belsky, & Crnic,

1998]. In addition, they suppose that internal working models constrain caregiving behavior. This mechanism, named 'intergenerational transmission,' endorses the continuity of attachment across generations through caregiving behavior [Bowlby, 1969/1982; George & Solomon, 1996; Main, 1991]. Thus, two types of continuity are hypothesized: an intra-individual continuity of attachment quality across age periods, and the correspondence of attachment between the mother and her child.

However, the findings related to both continuities are mixed. Some studies support the first type of continuity [e.g., Hamilton, 2000; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000], but others suggest the continuity must depend on the degree of stability of the family environment [e.g., Carlson, 1998; Weinfield, Sroufe, & Egeland, 2000]. For example, when the family environment changed through parental divorce in adolescence, secure toddlers were later identified as insecure adolescents [Lewis, Feiring, & Rosenthal, 2000]. Furthermore, the findings related to intergenerational transmission suggest that reality is not so simple. Some studies support intergenerational transmission [e.g., George & Solomon, 1996; Fonagy, et al., 1995; Ward & Carlson, 1995], but others fail to find strong evidence for the maternal characteristics that mediate intergenerational continuity [e.g., van IJzendoorn, 1995]. There must be many factors that intervene and/or compensate for the internal working models.

The issue of continuity and discontinuity of close relationships is theoretically and empirically incomplete. As I have pointed out, there are discontinuities among the studies: that is, the major theorists of attachment have traditionally been concerned with infancy, whereas social network theorists have studied relationships mainly among adolescents and adults. A practical problem of life span research is how to assess the same kinds of relationships throughout life. From the 1980s, attachment researchers have been constructing assessment instruments beyond the Strange Situation Procedure [Ainsworth et al., 1978] based on the same principle: the Attachment Story Completion Task [Bretherton, Ridgeway, & Cassidy, 1990; Page & Bretherton, 2001] and Attachment Doll Play for young children [George & Solomon, 1990–2000], and the Adult Attachment Interview for adolescents and adults [George, Kaplan, & Main, 1984–1996; Main & Goldwyn, 1998]. Although more validating studies of each of the instruments are needed as well as examinations of continuity across the instruments, these instruments are ready to use for examining the continuity/discontinuity of attachment. In contrast, social network theorists have not fully developed assessment instruments that are useful in young children. I have constructed a series of picture type tests, the Picture Affective Relationship Test for subjects who have difficulty responding to the ARS, based on the affective relationships model [Takahashi, 1978–2000; Takahashi, 2002].

For life span research, we must endeavor to assess the same conceptual entity, beyond participants' limited abilities to respond to each assessment instrument. Despite their limitations, the life span investigations in each of the two research clusters are important for further theorizations of close relationships.

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References

Actelli, L.K. (1996). The neglected links between marital support and marital satisfaction. In G.R. Pierce & I.G. Sarason (Eds.), *Handbook of social support and the family* (pp. 83–103). New York: Plenum.

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

Ainsworth, M.D.S., Blehar, M.C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the Strange Situation.* Hillsdale, N.J.: Erlbaum.

Antonucci, T.C. (1976). Attachment: A life-span concept. *Human Development, 19,* 135–142.

Antonucci, T.C. (1985). Personal characteristics, social support, and social behavior. In R.H. Binstock & E. Shanas (Eds.), *Handbook of aging and the social sciences* (Ed. 2) (pp. 94–128). New York: von Nostrand Reinhold.

Antonucci, T.C. (1986). Social support network: A hierarchical mapping technique. *Generations, X*(4), 10–12.

Antonucci, T.C., & Akiyama, H. (1987). An examination of sex differences in social support among older men and women. *Sex Roles, 17,* 737–749.

Antonucci, T.C., Fuhrer, R., & Dartigues, J.F. (1997). Social relations and depressive symptomatology in a sample of community-dwelling French older adults. *Psychology and Aging, 12,* 189–195.

Antonucci, T.C., & Jackson, J. (1987). Social support, interpersonal efficacy, and health; A life course perspective. In L.L. Carstensen & B.A. Edelstein (Eds.), *Handbook of clinical gerontology* (pp. 291–311). Elmsford, N.Y.: Pergamon Press.

Antonucci, T.C., Lansford, J.E. Schaberg, L., Smith, J., Akiyama, H., Takahashi, K., Fuhrer, R., Dartigues, J.F. (2001). Widowhood and illness: A comparison of social network characteristics in France, Germany, Japan and the United States. *Psychology and Aging, 16,* 655–665.

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

Bowlby, J. (1951). *Maternal care and mental health. WHO Monograph Series No. 2.* Geneva: World Health Organization.

Bowlby, J. (1969/1982). *Attachment and loss. Vol. 1. Attachment.* New York: Basic Books.

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

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

Bretherton, I. (1985). Attachment theory: Retrospect and prospect. In I. Bretherton & E. Waters (Eds.), Growing points of attachment theory and research. *Monographs of the Society for Research in Child Development, 50*(1–2, Serial No. 209), 3–35.

Bretherton, I. (1993). From dialogue to internal working models: The co-construction of self in relationships. In C.A. Nelson (Ed.), *Memory and affect in development: The Minnesota symposia on child development, Vol. 26* (pp. 23–263). Hillsdale, N.J.: Erlbaum.

Bretherton, I., Ridgeway, D., & Cassidy, J. (1990). Assessing the internal working models of the attachment relationship: An attachment story completion task for 3-year-olds. In M.T. Greenberg, D. Cicchetti, & E.M. Cummings (Eds.), *Attachment in the preschool years: Theory, research, and intervention* (pp. 273–308). Chicago: University of Chicago Press.

Bretherton, I., & Waters, E. (Eds.) (1985). Growing points of attachment theory and research. *Monographs of the Society and Research in Child Development, 50* (1–2).

Cassidy, J. (1999). The nature of the child's ties. In J. Cassidy & P.R. Shaver (Eds.), *Handbook of Attachment: Theory, research, and clinical applications* (pp. 3–20). New York: Guilford Press.

Cassidy, J., & Shaver, P.R. (Eds.) (1999). *Handbook of Attachment: Theory, research, and clinical applications.* New York: Guilford Press.

Carlson, E. (1998). A prospective longitudinal study of attachment disorganization/disorganization. *Child Development, 69,* 1107–1128.

Carstensen, L.L. (1992). Social and emotional patterns in adulthood: Support for socioemotional selectivity theory. *Psychology and Aging, 3,* 331–338.

Chodrow, N. (1978). *The reproduction of mothering: Psychoanalysis and sociology of gender.* Berkeley: University of California Press.

Dodge, K.A., Pettit, G.S., McClasky, C.L., & Brown, M.M. (1986). Social competence in children. *Monographs of the Society and Research in Child Development, 51*(1).

Erickson, R.J. (1993). Reconceptualizing family work: The effect of emotion work on perceptions of marital quality. *Journal of Marriage and the Family, 55,* 888–900.

Feiring, C., & Lewis, M. (1989). The social networks of girls from early through middle childhood. In Belle, D. (Ed.), *Children's social networks and social supports* (pp. 119–150). New York: Wiley.

Fonagy, P., Steele, M., Steele, H., Leigh, T., Kennedy, R., Mattoon, G., & Target, M. (1995). Attachment, the reflective self, and borderline states: The predictive specifically of the Adult Attachment Interview and pathological emotional development. In S. Goldberg, R. Muir, & J. Kerr (Eds.), *Attachment theory: Social, developmental, and clinical perspectives* (pp. 233–278). Hillsdale, N.J.: Analytic Press.

Fukui, S. (1999). *Stabilities and changes of social relationship among cancer patients.* Unpublished manuscript.
Funabashi, K. (1995). Changes in family systems. In Kashiwagi, K. & Takahashi, K. (Eds.), *Developmental psychology and feminism* (pp. 53–76). Kyoto: Minerva.
Furman, W., Simon, V.A., Shaffer, L., & Bouchery, H.A. (2002). Adolescents' working models and styles for relationships with parents, friends, and romantic partners. *Child Development, 73,* 241–255.
George, C., Kaplan, N., & Main, M. (1984–1996). *Adult Attachment Interview Protocol* (Ed. 3). Unpublished manuscript. Berkeley: University of California.
George, C., & Solomon, J. (1996). Representational models of relationship: Links between caregiving and representation. *Infant Mental Health Journal, 17,* 198–216.
George, C., & Solomon, J. (1990–2000). *Six-year attachment doll play classification system.* Oakland, Calif.: Mills College.
Hamanoue, K. (1999). *Changes and stability of social relationships among middle-aged persons: A two-years longitudinal study in Yakushima island.* Unpublished manuscript.
Hamilton, C. (2000). Continuity and discontinuity of attachment from infancy through adolescence. *Child Development, 71,* 690–694.
Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52,* 511–524.
Hazan, C., & Shaver, P. (1990). Love and work: An attachment-theoretical perspective. *Journal of Personality and Social Psychology, 59,* 270–280.
Hays, S. (1996). *The cultural contradictions of mother-hood.* New Haven: Yale University Press.
Hinde, R.A. (1981). The base of a science of interpersonal relationships. In S. Duck & R. Gilmour (Eds.), *Personal relationships. Vol. 1. Studying personal relationships* (pp. 1–22). London: Academic Press.
Hrdy, S.B. (1999). Mother nature: *A history of mothers, infants, and natural selection.* New York: Pantheon Books.
van IJzendoorn, M.H. (1995). Adult attachment representations, parental responsiveness, and infant attachment: A meta-analysis on the predictive validity of the Adult Attachment Interview. *Psychological Bulletin, 117,* 387–403.
Inoue, M., & Takahashi, K. (1999). *Affective relationships types and adjustment to college life.* Paper presented at the Meeting of Japanese Psychological Association.
Jones, D.C., & Vaughan, K. (1990). Close friendships among senior adults. *Psychology and Aging, 5,* 451–457.
Kahn, R.L., & Antonucci, T.C. (1980). Convoys over the life course: Attachment, roles, and social support. In P.B. Baltes & O.B. Brim (Eds.), *Life-span development and behavior, Vol. 3* (pp. 253–268). New York: Academic Press.
Kobak, R.R. (1999). The emotional dynamics of disruptions in attachment relationships: Implications for theory, research, and clinical intervention. In J. Cassidy & P.R. Shaver (Eds.). *Handbook of attachment: Theory, research, and clinical applications* (pp. 21–43). New York: Guilford Press.
Kobak, R.R., & Hazan, C. (1991). Attachment in marriage: Effects of security and accuracy of working models. *Journal of Personality and Social Psychology, 60,* 861–869.
Kobayashi, K. (1993). *Coping with future life events among college students: The role of pre-established personal framework in the planning future.* Unpublished manuscript.
Krause, S. (1987). Life stress, social support, and self-esteem in an elderly population. *Psychology and Aging, 2,* 349–356.
Lang, F.R., & Carstensen, L.L. (1994). Close emotional relationships in later life: Further support for proactive aging in the social domain. *Psychology and Aging, 9,* 315–324.
Lang, F.R. Staudinger, U.M., & Carstensen, L.L. (1998). Perspectives on socioemotional selectivity in late life: How personality and social context do (and do not) make a difference. *Journal of Gerontology: Psychological Science, 53B,* 21–30.
Levitt, M.J., Guacci-Franco, N., & Levitt, J.L. (1993). Convoys of social support in childhood and early adolescence: Structure and function. *Developmental Psychology, 29,* 811–818.
Lewis, M. (1982). The social network model. In T.M. Field, A. Huston, H.C. Quary, L. Troll, & G.E. Finley (Eds.), *Review of human development* (pp. 180–214). New York: Wiley.
Lewis, M. (Ed.). (1984). *Beyond the dyad.* New York: Plenum.
Lewis, M., Feiring, C., & Rosenthal, S. (2000). Attachment over time. *Child Development, 71,* 707–720.
Lieberman, A.F., & Zeanah, C.H. (1999). Contribution of attachment theory to infant-parent psychotherapy and other interventions with infants and young children. In J. Cassidy & P.R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 555–574). New York: Guilford Press.
Litwin, H. (2000). Social network type and social support among the old-old. *Journal of Aging Studies, 14,* 213–228.

Litwin, H. (2001). Social network type and morale in old age. *The Gelontologist, 41,* 516–524.
Lyons-Ruth, K., & Jacobvitz, D. (1999). Attachment disorganization: Unsolved loss, relational violence, and lapses in behavioral and attentional strategies. In J. Cassidy & P.R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 520–554). New York: Guilford Press.
Main, M. (1991). Metacognitive knowledge, metacognitive monitoring, and singular (coherent) vs. multiple (incoherent) models of attachment: Findings and direction for future research. In C.M. Parks, J. Stevenson-Hinde, & P. Marris (Eds.), *Attachment across the life cycle* (pp. 127–159). London: Routledge.
Main, M. (1994). *A move to the level of representation in the study of attachment organization: Implication for psychoanalysis.* Annual lecture to the British Psycho-Analytical Society, London.
Main, M. (1996). Introduction to the special section on attachment and psychopathology. 2. Overview of the field of attachment. *Journal of Consulting and Clinical Psychology, 64,* 237–243.
Main, M. (1999). Attachment theory: Eighteen points with suggestions for future studies. In J. Cassidy & P.R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 845–887). New York: Guilford Press.
Main, M., & Goldwyn, R. (1998). *Adult attachment scoring and classification systems.* Unpublished scoring manual. Berkeley: University of California.
Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. In I. Bretherton & E. Waters (Eds.), Growing points of attachment theory and research. *Monographs of the Society for Research in Child Development, 50*(1–2, Serial No. 209), 66–104.
Main, M., & Solomon, J. (1986). Discovery of a new, insecure-disorganized/disoriented attachment pattern. In T.B. Brazelton & M.W. Yogman (Eds.), *Affective development in infancy* (pp. 95–124). Norwood, N.J.: Ablex.
Main, M., & Solomon, J. (1990). Procedures for identifying infants as disorganized/disoriented during the Ainsworth strange situation. In M.T. Greenberg, D. Cicchetti, & E.M. Cummings (Eds.), *Attachment in the preschool years: Theory, research, intervention* (pp. 121–160). Chicago: University of Chicago Press.
Marvin, R., Cooper, G., Hoffman, K., & Powell, B. (2002). The circle of security project: Attachment-based intervention with caregiver-pre-school child dyads. *Attachment and Human Development, 4,* 107–124.
Nelson, K. (1986). *Event knowledge: Structure and function in development.* Hillsdale, N.J.: Erlbaum.
Page, T., & Bretherton, I. (2001). Mother- and father-child attachment themes in the story completions of pre-schoolers from post-divorce families: Do they predict relationships with peers and teachers? *Attachment & Human Development, 3,* 1–29.
Parker, J.G., & Gottman, J.M. (1989). Social and emotional development in relational context: Friendship interaction from early childhood to adolescence. In T.J. Berndt & G.W. Ladd (Eds.), *Peer relationships in child development* (pp. 95–131). New York: Wiley.
Pearson, J.L., Cohn, D.A., Cowan, P.A., & Cowan, C.P. (1994). Earned- and continuous-security in adult attachment: Relation to depressive symptomatology and parenting style. *Development and Psychopathology, 6,* 359–373.
Phelps, J.L., Belsky, J., & Crnic, K. (1998). Earned security, daily stress, and parenting: A comparison of five alternative models. *Development and Psychopathology, 10,* 21–38.
Piaget, J. (1954). *The construction of reality in the child.* New York: Academic Press.
Pierce, G.R., Sarason, R., & Sarason, I.G. (Eds.). (1996). *Handbook of social support and the family.* New York: Plenum.
Rempel, J.K., Holmes, J.G., & Zanna, M.P. (1985). Trust in close relationships. *Journal of Personality and Social Psychology, 49,* 95–112.
Rotenberg, K.J. & Hymel, S. (1999). *Loneliness in childhood and adolescence.* New York: Cambridge University Press.
Rutter, M. (1981). *Maternal deprivation reassessed* (Ed. 2). London: Penguin.
Schank, R.C., & Abelson, R.P. (1977). *Scripts, plans, goals and understanding.* Hillsdale, N.J.: Erlbaum.
Shaver, P.R., Hazen, C., & Bradshaw, D. (1988). Love as attachment: The integration of three behavioral systems. In R.J. Sternberg & M.L. Barnes (Eds.), *The psychology of love* (pp. 29–70). New Haven, Conn.: Yale University Press.
Solomon, J., & George, C. (1999). *Attachment disorganization.* New York: Guilford Press.
Takahashi, K. (1973). *Development of attachment relationships among female young adults. Annual review of Japanese developmental psychology Vol. 12* (pp. 255–275) (in Japanese). Tokyo: Kaneko-Shobo.
Takahashi, K. (1974). Development of dependency among female adolescents and young adults. *Japanese Psychological Research, 16,* 179–185.
Takahashi, K. (1978–2000). *The measurement of affective relationships among young children.* Unpublished manuscript. University of the Sacred Heart.

Takahashi, K. (1986). The role of personal framework of social relationships in socialization studies. In H. Azuma, H. Stevenson, & K. Hakuta (Eds.), *Child development and education in Japan* (pp. 123–134). New York: Freeman.
Takahashi, K. (1989). *Personal history differences between family pattern and age-mate pattern affective relationships among female college students.* Paper presented at the meeting of the Society for Research in Child Development, Kansas City, MO.
Takahashi, K. (1990a). Affective relationships and their lifelong development. In P.B. Baltes, D.L. Featherman, & R.M. Lerner (Eds.), *Life-span development and behavior Vol. 10* (pp. 1–27). Hillsdale, N.J.: Erlbaum.
Takahashi, K. (1990b). *Changes and stabilities in affective relationships of the late adolescence: A short-term longitudinal study.* Paper presented at the International Conference on Personal Relationships. Oxford.
Takahashi, K. (2002). *Structural nature of affective relationships types among college students.* Manuscript in preparation.
Takahashi, K. (2004). Close relationships across the life span: Toward a theory of relationship types. In F.R. Lang & K.L. Fingerman (Eds.), *Growing together: Personal relationships across the lifespan* (pp. 130–158). New York: Cambridge University Press.
Takahashi, K., & Majima, N. (1994). Transition from home to college dormitory: The role of preestablished affective relationships in adjustment to a new life. *Journal of Research on Adolescence, 4,* 367–384.
Takahashi, K., Ohara, N., Antonucci, T., & Akiyama, H. (2002). Commonalities and differences in close relationships among the Americans and the Japanese: A comparison by the Individualism/Collectivism concept. *International Journal of Behavioral Development, 26,* 453–465.
Takahashi, K., & Sakamoto, K. (2000). Assessing social relationships in adolescents and adults: Constructing and validating the Affective Relationships Scale. *International Journal of Behavioral Development, 24,* 451–463.
Takahashi, K., Tamura, J., & Tokoro, M. (1997). Patterns of social relationships and psychological well-being among the elderly. *International Journal of Behavioral Development, 21,* 417–430.
Takahashi, K., Tokoro, M., & Yokosuka, A. (1999). *Making sense of life: Personal stories among Japanese elderly adults.* Paper presented at the 6th Asia/Oceania Congress of Gerontology. Seoul, Korea.
Takahashi, K., & Yokosuka, A. (1997). *Type of affective relationships and psychological well-being among Japanese elderly adults.* Paper presented at the 50th Annual Scientific Meetings of the Gerontological Society of America. Cincinnati, Ohio.
Ueno, C. (1996). Collapse of 'Japanese mothers.' *U.S.-Japan Women's Journal, English Supplement, 10,* 3–19.
Urberg, K.A., Degirmencioglu, S.M., Tolson, J.M., & Halliday-Scher, K. (1995). The structure of adolescent peer networks. *Developmental Psychology, 31,* 540–547.
Ward, M.J., & Carlson, E. (1995). Associations among adult attachment representations, maternal sensitivity, and infant-mother attachment in a sample of adolescent mothers. *Child Development, 66,* 69–79.
Waters, E., Merrick, S., Treboux, D., Crowell, J., & Albersheim, L. (2000). Attachment security in infancy and early adulthood: A twenty-year longitudinal study. *Child Development, 71,* 684–689.
Weinfield, N., Sroufe, L.A., & Egeland, B. (2000). Attachment from infancy to early adulthood in a high-risk sample: Continuity, discontinuity, and their correlates. *Child Development, 71,* 695–702.
Weisner, T.S., & Bernheimer, L.P. (1998). Children of the 1960s at midlife: Generational identity and the family adaptive project. In R.A. Shweder (Ed.) *Welcome to middle age!* (pp. 211–2579). Chicago: University of Chicago Press.
Weisner, T.S., Garnier, H., & Loucky, J. (1994). Domestic tasks, gender egalitarian values and children's gender typing in conventional and nonconventional families. *Sex Roles, 30,* 23–54.
Weiss, R. (1974). The provisions of social relationships. In Z. Rubin (Ed.), *Doing unto others* (pp. 17–26). Englewood Cliffs, N.J.: Prentice-Hall.
Weiss, R.S. (1975). *Marital separation.* New York: Basic Books.
Wenger, G.C. (1991). A network typology: From theory to practice. *Journal of Aging Studies, 5,* 147–162.
Wenger, G.C. (1996). Social networks and gerontology. *Reviews in Clinical Gerontology, 6,* 285–293.
West, M., & Geroge, C. (2002). Attachment and dysthymia: The contributions of preoccupied attachment and agency of self to depression in women. *Attachment and Human Development, 4,* 278–293.
Yee, P.L., Santoro, K.E., Paul, J.S., & Rosenbaum, L.B. (1996). Information processing approaches to the study of relationship and social support schemata. In G.R. Pierce, B.R. Sarason, & I.G. Sarason (Eds.), *Handbook of social support and the family* (pp. 25–42). New York: Plenum.