

Early Attachment Network with Mother and Father: An Unsettled Issue

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ABSTRACT—*Infants' patterns of attachment to their mothers and fathers influence important developmental outcomes. Studies suggest that infants form discordant attachment patterns to mothers and fathers, and stress the importance of assessing infants' parental attachment relationships to evaluate their integrative effects on how they function later in life. However, such studies are few, based on small samples, and not well-designed longitudinally. Moreover, mixed results on how infants' attachment patterns to mothers and fathers affect important developmental outcomes have resulted in theoretical inconsistencies regarding the model that best describes the organization of multiple attachment relationships and their effect on later development. In this article, we review research on the unsettled issue of infants' network of attachment to mothers and fathers, and propose explanatory models that can be tested empirically; the methods we suggest are more robust and innovative than those that have been used traditionally.*

KEYWORDS—*early attachment network; developmental outcomes*

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According to attachment theory, early parent–child experiences are the foundations on which infants develop attachment relationships with their caregivers (1). These, in turn, have been hypothesized to shape children's relational world through the development and consolidation of representations of relationships (2), which over time influence long-term developmental outcomes, including psychological functioning and physiological well-being (3).

Despite recognizing the importance of the influence of both parents on children's upbringing and development, most studies of infant attachment have relied heavily on what Bowlby referred to as *monotropy* (4). These studies assumed that only one person, usually the mother, is an important attachment figure, whereas the other caretakers are subsidiary attachment figures with marginal influence on children's development. However, in recent decades, expectations relating to gender roles and parenting have changed the normative patterns of early childhood care to involve both parents to various degrees, as reflected in the inclusion of fathers in infant attachment theory and research (5). This, in turn, has spurred calls for research to focus on early attachment patterns to both parents. Some studies have emphasized the role of both mothers and fathers in influencing children's developmental outcomes, most focusing on identifying the specific domains to which each parental attachment relationship contributes (6–12). This work has relied on the *independence hypothesis* (13), which suggests that a child's separate attachment relationships with each parent, regardless of their concordance or lack thereof, may lead to different developmental outcomes. Although the independence hypothesis expanded attachment research to the possible effects of fathers on children's development, it still assumed that only one parent, either the mother or the father, influences developmental outcomes.

We suggest that although each attachment relationship between infants and caregivers (mothers or fathers) may be important in independently predicting developmental outcomes, there may be more to the story. If a single insecure attachment longitudinally affects psychological functioning (14–17) and



physical health (18, 19), two insecure attachments within the family are liable to result in even less optimal outcomes for an infant's developmental trajectory. Similarly, a secure attachment to one parent may buffer the negative effects of an insecure attachment to the other. Infants form simultaneously independent attachments to mothers and fathers (7, 8, 11, 20, 21), resulting in many possible variations of attachment patterns early in life (i.e., secure to both, secure to only one, insecure to both). Therefore, we ask: What role do two infant–parent attachment relationships *jointly* play in children's development?

Twenty-five years ago, van IJzendoorn, Sagi, and Lamberson (13) addressed the issue of infants' independent attachment relationships with mothers and fathers in what they referred to as *the multiple caretaker paradox*. They asked how attachment to one caregiver (usually the mother) could predict developmental outcomes if children attach in different ways to different caretakers. This question set the stage for the *integrative hypothesis* (13), which suggests that two early parental attachment relationships carry forward jointly to influence later developmental outcomes. This hypothesis assumes that the network of infant–mother and infant–father attachment relationships may predict developmental outcomes more strongly than either attachment relationship alone. Therefore, it may provide a more complete explanatory model than these attachment relationships provide independently.

Although few studies have assessed the integrative hypothesis, including two that did not support it (10, 13), it should be tested systematically for two reasons. First, given that children are often raised by both mothers and fathers, assessing attachment patterns to both parents may provide a more ecologically valid approach to understanding the individual's developmental trajectory than examining the effects of a single attachment relationship alone (22). Assessing the effect of the attachment network on developmental outcomes also adds a quantitative approach (i.e., the number of secure attachments in the family) to the qualitative approach inherent in attachment theory (i.e., the nature of the attachment bond). Adding a quantitative dimension to attachment may broaden the scope of attachment theory to include cultures in which children are raised by multiple caregivers (23). Second, longitudinal links between single infant–mother attachment relationships and later developmental outcomes, such as social competence or internalizing and externalizing symptoms (14, 15, 17, 24), were modest in size. This may be because studies exclude the second parent (mostly fathers), who may have an added effect on children's developmental trajectory. Therefore, assessing the effect of a network of attachment may enhance the predictive power of early attachment patterns on later outcomes.

INTEGRATIVE MODELS OF ATTACHMENT NETWORKS

The interrelated attachment relationships formed by infants with their mothers and fathers, which we refer to as an *attachment*

network, can be considered by grouping infants into four attachment configurations. We use the term *configuration* to refer to the relation between the two organized parental attachment patterns (secure and insecure): insecure with both mother and father (I-I); secure with mother, insecure with father (S_M -I $_F$); insecure with mother, secure with father (I $_M$ -S $_F$); and secure with both mother and father (S-S).

The integration of the two parental attachment patterns during the first 18 months has so far been assessed by a few studies, all with small samples (30–100 infants). Although these studies pointed out the importance of assessing infants' early attachment relationships with mothers and fathers for evaluating the integrative effect of such relationships on later functioning, they were not necessarily based on a priori conceptual or methodological planning, but often on hypothesis-generating models (11). The absence of a theoretical framework for understanding the possible joint effects of infants' attachment patterns to both parents on developmental outcomes resulted in studies that have produced mixed findings as well as theoretical inconsistencies regarding the way early attachment patterns to both parental figures affect later developmental outcomes.

To address the unsettled issue of the role that infants' attachment to mothers and fathers jointly plays in predicting developmental outcomes, we reviewed references of articles and book chapters. We searched for studies that reported infant or child attachment patterns to both parents, assessed using categorical attachment measures—either the Strange Situation Procedure (25) or the Attachment Story Completion Task (see Table S1)—and looked at the cross-sectional or longitudinal links between the four attachment configurations and developmental outcomes. Studies were conducted in Belgium (26), Germany (27), Israel (13, 28, 29), the Netherlands (13, 30), Sweden (6, 10), and the United States (21, 31, 32).¹ Because few studies have examined infant attachment networks as predictors of developmental outcomes, we examined all of them, regardless of the method of assessing infant attachment (Strange Situation Procedure or Attachment Story Completion Task), the socioemotional outcomes measured, the informants (e.g., self, teacher, parent), the developmental period when the outcomes were assessed, and the children's sleeping arrangements (communal or home sleeping). We captured the relations between all possible Infant–Mother \times Infant–Father attachment configurations, and identified two main issues (the second is logically derived from the first) that call for further assessment. Next, we present each issue and propose two competing hypotheses, based on empirical evidence, as potential answers (see Figure 1). Finally, we combine the individual hypotheses into four mutually exclusive

¹Two important longitudinal studies that assessed infants' attachment to mothers and fathers, conducted in England (12) and Germany (7), were reviewed but left out of the analyses because neither assessed the joint effects of the two on developmental outcomes.

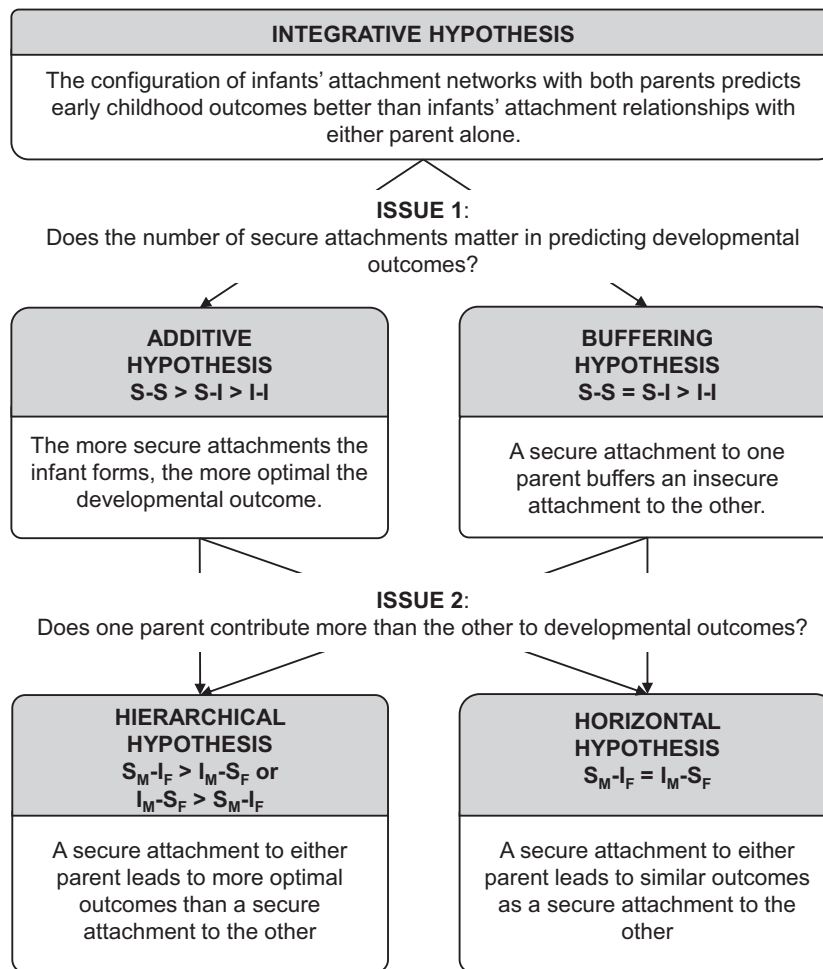


Figure 1. Four competing hypotheses, ordered according to the issue they address.

Note. S-S = secure with mother and father; I-I = insecure with mother and father; S_M = secure with mother; S_F = secure with father; I_M = insecure with mother; I_F = insecure with father.

integrative models, each reflecting the relations between the different attachment configurations (see Table 1).

Issue 1: Does the Number of Secure Attachments Matter in Predicting Developmental Outcomes or is One Secure Attachment Sufficient for Optimal Development? The Additive Hypothesis Versus the Buffering Hypothesis

Some studies suggest that the integration between the infant's parental attachment patterns can be described best by what we term the *additive hypothesis*, which has also been referred to as the averaging hypothesis (33) and the incomplete buffering hypothesis (26). According to this hypothesis, a linear dose-response relation exists between the total number of secure attachment patterns and developmental outcomes, so more secure relationships formed by an infant result in more optimal developmental outcomes. In other words, infants who are securely attached to both parents have the most optimal outcomes, followed by those who are securely attached to only one

parent, and those who are insecurely attached to both parents have the least optimal outcomes.

The additive hypothesis is supported by studies showing that compared to infants who were securely attached to only one parent, infants who were securely attached to both parents were more ready (or more disinhibited) to engage positively with an unfamiliar person in a clown costume at age 12 months (21), and to resolve conflicts more autonomously during play with peers at age 5 (27). Furthermore, infants who exhibited more secure patterns of parental attachment scored higher on socioemotional (i.e., preschool peer play behavior) and cognitive (i.e., IQ index) outcomes (11, 13).

Yet other studies support what we term the *buffering hypothesis*, which suggests that early secure attachment to one parent offsets the risk effects of insecure attachment to the other. Accordingly, infants who are securely attached to only one parent have developmental outcomes that are as optimal as those of infants who were securely attached to both parents, and both

Table 1
Model-Based Outcome Predictions.

Integrative model	Prediction ^a	Brief description
(a) Additive- hierarchical	S-S > S _M -I _F > I _M -S _F > I-I OR S-S > I _M -S _F > S _M -I _F > I-I	Secure attachment to only one parent (but not the other) leads to more optimal outcomes than insecure attachment to both parents, but less optimal outcomes than secure attachment to both parents.
(b) Additive- horizontal	S-S > S _M -I _F = I _M -S _F > I-I	Secure attachment to either parent (but not the other) leads to more optimal outcomes than insecure attachment to both parents, but less optimal outcomes than secure attachment to both parents.
(c) Buffering- hierarchical	S-S = S _M -I _F > I _M -S _F > I-I OR S-S = I _M -S _F > S _M -I _F > I-I	Secure attachment to only one parent (but not the other) leads to equally good outcomes as secure attachment to both parents.
(d) Buffering- horizontal	S-S = S _M -I _F = I _M -S _F > I-I	Secure attachment to either parent (but not the other) leads to equally good outcomes as secure attachment to both parents, all of which are more optimal than insecure attachment to both parents.

Note. Greater than symbols represent more optimal developmental outcomes. S-S = secure with mother and father; I-I = insecure with mother and father; S_M = secure with mother; S_F = secure with father; I_M = insecure with mother; I_F = insecure with father. ^aAll models assume that the I-I group has less optimal outcomes than the other three configuration groups.

types of infants have significantly more optimal outcomes than infants who are insecurely attached to both parents.

Consistent with the buffering hypothesis, infants who were securely attached to *only one parent* performed as well as infants who were securely attached to both parents, and more optimally than infants who were insecurely attached to both parents. This was apparent in behavioral domains at age 5 (as measured by lower abnormal and out-of-context behaviors; 27) and age 8 (as captured by lower scores on behavioral problems mapped to the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition [DSM-IV] disorders of oppositional defiant disorder, conduct disorder, attention deficit, and hyperactivity disorder; 31). Furthermore, children who were securely attached to one parent but not the other, as assessed by the Attachment Story Completion Task (an instrument that probes children's representations of attachment relationships) at age 5, performed as well as those who were securely attached to both parents in domains of peer social competence (26). Finally, secure attachment to only one parent led to fewer internalizing behavioral problems, more successful adjustment to school stressors, and higher self-esteem and positive evaluation of self than did insecure attachment to both parents (26).

Issue 2: Does One Parent Contribute More than the Other to Developmental Outcomes or Do They Matter Equally? The Hierarchical Hypothesis Versus the Horizontal Hypothesis

To define more thoroughly the relationship between infants who are securely attached only to their mothers and those who are securely attached only to their fathers, studies have compared the two. They have asked whether an attachment relationship with one parent influences developmental outcomes more than an attachment relationship with the other, and if so, which parent plays a more crucial role in determining such outcomes (13, 33, 34). Although researchers have been unable to answer

these questions, two hypotheses describing the relation between attachment patterns in infants and their mothers and infants and their fathers have emerged.

According to the *hierarchical hypothesis* (13, 33, 35), one parent influences the developmental outcomes of the child more than the other parent. Thus, we would expect one of two developmental trajectories to occur. One possibility is that an infant who is securely attached only to her mother but insecurely attached to her father will show more optimal developmental outcomes than an infant who is securely attached only to her father but insecurely attached to her mother. Another possibility is that an infant who is securely attached only to her father but insecurely attached to her mother will show more optimal developmental outcomes than an infant who is securely attached only to her mother but insecurely attached to her father.

Supporting this hypothesis, in one study (21), infants who were securely attached only to their mothers were more ready (or disinhibited) to engage positively with a stranger in a clown costume at age 12 months than infants who were securely attached only to their fathers. Similarly, infants who were securely attached only to their mothers concentrated more on play (they were more absorbed, less distracted, and more balanced emotionally) and resolved conflicts with other children more autonomously at age 5 than infants who were securely attached only to their fathers (27).

In contrast, what we termed the *horizontal hypothesis* suggests that infants with secure attachment only to their mothers have developmental outcomes similar to infants with secure attachment only to their fathers (regardless of whether these outcomes were similar to those of infants who developed secure attachment to both parents). Supporting this hypothesis, in one study (31), children who had only one secure attachment in infancy—to either their fathers or their mothers—reported a similar degree of externalizing behaviors at age 8. Similarly, infants with

one secure parental attachment exhibited comparable severity of abnormal behaviors at age 5, regardless of the parent to whom they were securely attached (27). And in yet another study (26), 5-year-olds who were securely attached only to their mothers did not differ significantly from 5-year-olds who were securely attached only to their fathers in predicting socioemotional competence, self-esteem, and positive representation of self.

We propose combining the two pairs of dichotomized hypotheses (additive vs. buffering and hierarchical vs. horizontal) into four mutually exclusive models to capture the different relations between the attachment network configurations: *additive-hierarchical*, *additive-horizontal*, *buffering-hierarchical*, and *buffering-horizontal*. Each model incorporates predictions that simultaneously answer the two issues raised earlier, and each model may explain one or more outcomes, but no two models explain the same outcome.

PROPOSED METHODOLOGICAL APPROACH FOR ASSESSING THE EARLY ATTACHMENT NETWORK

Assessing the predictive power of infant attachment networks on developmental outcomes requires that studies be based on sufficiently large nonconvenience samples that include infants with all four integrative attachment configurations (S-S, S_M-I_F, I_M-S_F, and I-I). To obtain a sample of a size that allows a powerful representation of all four attachment configurations, conditional probabilities (e.g., the probability of any infant being classified as S-S, S_M-I_F, I_M-S_F, or I-I) should be calculated. For example, in the Israeli study mentioned earlier (13), approximately 35% of infants were securely attached to two parents (S-S), about 19% were securely attached to mothers but insecurely attached to fathers (S_M-I_F), about 30% were insecurely attached to mothers but securely attached to fathers (I_M-S_F), and about 16% were insecurely attached to both parents (I-I). Accordingly, to ensure an adequately powered four-group sample that meets the minimum quota for the smallest probable attachment configuration group (16% infants who are insecurely attached to both parents) requires assessing at least 440 infants for attachment patterns with *both* parents to obtain adequate statistical power for predictions. Although this process is tedious and costly, it is essential for longitudinally assessing the links between the proposed network of attachment models and developmental outcomes.²

When assessing integrative attachment network models, research has focused on various cognitive, adaptive, and socioemotional outcomes in early and mid-childhood. However, no consistent organizational framework guided the choice of outcome measures attachment networks are likely to predict, resulting in lack of coherence in explaining the links between the two. We view the early attachment network as a context in which infants' stress and emotion regulatory systems are shaped,

influencing their ability to cope with relational stressors later in life. Therefore, we emphasize the relevance of *stress-related* outcomes at both the psychological and biological levels when assessing the four proposed attachment network models. Infant attachment insecurity and its correlates (e.g., parental sensitivity) are linked to psychological functioning (e.g., internalizing and externalizing symptoms; 16, 31), biological stress regulation dysfunctions, and health-related outcomes (e.g., obesity and inflammation markers; 18, 37). Hence, we propose assessing similar psychological and physiological outcomes when testing the integrative hypothesis outlined here.

CONCEPTUAL AND EMPIRICAL CONSIDERATIONS FOR RESEARCH ON EARLY ATTACHMENT NETWORKS

Next, we turn to the methods of potential longitudinal studies of attachment networks. First, the models proposed here are premised on the categorical approach to attachment patterns. Although this has been the most prevalent approach in predicting developmental outcomes since the Strange Situation Procedure was introduced in the 1970s, several approaches to attachment security have emerged, including the dimensional analysis of the Strange Situation Procedure (25) and the Attachment Q-Set (38). The categorical approach is the most parsimonious, but other approaches may also prove useful in assessing attachment network models.

Second, we focused on organized infant attachment classifications, that is, the secure and insecure patterns of attachment; hence, we did not specify the nuances that may be associated with insecure attachment (e.g., ambivalent and avoidant attachment patterns). However, researchers are encouraged to consider the two types of attachment insecurity when assessing the association between early attachment networks and developmental outcomes because they add required specificity to the complex developmental trajectories following formation of insecure attachments (16, 17). Furthermore, we did not refer to disorganized infant attachment patterns. Although disorganization in infancy, mainly with mothers, predicts later developmental outcomes (16), considering this attachment category at this stage of theoretical development may increase the conceptual and practical complexity of the subject.

Finally, our review focused on the attachment network to mothers and fathers. An attachment network can also include nonparental (e.g., professional) caregivers, which may affect children's developmental outcomes significantly (39). In this article, we offer a starting point from which other types and sizes of attachment networks can be studied, and we encourage researchers to include nonparental attachment figures when assessing attachment networks.

In conclusion, developmental trajectories across the lifespan are multifaceted and determined by many factors, some related to attachment in infancy. Little attention has been directed at the integrative influence on developmental outcomes of

²An even larger sample (760 infants) was recruited successfully by the second author over a year (36).

attachment relationships with mothers and fathers, but the question has been asked for a long time (40, 41). We propose an organizational framework from which investigators can embark on research to inform and expand our understanding of the role of early attachment relationships in individuals' development. We believe that the early network of attachment models we have presented may function as more complex, more thoroughly elaborated, and more ecologically valid predictors of developmental outcomes than the ones that have been conceptually and empirically formulated.

REFERENCES

1. Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development*. New York, NY: Basic Books.
2. Bowlby, J. (1980). *Attachment and loss, Vol. 3: Loss, sadness and depression*. New York, NY: Basic Books.
3. Cassidy, J., Jones, J. D., & Shaver, P. R. (2013). Contributions of attachment theory and research: A framework for future research, translation, and policy. *Development and Psychopathology, 25*, 1415–1434. <https://doi.org/10.1017/S0954579413000692>
4. Bowlby, J. (1979). *The making and breaking of affectional bonds*. London, UK: Tavistock.
5. Bretherton, I. (2010). Fathers in attachment theory and research: A review. *Early Child Development and Care, 180*, 9–23. <https://doi.org/10.1080/03004430903414661>
6. Frodi, A. M., Lamb, M. E., Hwang, C. P., & Frodi, M. (1983). Father-mother infant interaction in traditional and nontraditional Swedish families: A longitudinal study. *Alternative Lifestyles, 5*, 142–163. <https://doi.org/10.1007/BF01091325>
7. Grossmann, K., Grossmann, K. E., Fremmer-Bombik, E., Kindler, H., Scheuerer-Engelsch, H., & Zimmermann, P. (2002). The uniqueness of the child-father attachment relationship: Fathers' sensitive and challenging play as a pivotal variable in a 16-year longitudinal study. *Social Development, 11*, 307–331. <https://doi.org/10.1111/1467-9507.00202>
8. Grossmann, K. E., Grossmann, K., Huber, F., & Wartner, U. (1981). German children's behavior towards their mothers at 12 months and their fathers at 18 months in Ainsworth's Strange Situation. *International Journal of Behavioral Development, 4*, 157–181.
9. Lamb, M. E. (1977). Father-infant and mother-infant interaction in the first year of life. *Child Development, 48*, 167–181. <https://doi.org/10.2307/1128896>
10. Lamb, M. E., Hwang, C. P., Frodi, A. M., & Frodi, M. (1982). Security of mother- and father-infant attachment and its relation to sociability with strangers in traditional and nontraditional Swedish families. *Infant Behavior and Development, 5*, 355–367. [https://doi.org/10.1016/S0163-6383\(82\)80046-5](https://doi.org/10.1016/S0163-6383(82)80046-5)
11. Sagi-Schwartz, A., & Aviezer, O. (2005). Correlates of attachment to multiple caregivers in kibbutz children from birth to emerging adulthood: The Haifa longitudinal study. In K. E. Grossmann, K. Grossmann, & E. Waters (Eds.), *Attachment from infancy to adulthood* (pp. 165–197). New York, NY: Guilford.
12. Steele, H., Steele, M., & Fonagy, P. (1996). Associations among attachment classifications of mothers, fathers, and their infants. *Child Development, 67*, 541–555. <https://doi.org/10.1111/j.1467-8624.1996.tb01750.x>
13. van IJzendoorn, M. H., Sagi, A., & Lambermon, M. W. E. (1992). The multiple caretaker paradox: Data from Holland and Israel. *New Directions for Child and Adolescent Development, 1992*, 5–24. <https://doi.org/10.1002/cd.23219925703>
14. Groh, A. M., Fearon, R. P., Van IJzendoorn, M. H., Bakermans-Kranenburg, M. J., & Roisman, G. I. (2017). Attachment in the early life course: Meta-analytic evidence for its role in socioemotional development. *Child Development Perspectives, 11*, 70–76.
15. Groh, A. M., Fearon, R. P., Bakermans-Kranenburg, M. J., van IJzendoorn, M. H., Steele, R. D., & Roisman, G. I. (2014). The significance of attachment security for children's social competence with peers: A meta-analytic study. *Attachment & Human Development, 16*, 103–136. <https://doi.org/10.1080/14616734.2014.883636>
16. Groh, A. M., Roisman, G. I., van IJzendoorn, M. H., Bakermans-Kranenburg, M. J., & Fearon, R. P. (2012). The significance of insecure and disorganized attachment for children's internalizing symptoms: A meta-analytic study. *Child Development, 83*, 591–610. <https://doi.org/10.1111/j.1467-8624.2011.01711.x>
17. Fearon, R. P., Bakermans-Kranenburg, M. J., van IJzendoorn, M. H., Lapsley, A.-M., & Roisman, G. I. (2010). The significance of insecure attachment and disorganization in the development of children's externalizing behavior: A meta-analytic study. *Child Development, 81*, 435–456. <https://doi.org/10.1111/j.1467-8624.2009.01405.x>
18. Ehrlich, K. B., Miller, G. E., Jones, J. D., & Cassidy, J. (2016). Attachment and psychoneuroimmunology. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (3rd ed., pp. 180–201). New York, NY: Guilford.
19. Puig, J., Englund, M. M., Simpson, J. A., & Collins, W. A. (2013). Predicting adult physical illness from infant attachment: A prospective longitudinal study. *Health Psychology, 32*, 409–417. <https://doi.org/10.1037/a0028889>
20. Easterbrooks, M. A., & Goldberg, W. A. (1984). Toddler development in the family: Impact of father involvement and parenting characteristics. *Child Development, 55*, 740–752. <https://doi.org/10.2307/1130126>
21. Main, M., & Weston, D. R. (1981). The quality of the toddler's relationship to mother and to father: Related to conflict behavior and the readiness to establish new relationships. *Child Development, 52*, 932–940. <https://doi.org/10.2307/1129097>
22. Belsky, J. (1981). Early human experience: A family perspective. *Developmental Psychology, 17*, 3–23. <https://doi.org/10.1037/0012-1649.17.1.3>
23. Keller, H. (2013). Attachment and culture. *Journal of Cross-Cultural Psychology, 44*, 175–194. <https://doi.org/10.1177/0022022112472253>
24. Madigan, S., Atkinson, L., Laurin, K., & Benoit, D. (2013). Attachment and internalizing behavior in early childhood: A meta-analysis. *Developmental Psychology, 49*, 672–689. <https://doi.org/10.1037/a0028793>
25. Ainsworth, M. D. S., Blehar, S., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the Strange Situation*. Hillsdale, NJ: Erlbaum.
26. Verschueren, K., & Marcoen, A. (1999). Representation of self and socioemotional competence in kindergartners: Differential and combined effects of attachment to mother and to father. *Child Development, 70*, 183–201. <https://doi.org/10.1111/1467-8624.00014>
27. Suess, G. J., Grossmann, K. E., & Sroufe, L. (1992). Effects of infant attachment to mother and father on quality of adaptation in

- preschool: From dyadic to individual organisation of self. *International Journal of Behavioral Development*, *15*, 43–65. <https://doi.org/10.1177/016502549201500103>
28. Oppenheim, D., Sagi, A., & Lamb, M. E. (1988). Infant–adult attachments on the kibbutz and their relation to socioemotional development 4 years later. *Developmental Psychology*, *24*, 427–433. <https://doi.org/10.1037/0012-1649.24.3.427>
 29. Sagi-Schwartz, A., Lamb, M. E., Lewkowicz, K. S., Shoham, R., Dvir, R., & Estes, D. (1985). Security of infant–mother, –father, and –metapelet attachments among kibbutz-reared Israeli children. *Monographs of the Society for Research in Child Development*, *50*(Serial No. 1-2), 257–275. <https://doi.org/10.2307/3333837>
 30. Goossens, A., & van IJzendoorn, M. H. (1990). Quality of infants’ attachments to professional caregivers: Relation to infant–parent attachment and day-care characteristics. *Child Development*, *61*, 832–837. <https://doi.org/10.2307/1130967>
 31. Kochanska, G., & Kim, S. (2013). Early attachment organization with both parents and future behavior problems: From infancy to middle childhood. *Child Development*, *84*, 283–296. <https://doi.org/10.1111/j.1467-8624.2012.01852.x>
 32. Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood : A move to the level of representation. *Monographs of the Society for Research in Child Development*(Serial No. 1-2), *50*, 66–104. <https://doi.org/10.2307/3333827>
 33. Bretherton, I. (1985). Attachment theory: Retrospect and prospect. *Monographs of the Society for Research in Child Development*, *50* (Serial No. 1-2), 3–35.
 34. Bretherton, I. (1991). Pouring new wine into old bottles: The social self as internal working model. In M. R. Gunnar & L. A. Sroufe (Eds.), *Minnesota symposia in child psychology: Self processes in development* (pp. 1–41). Hillsdale, NJ: Erlbaum.
 35. Bowlby, J. (1969). *Attachment and loss, Vol. 1: Attachment*. New York, NY: Basic Books.
 36. Sagi, A., Koren-Karie, N., Gini, M., Ziv, Y., & Joels, T. (2002). Shedding further light on the effects of various types and quality of early child care on infant–mother attachment relationship: The Haifa study of early child care. *Child Development*, *73*, 1166–1186. <https://doi.org/10.1111/1467-8624.00465>
 37. Anderson, S. E., Gooze, R. A., Lemeshow, S., & Whitaker, R. C. (2012). Quality of early maternal–child relationship and risk of adolescent obesity. *Pediatrics*, *129*, 132–140. <https://doi.org/10.1542/peds.2011-0972>
 38. Waters, E., & Deane, K. E. (1985). Defining and assessing individual differences in attachment relationships: Q-methodology and the organization of behavior in infancy and early childhood. *Monographs of the Society for Research in Child Development*, *50*(Serial No. 1-2), 41–65. <http://dx.doi.org.libproxy.newschool.edu/10.2307/3333826>
 39. Howes, C., & Spieker, S. (2016). Attachment relationships in the context of multiple caregivers. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research and clinical applications* (3rd ed., pp. 314–328). New York, NY: Guilford.
 40. Thompson, R. A., & Raikes, H. A. (2003). Toward the next quarter-century: Conceptual and methodological challenges for attachment theory. *Development and Psychopathology*, *15*, 691–718. <https://doi.org/10.1017/S0954579403000348>
 41. Thompson, R. A. (2000). The legacy of early attachments. *Child Development*, *71*, 145–152. <https://doi.org/10.1111/1467-8624.00128>

SUPPORTING INFORMATION

Additional supporting information may be found in the online version of this article:

Table S1. Studies That Assessed the Predictive Power of Attachment Networks