

Chapter 3

How Do Individual Differences in Attachment Develop?

Why are some people relatively secure in their attachment styles whereas others are less so? According to attachment theory, these individual differences are reflections of the way in which people's attachment systems have become organized over the course of their lives, beginning with their earliest attachment relationships. But to what extent do early attachment experiences shape later attachment patterns? This question has been at the forefront of developmental inquiry for several decades (see Cassidy & Shaver, 2008, for a review). However, due to the time and expense involved in conducting longitudinal research on personality development, only recently have researchers been positioned to answer this question using multidecade research. The purpose of this chapter is to review what is known about the consequences of early attachment experiences for the development of individual differences in attachment.

We begin by discussing factors that shape individual differences in attachment organization in infancy and early childhood. Readers may wonder, why have a chapter that devotes considerable attention to the development of attachment in childhood when this book is primarily about attachment in adulthood. The answer is that a person's sense of security in adulthood is thought to have its origins in early caregiving experiences. Therefore, it seems sensible to begin at the beginning, so to speak, by reviewing research on how early caregiving experiences may shape individual differences in attachment in infancy and childhood. We then review theory and research on how those early experiences may help scaffold the development of other resources and competencies that might sustain attachment patterns into adulthood.

It is unlikely that early attachment experiences alone fully explain why some people are more secure than others in adulthood. Early attachment experiences are, without a doubt, an important part of the story. But there are many factors that have the potential to influence the organization of attachment as people navigate the life course. Thus, we also review what is known about the various factors that contribute to individual differences in attachment in adulthood, including experiences in relationships with peers. Finally, we close with some caveats and ideas about the kind of research that would be most beneficial in the near future.

HOW DO EARLY ATTACHMENT EXPERIENCES SHAPE ATTACHMENT PATTERNS IN INFANCY AND EARLY CHILDHOOD?

One of the important goals of research on early attachment experiences is to uncover the antecedents of attachment security (see Belsky & Fearon, 2008, for a review). In Ainsworth's early research, for example, she observed that children who were more confident in exploring the environment had parents who were more supportive and available than children who were less confident in exploring the environment (Ainsworth, 1967). Ainsworth, Blehar, Waters, and Wall, (1978) studied this issue systematically in a sample of parents and children in Baltimore, Maryland. Specifically, they studied approximately 23 infant–mother pairs in their homes. The investigators made notes of how the children behaved, how the mother responded to the child's signals, etc. When the infants were 12 months of age, they were brought to the laboratory to participate in the strange situation procedure as a way of assessing their attachment organization (see chapter: What Is Attachment Theory?).

Children who were classified as secure at 12 months of age were more likely, than those who were not, to have had caregivers who were sensitively responsive to their child's needs in the year prior to the strange situation. Conversely, children who were classified as insecure were more likely to have mothers who were neglectful or inconsistently responsive to their children's needs. This observational research provided some of the first evidence that variations in the early caregiving environment are associated with the ways in which a child's attachment behavior becomes organized in the first year of life.

After the publication of Ainsworth's ground-breaking studies, a number of research teams began investigating factors that may determine whether children develop secure or insecure relationships with their primary attachment figures. One of the key predictors of the attachment patterns children develop is the history of sensitive and responsive interactions between the caregiver and the child (DeWolff & van IJzendoorn, 1997). *Sensitive responsiveness* is typically defined as the extent to which a parent is in-tune with a child's emotional state, is able to decode those signals accurately, and able to respond appropriately and in a timely fashion (Ainsworth et al., 1978). When the child is uncertain or stressed, a sensitively responsive caregiver is one who correctly notes the child's distress and is able to provide the child with comfort or the assistance that is needed. Ainsworth and colleagues believed that the ability of the caregiver to be sensitively responsive to the child is critical for the child's psychological development. Such supportive interactions help the child learn to regulate his or her emotions, give the child the confidence to explore the environment, and provide the child with a safe haven during stressful circumstances.

Evidence for the role of sensitive and responsive caregiving in shaping attachment patterns comes from both longitudinal and experimental studies. For example, Grossmann, Grossmann, Spanger, Suess, and Unzner (1985) studied

parent–child interactions in the homes of 54 families, up to 3 times during the first year of the child’s life. At 12 months of age, infants and their mothers participated in the strange situation. Grossmann and colleagues found that children who were classified as secure in the strange situation at 12 months of age were more likely than children classified as insecure to have mothers who provided sensitive and responsive care to their children in the home environment.

van den Boom (1990, 1994) developed an intervention that was designed to enhance maternal sensitive responsiveness. van den Boom identified a sample of babies who showed signs of irritability on a newborn behavioral assessment scale. She then randomly assigned half of those babies to an experimental group and the other half to a control group. Mothers in the intervention group were given individualized sessions on sensitive responsiveness—sessions that involved watching video-taped interactions between the mother and her child with coaching and discussion. The control group received no training. When the infants were 9 months of age, the mothers in the intervention group were rated as more responsive and attentive in their interaction with their infants. In addition, their infants were rated as more sociable, self-soothing, and more likely to explore the environment. At 12 months of age children in the intervention group were more likely to be classified as secure than insecure (anxious or avoidant) in the strange situation compared with the control group (see Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2003; van IJzendoorn, Juffer, & Duyvesteyn, 1995, for an in-depth discussion of intervention research).

It is important to note that sensitive responsiveness is embedded in a network of contextual factors (eg, Cowan, 1997). That is, there are a number of factors that can facilitate or impair a parent’s ability to provide sensitive and responsive care to a child. If a mother, for example, is experiencing depression, she may not have the psychological resources available to be attentive to her child’s needs. Indeed, research shows that the children of parents who experience depressive episodes are more likely to be classified as insecure in the strange situation (Cummings & Davies, 1994; Teti, Gelfand, Messinger, & Isabella, 1995). Likewise, parents who are struggling financially are likely to experience stress. They are also likely to work multiple jobs in an effort to make ends meet, which is likely to add further stress. This stress may carry over into parenting, making it more difficult for the parent to provide a secure base and safe haven for the child. Indeed, research typically finds that the rates of insecure attachment are higher in economically disadvantaged families (eg, Belsky, 1996; Belsky & Isabella, 1998; Scher & Mayseless, 2000). In short, although attachment theorists tend to emphasize the role of sensitive, responsive caregiving in shaping the development of children’s attachment patterns, there are many factors that have the potential to influence caregiving quality. Sensitive responsiveness is not viewed as the sole predictor of attachment security; it is regarded as an organizing variable: one that can reflect a broad array of social-cultural and biological influences (eg, Pickles et al., 2013).

WHAT ARE THE CONSEQUENCES OF EARLY ATTACHMENT EXPERIENCES FOR SOCIAL AND PERSONALITY DEVELOPMENT?

One of Bowlby's (1973) arguments was that, as children begin to construct working models of themselves and their interpersonal world, these representations gain traction in shaping the kinds of experiences that children are likely to have. We expand on this theme in chapter: *How Stable Are Attachment Styles in Adulthood?*, but for now we wish to note that supportive attachment experiences in childhood not only influence the security of the bond that the child develops with his or her caregiver, but have consequences for many outcomes of developmental significance. For example, children who have relatively secure attachment histories are more likely than those who have insecure attachment histories to develop a sense of empathy and the ability to form high-functioning relationships with others (see Berlin, Cassidy, & Appleyard, 2008, for a review). These skills, in turn, are believed to reinforce and sustain the child's working models. As a consequence of these person–environment transactions, early attachment experiences have the potential to set a child on a developmental pathway in which he or she gains momentum across time, ultimately generating individual differences downstream in the ways in which individuals organize their attachment-related thoughts, feelings, and behavior.

In the sections that follow, we review some of the research on how early attachment experiences may impact developmental outcomes (see Fraley & Roisman, 2015, for further discussion of these themes). We focus on two broad outcomes: those concerning social competence and those concerning the quality of peer relationships and friendships. We highlight these outcomes, not because they are the only outcomes that are of interest in understanding social development, but doing so allows us to review the consequences of early attachment experiences for two important domains of human functioning: the intrapersonal and the interpersonal.

How do Early Attachment Histories Shape the Development of Social Competence?

Social competence refers to the broad set of emotional, social, and cognitive skills needed for adaptation to a diverse array of developmental contexts and challenges (Waters & Sroufe, 1983). In this chapter we use the term loosely to capture a wide range of personal skills and competencies, such as emotion regulation skills, self-control, perspective taking, and the capacity for empathy. Bowlby believed that supportive and responsive interactions between parents and their children are crucial for the development of these skills in childhood. For example, he believed that a child's sense of self (ie, whether he or she perceives him or herself as lovable) and his or her ability to regulate emotions in

an appropriate way are rooted in the history of a child's interactions with his or her parents.

An important line of work in attachment research concerns the relations among early attachment histories and emotional understanding and perspective-taking skills. Laible and Thompson (1998), for example, had young children watch three puppets enact a variety of dramatic scenes and, at the end of each one, each child was asked questions about the protagonist puppet's feelings. Laible and Thompson (1998) found that children with secure attachment histories exhibited greater emotional understanding compared to children with insecure attachment histories. This suggests that the ways in which children had internalized attachment experiences may have influenced their ability to understand the point of view of others and to better understand the world from someone else's perspective.

Research has also found that secure children are more empathic than others. For example, Kestenbaum, Farber, and Sroufe (1989) studied children's free play interactions and made note of cases in which another child was visibly distressed and how the target child behaved as a result. Kestenbaum and colleagues found that children with secure attachment histories were more likely than those with avoidant histories to behave in emphatic ways in the presence of distressed children.

Children with histories of insecure attachment have been found to behave with more aggression, greater anger, and less empathy across a variety of situations. For example, Troy and Sroufe (1987) found that children with avoidant attachment histories were more likely to victimize their peers. McElwain, Cox, Burchinal, and Macfie (2003) found that, at 36 months of age, children with insecure attachment histories were more likely to exhibit instrumental aggression when interacting with peers.

In summary, these findings are consistent with the notion that early attachment experiences provide a framework for the development of social competence. Children who have a secure attachment history are more likely, than those who have an insecure attachment history, to exhibit the kinds of competencies that might enable them to successfully negotiate a variety of interpersonal tasks. They exhibit greater emotional understanding, are able to take the perspective of other individuals, are more empathic, and express less anger and hostility.

How do Early Attachment Histories Shape the Development of Close Friendship Relationships?

Attachment researchers also believe that early attachment experiences set the stage for the way in which the child navigates interpersonal contexts, including not only his or her relationship with attachment figures, but the way the individual functions in nonparental contexts in which issues concerning trust and intimacy emerge. This can include relations with teachers and mentors

(Ainsworth, 1989), siblings (Teti & Ablard, 1989), and, importantly, close friendships (Furman, Simon, Shaffer, & Bouchey, 2002).

Close friendships serve a number of important developmental functions. For example, friends can provide a context in which one explores new skills and interests, builds alliances, bolsters self-esteem, and reinforces emerging identities (Shulman, Elicker, & Sroufe, 1994). Forming and maintaining a close friendship, however, requires a number of resources. One must be capable of managing conflict, offering support, adopting the other's perspective, and engaging in appropriate levels of self-disclosure and reciprocity. Indeed, research indicates that these kinds of social competencies play a role in facilitating the development of well-functioning friendships (eg, Boling, Barry, Kotchick, & Lowry, 2011; Simpson, Collins, Tran, & Haydon, 2007).

Close friendships are also of special interest from an attachment perspective because they are some of the first extra-familial contexts in which issues concerning intimacy, trust, and support are explored. According to some theorists, close friends are often testing grounds for transferring attachment-related features and functions away from parents (Zeifman & Hazan, 2008; see chapter: *What Is an Attachment Relationship?*). As such, the experiences that take place in the context of friendship relationships might be a key milestone in the development of expectations for trust, intimacy, and support that are relevant for understanding individual differences in attachment in adulthood.

Research suggests that early attachment experiences may play an important role in shaping the quality of peer interactions and close friendships. Children classified as secure in the strange situation are more likely to have stable play partners, demonstrate greater reciprocity, and exhibit empathy towards peers during the preschool years (Kestenbaum et al., 1989). Research has also found that secure attachment is related to lower levels of child–friend aggression at age 3 (McElwain et al., 2003) and fewer negative interactions with close friends at age 5 (Youngblade & Belsky, 1992).

There are many potential pathways through which early attachment experiences might influence the dynamics of friendships. One pathway that has been investigated extensively by McElwain, Booth-LaForce, and Wu (2011) concerns mental state talk. To be effective in their friendships, children need to take into consideration their friend's desires, beliefs, and feelings. One way in which children can acquire these competencies is through exchanges with caregivers in which they communicate about psychological states in a supportive, uncritical manner. McElwain et al. (2011) examined the association between early attachment experiences and the nature of mind talk in parent–child interactions at 24 months of age. They found that children with secure attachment histories were more likely to have mothers who engaged in cognitive talk (ie, they were more likely to reference appropriately feelings, desires, and plans). In turn, children whose mothers engaged in more cognitive talk at 24 months of age were more likely to have high-functioning friendships at 54 months as indexed by more positive friendship interactions across time.

DO EARLY ATTACHMENT EXPERIENCES HAVE ENDURING CONSEQUENCES FOR SOCIAL AND PERSONALITY DEVELOPMENT?

One of the key ideas in attachment theory is that early experiences have the potential to shape individual differences in adult attachment by providing a *foundation* upon which a variety of skills, competencies, and resources develop. For example, it is possible that sensitive and supportive caregiving in early life has the potential to enable children to acquire interpersonal skills that enable them to relate to others in adaptive ways. These social competencies, in turn, may facilitate children's abilities to develop high-quality friendships (eg, Englund, Kuo, Puig, & Collins, 2011; Simpson et al., 2007) (Fig. 3.1). Although there are a number of specific pathways through which early experiences could shape later outcomes (eg, brain development, emotional regulation, behavioral synchronization), the important theme is that those early experiences provide a starting place for what comes next. The effects of early experiences, whether they are positive or negative, create developmental cascades that have implications downstream for a number of important outcomes (Masten & Cicchetti, 2010; Masten et al., 2005). These ideas are emphasized by the *organizational perspective* on close relationships, a perspective that calls attention to the ways in which new relationship experiences can be shaped by earlier relationship histories (see Simpson, Collins, Farrell, & Raby, 2015).

There is a growing body of research which supports this perspective. For example, Simpson et al. (2007), using data from the Minnesota Longitudinal Study of Risk and Adaptation (MLSRA; see Sroufe, Egeland, Carlson, & Collins, 2005), found that early attachment experiences were related to social competence at ages 6–9, which, in turn, was related to the security of friendship relations at age 16. The security of those friendship relationships predicted interpersonal functioning in romantic relationships (eg, the expression of positive and negative effect in relationships) at ages 20–23. Fig. 3.1 illustrates some of the pathways in question. Using the same data set, Englund, Kuo, Puig, and Collins (2011) found that early attachment histories predicted a variety of

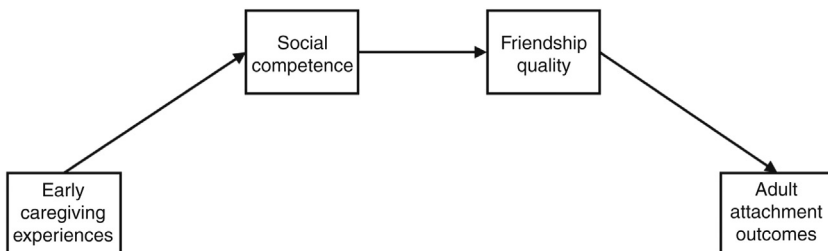


FIGURE 3.1 A basic framework for conceptualizing the way in which early attachment experiences can provide a foundation for social and interpersonal development. (Based, in part, on Simpson et al., 2007.)

adaptive outcomes in childhood and adolescence, including peer competence at age 9 and friendship security at age 16. Moreover, those outcomes, in turn, predicted relationship effectiveness at age 23 and global adjustment and functioning at ages 26 and 28. In short, many of the prominent conceptual models for understanding the legacy of early attachment experiences are *intervening variable* or *mediation models*: they assume that early experiences shape later outcomes by providing a foundation for subsequent experiences (Fig. 3.1).

One thing to note about this approach, however, is that it assumes, at least implicitly, that the influence of early experiences may decay across time. This is best illustrated by redrawing the dynamics illustrated in Fig. 3.1 to better reflect the unique pathways that individuals may take as they navigate each developmental task or phase. In Fig. 3.2, for example, each developmental mediator not only functions as a means to help direct an individual along a specific developmental pathway, it also has the potential to create opportunities for divergence from the original pathway. A child entering into a new peer group, for example, may find that he does not fit in, and, as a result, may experience a sense of social isolation. Although having a secure attachment history may buffer him against

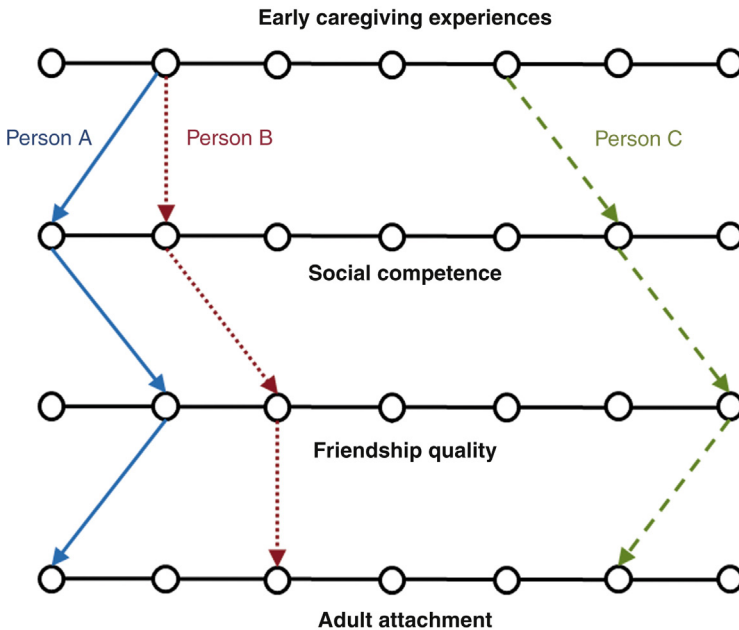


FIGURE 3.2 Cascades in the development of individual differences in adult attachment. Each horizontal line represents a spectrum of outcomes for a construct, such as friendship quality, that can range from poor (left) to optimal (right). Many models of how early experiences shape later outcomes assume that early experiences are important because they provide a foundation for what is to come next. People who have relatively supportive caregiving experiences in early childhood (Person C), for example, are more likely to develop appropriate social and emotional skills, which in turn may lead to high-quality friendships, and, ultimately, more secure adult attachments compared to people with relatively unsupportive early caregiving experiences (Persons A and B).

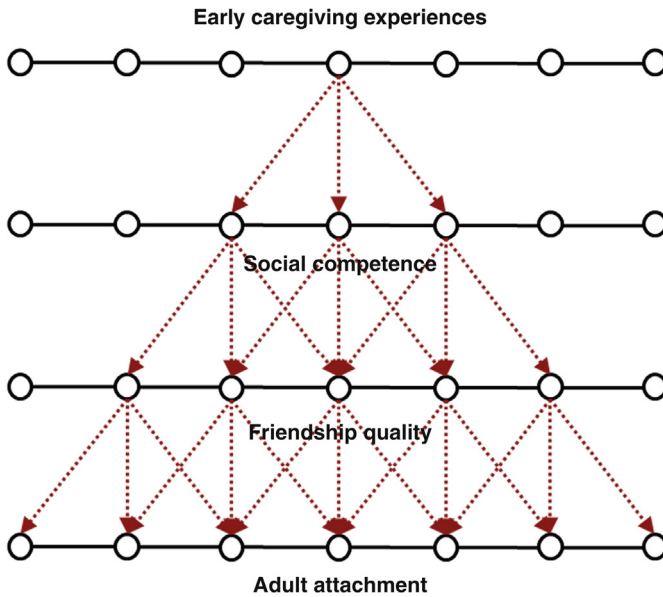


FIGURE 3.3 The way in which cascading processes can lead to decreasing levels of predictability across time. In this illustration, people starting at the same place (ie, early caregiving experiences of moderate quality) have the potential to enter into social experiences that are comparable to what might be expected, but there is also a chance they will end up in better or less than ideal circumstances. At each step along the way, however, these junctures create additional opportunities for people to diverge from their initial trajectory. Although the most likely outcome of this process is that people starting at the mid-range of early caregiving quality will be moderately secure as adults, one’s ability to forecast a person’s actual fate diminishes exponentially each step along the way (eg, Galton, 1894).

this experience relative to someone with an insecure history, the experience of peer rejection can also disrupt his developmental trajectory and undermine his ability to form satisfying relationships in the years to come. Thus, each intervening variable in this framework presents both an opportunity for effects of early attachment experiences to be sustained *and* an opportunity for the effects of early experiences to recede into the background. The consequence of this is that, as people move through life, the impact of early attachment experiences in particular should diminish, even if those experiences initially provided a foundation upon which all subsequent experiences were built (Fig. 3.3).

Is this, in fact, what we see when we examine the long-term correlates of early caregiving experiences on developmental outcomes? That is, do the consequences of early attachment experiences fade away as individuals reach adolescence and young adulthood? Fraley, Roisman, and Haltigan (2013) attempted to address this question by examining the predictive significance of responsive caregiving early in life for a variety of outcomes assessed at various ages between infancy and age 16. To do so, they used data from the NICHD Study of Early Child Care and Youth Development (SECCYD)—a longitudinal study of

approximately 1000 infant–mother dyads who were assessed when the infants were 1 month of age and at a variety of follow-up waves. Fraley and colleagues examined the association between the quality of early attachment experiences in particular (ie, maternal sensitivity in the first 3 years of life) and two outcomes of developmental significance: social competence (as rated by observers and parents) and academic skills (as rated by teachers or as quantified through standardized cognitive tests). They found that the association between early sensitivity and social competence was about 0.27. And, importantly, the association did not decay across time. That is, the legacy of early attachment experiences was manifested in social competence to a similar degree whether children were 5 years of age or 15 years of age (Fig. 3.4). A similar pattern was detected with

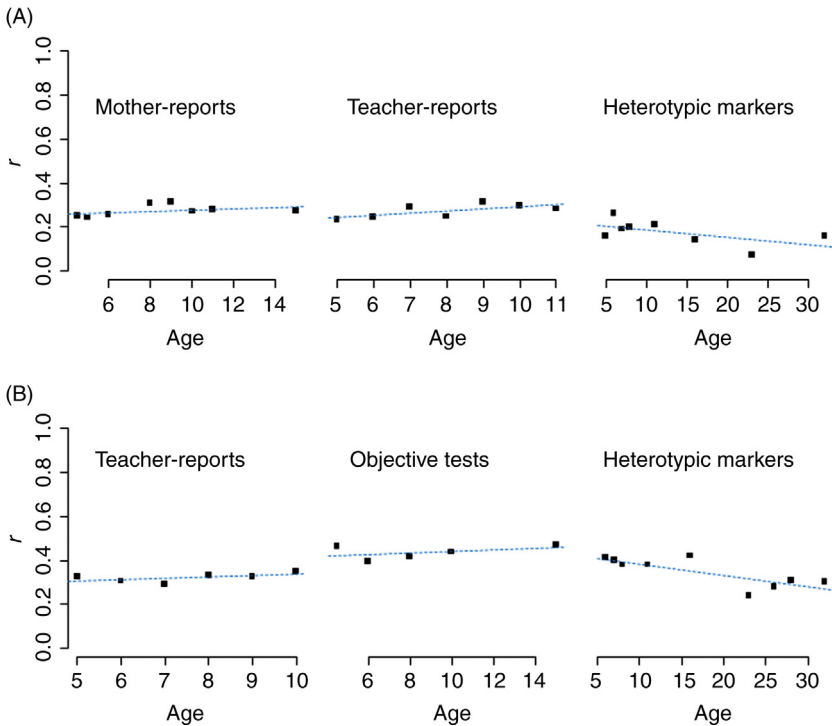


FIGURE 3.4 Associations between early caregiving experiences and various developmental outcomes as a function of the age at which the outcome was assessed. Part A illustrates associations between early caregiving experiences and social competence as assessed via mother-reports in the SECCYD (Fraley et al., 2013a), teacher-reports in the SECCYD (Fraley et al., 2013a), and a variety of heterotypic indicators in the MLSRA (Raby et al., 2015). Part B illustrates the association between early caregiving experiences and academic and educational outcomes as assessed by teacher-ratings in the SECCYD (Fraley et al., 2013a), objective tests in the SECCYD (Fraley et al., 2013a), and objective tests in the MLSRA (Raby et al., 2015). In each of these cases it can be seen that the associations between early caregiving experiences and a broad range of outcomes tend to be relatively stable and are not approaching zero as individuals get older.

cognitive and academic outcomes. Children whose parents were sensitive and responsive in their early caregiving (ie, in the first 3 years of the child's life) were more likely to succeed in school and perform well on cognitive tests and, importantly, the magnitude of that association was relatively invariant across time (Fig. 3.4).

This empirical pattern has now emerged in a number of studies. In one of the most recent ones, Raby, Roisman, Fraley, and Simpson (2015) examined the predictive significance of early caregiving experiences in the MLSRA, using data from a study of approximately 243 individuals who have been followed from birth to age 32. Raby and colleagues operationalized social competence using a variety of developmentally appropriate outcomes. For example, in childhood, social competence was indexed via teacher's ratings of children's interactions with peers. In adulthood (eg, ages 23 and 32 years) social competence was indexed as adaptive functioning in romantic relationships. They found that the association between early supportive caregiving experiences and social competence was relatively constant across time: it did not decay as individuals got older (Fig. 3.4). A similar pattern emerged with indicators of academic and cognitive skills.

What these studies reveal is that early caregiving experiences have the potential to manifest in social, emotional, and cognitive functioning across the first few decades of life. More importantly, these studies raise the possibility that early experiences provide not only a *foundation* for early development, as implied by traditional intervening variable models, but they also provide a *scaffolding* for interpersonal experiences. If early experiences only provided the foundations for subsequent development, we would find that the predictive significance of early attachment experiences would get weaker over time as children begin to accumulate a history of interpersonal experiences that diverge in subtle (or dramatic) ways from their early ones. And, although there is evidence of divergence (the predictive coefficients are not perfect), the fact that the coefficients tend to stay uniform across increasing measurement intervals indicates that early experiences may combine in a way that enables them to continue to guide interpersonal experiences as children develop.

How might this work? How might early attachment experiences continue to play scaffolding effects across time? A variety of hypotheses have been discussed in the literature. Fraley (2002) referred to these ideas collectively as the *prototype* hypothesis because they all hinge on the notion that children develop mental representations of early experiences that are embodied in ways that might be different from the experiences that are encoded and stored later in life. Infants, for example, develop representations of interactions with caregivers before they acquire language. Once children begin to use language, it is possible that the way they come to encode and represent experiences with caregivers' shifts in modality. One potential consequence of this is that the representations that developed in early life are preverbal and more procedural in nature than those that dominate interpersonal dynamics later (Fraley, 2002). Relatedly,

scholars have argued that the brain is much more plastic in early life than it is later (Couperus & Nelson, 2008). As a consequence, early experiences have the potential to shape neural development and biosocial organization in a way that is more powerful than similar kinds of experiences that take place later. In the same way that touching an oil painting is more likely to leave an indelible impression when the paint is fresh rather than after it has dried, attachment experiences are more likely to leave an enduring mark on social and personality development when the brain is highly plastic than when it is less so.

Regardless of the specific mechanisms that might enable early experiences to leave a persistent trace on developmental outcomes, many theorists agree that early attachment experiences have the potential to be important in understanding later personal and interpersonal functioning. The idea was expressed most eloquently by Sroufe, Egeland, and Kreutzer (1990, p. 1364) when they wrote that “earlier patterns may again become manifest in certain contexts, in the face of further environmental change, or in the face of certain critical developmental issues. While perhaps latent, and perhaps never even to become manifest again in some cases, the earlier pattern is not gone.”

WHAT GIVES RISE TO INDIVIDUAL DIFFERENCES IN ADULT ATTACHMENT PATTERNS?

The studies we have reviewed up to this point suggest two broad conclusions. First, early experiences have the potential not only to provide a foundation for social and personality development, but also to scaffold—in potentially subtle ways—the ways in which later experiences unfold. This raises the possibility that early attachment experiences can have enduring consequences for later outcomes. Second, even if the effects are enduring, that does not mean they are strong. As can be seen from the coefficients in Fig. 3.4, the legacy of early attachment experiences might be persistent, but they do not determine a person’s fate. There are plenty of individuals in these samples who, despite having favorable early caregiving histories, are not functioning well in their peer relationships as adolescents or adults. And, similarly, there are plenty of individuals who, although having relatively unresponsive caregivers in early life, are socially and emotionally competent young adults.

The implication of this finding is that individual differences in how people approach their relationships in adulthood must be understood as multifaceted and multidetermined. Attachment theory is sometimes portrayed as a theory that assumes that variation in how adults relate to their romantic partners, for example, can be fully explained by knowing what their attachment histories were like with their parents in infancy (eg, Duck, 1994). Not only is this simplified view unlikely to be correct, but it fails to capture the ideas expressed in Bowlby’s writings: early attachment experiences help to shape development, but they do not *determine* development. As such, the degree to which early experiences predict later outcomes is an empirical question; the theory does not make a

strong empirical prediction about the answer (see Fraley & Brumbaugh, 2004; Sroufe & Jacobvitz, 1989).

With that as context, in this section we examine some of the research that helps to explain where, in fact, individual differences in *adult* attachment come from. Based on the work we reviewed previously, we suggest that individual differences in adult attachment have their origins in early attachment experiences, and that there may even be some scaffolding effects, as entailed by the prototype perspective. But the theme that we wish to emphasize is that attachment styles can be shaped by a broad array of factors. Although this may not provide readers with a strong sense of closure in helping to identify a smoking gun in personality development, we believe it enriches the mystery. The more ways there are to reach a specific outcome, the more pressing the search becomes.

Attachment theory and research have emphasized a number of factors that might contribute to individual differences in adult attachment styles. Throughout this book we highlight a number of these, including contextual ones, such as sex, culture, and age (see chapter: What Are the Effects of Context on Attachment?) and temperamental or genetic factors (see chapter: What Can Neuroscience, Genetics, and Physiology Tell Us about Attachment?). In the present chapter, however, we limit our discussion to those that have featured most prominently in developmental approaches to understanding the origins of individual differences in adult attachment: (1) the quality of people's caregiving and family environments, (2) the development of social competence, and (3) the quality of peer relationships and friendships. We previously highlighted the role of these factors in early child development. Our purpose in this section is to review what is known about how these factors are related to attachment and relationship functioning in adulthood.

Quality of the Caregiving Environment

A number of investigators have examined the association between early sensitivity and adult attachment styles through the use of retrospective reports. These studies generally reveal that adults who recall warm, loving relationships with their early attachment figures are more likely to rate themselves as secure in attachment. For example, Hazan and Shaver (1987) found that adults who classified themselves as secure were more likely to describe their early experiences with their parents as being affectionate, caring, and loving. Adults who classified themselves as insecure, in contrast, were more likely to describe their parents as cold or rejecting (see also Collins & Read, 1990).

Similar to the findings regarding the effects of context on childhood attachment, theorists have also called attention to a number of contextual factors that may impact the quality of the caregiving environment, and in turn, adult attachment. Maternal depression, for example, interferes with the parent's ability to provide a supportive environment for the child (Cummings & Davies, 1994;

Teti et al., 1995). Mickelson, Kessler, and Shaver (1997) found in a large population-based survey that individuals who reported that their parents had experienced depressive episodes when they were young were more insecure in their adult attachment orientation. Similarly, Davila and colleagues have found that young adults who were secure across two assessment waves were less likely than those who were not, to report a history of family psychopathology, including depression (Davila, Burge, & Hammen, 1997).

Moreover, the quality of the relationship between the parents themselves may play a role in shaping the quality of parenting (eg, Rholes, Simpson, & Blakely, 1995; Selcuk et al., 2010) and the attachment styles that the individual develops. Parental divorce, father absence, or high-parental conflicts all have the potential to signal to the individual that other people may not be available, dependable, or reliable. These kinds of ideas have been emphasized most explicitly by attachment theorists inspired by life history perspectives on development (eg, Belsky, Houts, & Fearon, 2010; Simpson & Belsky, 2008). Researchers have found, for example, that adults who indicate that their biological parents divorced are more likely to report insecure attachment styles (Mickelson et al., 1997). In addition, researchers have found that early contextual stressors, broadly defined (eg, father absence, low socioeconomic status), are related to self-report measures of insecure attachment styles in adulthood (eg, Chisholm, Quinlivan, Petersen, & Coall, 2005; Fraley, Roisman, Booth-LaForce, Owen, & Holland, 2013).

Much of the research that has investigated these antecedents, however, has been based on retrospective measures of the interpersonal environment (making the reports subject to reconstructive biases in memory; Scharfe & Bartholomew, 1998) or concurrent associations between attachment and experiences. There are relatively few studies positioned to address these hypotheses in a prospective fashion. Nonetheless, a small number of relevant longitudinal studies have begun to emerge in recent years (eg, Chopik, Moors, & Edelstein, 2014; Zayas, Mischel, Shoda, & Aber, 2011). In one especially rigorous study, Dinero, Conger, Shaver, Widaman, and Larsen-Rife (2008) examined the quality of observed interactions between adolescents and their parents in a sample of over 250 families. Dinero and colleagues found that the quality of parent-child interactions at age 15 predicted self-reports of attachment security at age 25 (r s ranged from 0.05 to 0.21). This study was one of the first to provide longitudinal evidence that parent-child interactions are prospectively related to adult attachment styles, and, importantly, did so using observations of parent-child interactions.

In another longitudinal study involving data from 1070 individuals from the Young Finns Study, Salo, Jokela, Lehtimäki, and Keltikangas-Jaärvinen (2011) it was found that early maternal nurturance, assessed from mothers' reports when their children were an average of 10 years old, significantly predicted children's avoidant attachment 21 to 27 years later ($r = -0.07$). This particular study is noteworthy largely due to the long time interval between assessments and the large sample size.

Fraley, Roisman, Booth-LaForce, et al. (2013b) examined data on over 600 young adults (age 18) who had initially been studied at 1 month of age in the NICHD SECCYD. This study included measures not only of early maternal sensitivity, but of sensitivity assessed across multiple points in time (ie, 6 months, 15 months, 24 months, 36 months, 54 months, Grade 1, Grade 3, Grade 5, and age 15). This provided an unusual opportunity to examine not only how early sensitivity may be associated with adult attachment, but how changes in sensitivity across time are related to adult attachment. Their analyses indicated that self-reported attachment avoidance at age 18 was correlated with both early levels of sensitivity and changes in sensitivity. When both variables were modeled simultaneously, along with other covariates, however, only increases in maternal sensitivity continued to predict avoidance. Specifically, individuals who were more avoidant in attachment at age 18 were more likely than those who were less avoidant to have experienced decreases in maternal sensitivity across time.

Social Competence

The association between social competence and adult attachment has primarily been investigated in social psychological research using concurrent methodologies. Bartholomew and Horowitz (1991), for example, found that relatively secure adults were more likely to have high self-confidence and to express greater interpersonal warmth—qualities that are indicative of social competence. Research has also found that secure adults are more empathically accurate in their relationships (Simpson et al., 2011) and are better able to seek and provide support during stressful and challenging situations (Collins & Feeney, 2000).

There is also longitudinal research linking social competence to relationship functioning. Simpson et al. (2007), for example, examined peer competence and romantic functioning using data from the MLSRA. Peer competence was assessed at Grades 1, 2, and 3 by using teacher ratings of how well target children resembled a prototypical child who “was well liked and respected by peers, had mutual friendships, demonstrated understanding of other children’s perspectives and ideas, and constructively engaged peers in activities” (p. 359). Romantic functioning was assessed in a number of ways at ages 20–23, including the emotional tone of the relationship (ie, the relative balance of positive to negative affect) and behavioral observations of couple behavior. They found that individuals who had higher peer competence ratings in childhood had higher romantic relationship process scores, less negative affect, and a higher ratio of positive to negative emotional experiences. Although relationship functioning is not the same “thing” as attachment style, it is an outcome of great significance in attachment theory and is closely related to individual differences in adult attachment.

Using longitudinal data from the NICHD SECCYD, Fraley et al. (2013b) examined trajectories of social competence from early childhood (54 months) through age 15 years. They found that individuals who exhibited greater social competence in early childhood (rated by parents and teachers) were more likely

to be secure at age 18 on measures of self-reported attachment styles compared to those who exhibited less social competence in early childhood. In addition, children who became more socially competent across time were more likely to be secure at age 18.

Taken together, these studies indicate that social competence, assessed in a variety of ways in early childhood, adolescence, and concurrently in adulthood is associated with individual differences in attachment and relationship functioning in adulthood.

Friendship Relationships

Importantly, psychologists have not focused exclusively on the family of origin in theorizing about the roots of adult attachment styles. According to many theorists, friendships—especially those that develop in adolescence and early adulthood—play a role in shaping attachment styles (eg, Fraley & Davis, 1997; Furman et al., 2002; Nickerson & Nagle, 2005). Although parents still play an important role in their child’s development, peer relationships are some of the first extra-familial contexts in which issues concerning intimacy, trust, and support are explored and negotiated. Some research has suggested that, for many people, close friends can serve important attachment functions (see chapter: *What Is an Attachment Relationship?*) and that individuals who have higher quality friendships are more likely to be secure in their attachment orientation (eg, Bartholomew & Horowitz, 1991).

Research indicates that the functioning of relationships with friends might shape the way in which romantic relationships function. According to Furman et al. (2002), adolescents develop expectations for and assumptions about romantic relationships based, in part, on their experiences in close friendships. Consistent with this assumption, adolescents who hold relatively secure views of their parents are also likely to hold secure views of close friendships and romantic relationships (Furman et al., 2002). Importantly, however, individual differences in the views people hold of their friendships are associated with views of romantic relationships, even when variation in parental representations is taken into account. Thus, although it is possible that early attachment experiences help set the stage for the functioning of friendship relationships, the unique experiences that adolescents have in those friendships also play a role in shaping expectations and attitudes towards emerging romantic relationships. Indeed, Furman and colleagues conclude that “views of friendships may mediate the links between views of relationships with parents and those of romantic relationships” (Furman et al., 2002, p. 250).

Prospective data that bear on this issue come again from the study by Simpson et al. (2007). Simpson and colleagues assessed the quality of friend relationships in adolescence in the MLSRA through an interview in which participants discussed their close friendships, how much they trusted and disclosed to their friends, and the extent to which they felt that their friends were authentic.

They found that the quality of those friendships was positively correlated with a variety of indices of romantic relationship functioning in early adulthood.

In addition, Fraley et al., 2013b's analysis of data from the SECCYD examined children's perceptions of friendship quality with their self-identified best friend using the Friendship Quality Questionnaire (FQQ; Parker & Asher, 1993), which was administered at Grades 3, 4, 5, and 6 and at age 15 years. The FQQ assesses various aspects of friendship quality, including validation and caring, conflict resolution, help and guidance, and intimate exchange. Using growth curve modeling, they found that individuals who had high-quality friendships early in life were more likely to self-report security in their romantic relationships at age 18 years. In addition, individuals whose friendship relationships increased in quality over time were more likely to report security in their romantic relationships at age 18.

SUMMARY

One of the key ideas in attachment theory is that early attachment experiences play an important role in shaping the development of individual differences. The objective of this chapter was to review some of the research on development and attachment in an effort to better understand how individual differences in attachment emerge. One of the take home messages is that the quality of early caregiving experiences appears to play a role in shaping whether children become secure or insecure in the way they organize their attachment-related thoughts, feelings, and behavior. Moreover, the consequences of early attachment experiences appear to cascade into a number of domains of developmental significance, including the development of social competence and the quality of the friendships that the child develops. Finally, research suggests that these intervening factors, in turn, may be relevant for understanding who becomes relatively secure or insecure in their adult attachment patterns.

A second take home message is that, although adult attachment styles appear to have their origins in early experiences with parents, the associations between early experiences and later outcomes are relatively small. That said, the *history* of experiences across time (eg, whether people are experiencing *more* or *less* parental sensitivity across time) is a critical part of understanding who is secure and who is insecure in adulthood (eg, Fraley et al., 2013b). The implication of this theme is that understanding individual differences in adult attachment styles may require thinking beyond early experiences alone, and require the consideration of a person's developmental history more inclusively (see also Sroufe & Jacobvitz, 1989). When Bowlby (1973) was considering the ways in which developmental processes may shape later outcomes, he asked his readers to consider a railway metaphor. His argument was that if you wish to understand people's final destination, it is useful to know from what station they started. But, importantly, he also suggested that knowing the routes taken along the way—and whether they converge with or diverge from the original

path—is necessary for understanding where people end up (see also Shulman et al., 1994). Like Bowlby, we believe that knowing the starting point is useful for understanding later attachment-related outcomes; however, on its own, this information is incomplete. To understand why some adults are secure and others are not requires that we study not only people's early experiences, but also the ways in which those experiences have evolved across people's lives.

A third take home message is that the developmental antecedents of adult attachment do not boil down to any single etiological agent. This is important to understand because a surface reading of attachment theory may seem to suggest that adult attachment styles are fully determined by early caregiving experiences. But as the data make clear, there are many factors that potentially shape individual differences in attachment—more of which will be discussed in chapter: *What Are the Effects of Context on Attachment?* and chapter: *What Can Neuroscience, Genetics, and Physiology Tell Us about Attachment?* And, although many of these factors, such as the quality of peer relationships, may have their origins in early caregiving experiences, these factors also represent junctures in the developmental process where a previously established trajectory can diverge. A child with a secure attachment history may be more likely to be relatively secure as a young adult if he or she has well-functioning friendships. But if those friendship experiences are negative (eg, they create tension, fail to establish trust, make one feel unaccepted), they have the potential to undermine the person's developing sense of security. Although the individual may still retain some benefits of supportive early experiences through scaffolding processes, those recent experiences nonetheless have the potential to contribute to a developing sense of insecurity.

We close this chapter with one final thought. We have discussed attachment styles in adulthood as if they refer to a well-known, circumscribed construct. But, as we emphasize in chapter: *What Are Attachment Working Models?* and chapter: *How Are Individual Differences in Attachment Measured?*, scholars who study adult attachment emphasize both global attachment patterns as well as relationship-specific attachment patterns. One consequence of this distinction is that the developmental origins of individual differences in how adults relate to their parents may not fully overlap with those that generate individual differences in other attachment relationships in adulthood (eg, attachments to romantic partners). There may be a stronger association, for example, between early attachment experiences and the way in which individuals relate to their parents as adults than the way they relate to their romantic partners (see Steele et al., 2014). Moreover, some of the factors that may shape how secure adults are in their romantic relationships (see chapter: *How Are Individual Differences in Attachment Measured?*), such as the quality and intimacy of interpersonal interactions (eg, Pierce & Lydon, 2001), may selectively impact attachment orientations in the context of intimate relationships. There is clearly much more research that is needed to fully understand how early attachment experiences shape development and how individual differences in adult attachment patterns may be rooted in—or potentially diverge—from those experiences.