

## CHAPTER 15

# Attachment and Social Development within a Life–History Perspective

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Claire has been a participant in a longitudinal study her entire life. When she was born, her mother had already dropped out of high school and was not living with Claire’s biological father. For most of the first 18 months of Claire’s life, her mother and father were unemployed, had a conflict-ridden relationship, struggled with major money problems, and moved several times. Despite the fact that Claire’s mother said she loved her and enjoyed being a parent, Claire was classified as insecurely attached to her mother based on their behavior together. When Claire became upset, for example, her mother could not comfort her, so Claire—a mere 1-year-old—had to learn to comfort herself.

Between ages 2 and 5, Claire and her family experienced even more life stress. Her biological father provided little assistance and died unexpectedly at a very young age. When Claire was 3, trained observers coded Claire’s mother acting unsupportive and hostile toward her. At preschool, Claire’s teachers described her as immature, fearful, and angry compared to her peers.

During elementary school, Claire’s life improved somewhat, but unpredictable and stressful events continued to crop up. One of her relatives, for example, was charged with killing someone, and her mother had a string of short-term boyfriends. Things became better, however, at school. Claire was smart; her focus on schoolwork and her

grades gradually improved, and she developed a new group of friends.

But early in adolescence, Claire started engaging in high-risk behaviors. For example, she began abusing alcohol and drugs, and she had several different sexual partners by the time she was 16 years old. When she was 19, Claire got pregnant, without a job or steady boyfriend. Early in adulthood, she moved back in with her mother, remained chronically unemployed, had trouble maintaining romantic relationships, and worried about the quality of her parenting.

How can the trajectory of Claire’s life be understood? How did her early life experiences shape the person she became as an adult? What role did being insecurely attached play in her personality and social development across time? In recent years, psychologists have learned a great deal about the way in which certain early life experiences and the attachment orientations that emerge from them typically affect how people develop as their lives unfold. In this chapter, we answer these and other questions by turning to theory and research on personality and social development over time, linking several key principles to Claire and her unique developmental trajectory.

The chapter is organized around six sections. In the first section, we describe the primary

evolutionary tenets of attachment theory, including key normative and individual-difference principles underlying the theory. In the second section, we describe a broad theory of personality and social development—life-history theory—which explains how and why people follow different evolved developmental trajectories as their lives unfold, depending in large part on the events and experiences they encounter across their lives. In the third section, we present a model anchored on life-history principles—the evolutionary model of social development proposed by Belsky, Steinberg, and Draper (1991). This influential model explains how and why certain events that occur during specific stages of life typically affect personality and developmental outcomes at later points in life. As we shall see, the psychological construct that connects early life experiences with later outcomes is whether individuals develop secure or insecure attachment orientations in relation to significant others during their lives, beginning with their caregivers. In the fourth section, we summarize findings from a recent longitudinal study that tests key stages and components of the evolutionary model of social development. In the fifth section, we discuss how some of the specific events in Claire’s life offer complementary idiographic evidence that is largely consistent with the Belsky and colleagues model. In the final section, we return to a core theme of the chapter—why many of the thoughts, feelings, and behaviors that Claire displayed at different stages of her development reflect her attachment orientation and can be construed as “adaptive” in terms of promoting her reproductive fitness, particularly in light of her very challenging and unpredictable life course.

### Evolutionary Principles of Attachment Theory

According to Bowlby (1969, 1973, 1980), humans—especially young children—evolved to maintain close physical and emotional proximity to stronger, older, and/or wiser attachment figures, which would have increased their chances of surviving the perils of childhood and eventually reproducing in evolutionary history. The specific constellation of cognitive, behavioral, and emotional tendencies that evolved to promote proximity and regulate feelings of security is known as the *attachment system*, which is activated when individuals—both children

and adults—feel ill, distressed, vulnerable, or overwhelmed (Bowlby, 1973).

Attachment theory has two basic components: (a) a normative component, which explains modal (species-typical) patterns and stages of attachment in humans, such as why attachment bonds form, and (b) an individual-difference component, which explains deviations from modal patterns and stages, such as why children and adults have different attachment patterns/orientations.

### *Normative Features of Attachment*

Three normative features of attachment have direct ties to evolutionary principles (Simpson & Belsky, 2016): (1) the synchronization of infant–parent behaviors evident during the opening months of a child’s life; (2) the strong motivation of children to maintain close contact with, and seek proximity to, their caregivers (attachment figures); and (3) the four early developmental stages in which attachment reactions and behaviors emerge.

### *Synchronized Capabilities*

Human infants are born in an underdeveloped, premature state compared to infants in most species (Kaplan, Lancaster, & Hurtado, 2000). Nonetheless, they are well equipped to bond with their caregivers from the very moment they are born. This preparedness to bond is synchronized with their mothers’ natural tendency to respond in ways that are well suited to infants’ developing abilities, which in turn facilitates infant–caregiver bonding (Simpson & Belsky, 2008). Mothers, for example, usually exaggerate their facial expressions, change them more slowly, and maintain longer eye contact when interacting with their infants than with others (Eibl-Eibesfeldt, 1989). When talking to their infants, mothers slow their speech, accentuating certain syllables, and speaking one octave higher normal speech (Grieser & Kuhl, 1988). Infants prefer these behaviors, which mesh well with their developing visual and auditory capacities.

### *Contact Maintenance and Proximity Seeking*

Attachment behaviors ostensibly evolved to promote and maintain physical proximity between vulnerable children and their attachment figures (Bowlby, 1969). Young children ac-

compish this by enacting three broad types of behaviors. Signaling behaviors, such as vocalizing and smiling, usually draw caregivers toward their child, often to participate in positive interactions. Aversive behaviors, such as crying and screaming, motivate caregivers to attend to their child, typically to quell these aversive reactions. Active behaviors, such as approaching and following, keep children close to their caregivers. In all likelihood, each of these behaviors served the same evolutionary function—to draw and keep vulnerable infants in close physical proximity to their caregivers, thereby increasing their chances of survival enroute to eventual reproduction (Marvin, Britner, & Russell, 2016).

### *Phases of Development*

Bowlby (1969) claimed that attachment propensities develop during four developmental phases. During Phase 1 (typically between birth and 2–3 months), infants respond well to a variety of people, not showing a preference for any one attachment figure. This propensity should have facilitated survival in difficult ancestral environments in which the probability of early maternal death was much greater than it is today.

During Phase 2 (typically between 2–3 months and 7 months), infants become more discriminating in their social responsiveness. For example, they start to distinguish caregivers and family members from strangers, prefer certain people over others, and direct more of their attachment behavior toward certain individuals, usually those who most often care for them. Such refined discrimination at this age would have helped infants sustain care and attention from their primary caregivers, also facilitating their survival enroute to reproduction.

During Phase 3 (typically from 7 months to 3 years), children assume a more proactive role in seeking proximity and initiating social contact. During this phase, they also start developing internal working models—schemas composed of beliefs, expectancies, attitudes, and emotions reflecting what relationships tend to be like based on their experiences with attachment figures (Bowlby, 1973). Phase 3 is also when the three primary functions of attachment begin to appear in behavior: (1) proximity maintenance (staying near to, and resisting separations from, the attachment figure), (2) safe haven (turn-

ing to the attachment figure for comfort and support when distressed), and (3) secure base (using the attachment figure as a safe foundation from which to engage in nonattachment behaviors). These tendencies should also have promoted survival and eventual reproduction in ancestral environments.

During Phase 4 (which typically begins around age 3), behaviors that facilitate goal-corrected partnerships with others start to emerge. Given their blossoming language skills and theory-of-mind capabilities, children begin to view the world from the perspective of their interaction partners rather than just themselves. These abilities allows children to incorporate the goals, plans, and desires of their partners into their own decision making, which in turn facilitates joint plans and activities. These unique abilities should have further promoted the formation and maintenance of pair-bonds in evolutionary history.

As children become toddlers, their need for physical proximity is gradually supplanted by the desire to maintain psychological proximity (i.e., *felt security*; Sroufe & Waters, 1977). Early in adolescence, observable indicators of attachment bonds with parents continue to wane as proximity maintenance, safe haven, and secure base functions are slowly transferred to first peers and then to romantic partners, who often become primary attachment figures in adulthood (Furman & Simon, 1999). The attachment mechanisms that bonded children to their parents are then used in adulthood to facilitate the strong, long-term attachment bonds that are needed for mates to successfully coparent, which should have promoted the long-term survival of offspring in ancestral environments (Zeifman & Hazan, 2016).

In summary, humans are born to bond with their caregivers, with mothers' and infants' behaviors being naturally synchronized, and with infants' behaviors drawing and keeping caregivers close by. The attachment orientations that develop from early caregiving experiences then guide individuals' expectations and behaviors in later friendships and adult romantic relationships.

### *Individual Differences in Attachment*

Although human infants evolved to form attachment bonds with their caregivers, the type of bond they form depends on the nature and quality of their early caregiving environment

(Ainsworth, Blehar, Waters, & Wall, 1978). Needless to say, infants do not have the cognitive ability to appraise conditions in their local environment, such as whether it is safe, plentiful, and rich in resources or threatening, harsh, and impoverished. However, they can determine the degree to which their caregivers are sensitive, responsive, and attentive to their needs. This information should provide critical cues about the nature and quality of the current and perhaps future environmental conditions (Chisholm, 1996; Frankenhuys, Gergely, & Watson, 2013). If, during evolutionary history, caregivers could devote the time, effort, and energy necessary to be sensitive, responsive, and attentive to their children, the local environment was most likely safe and had sufficient resources. Caregivers, therefore, could focus on their children rather than having to deal with external threats. If, on the other hand, caregivers were insensitive, unresponsive, and devoted little attention to their children, the local environment was probably less resource-rich and perhaps dangerous.

The Strange Situation is well suited to identify different attachment patterns in young children because it exposes them to two common danger cues in our evolutionary past: being left alone, and being left with a stranger. Examining reunions between mothers and their 12- to 18-month-old infants, Ainsworth and her colleagues (1978) documented three primary attachment patterns in young children: secure, anxious-ambivalent, and anxious-avoidant. When reuniting with their mothers after being left alone or waiting with a stranger, securely attached children use their caregivers to regulate and reduce their distress, which allows them to resume other activities (e.g., exploration, play). Anxious-avoidant children, by comparison, ignore or withdraw from their caregivers upon being reunited with them, attempting to control and abate their negative affect in an independent, self-reliant fashion. Anxious-ambivalent children make inconsistent, conflicted attempts to glean comfort and support from their caregivers upon reunion, intermixing clinginess with outbursts of anger at their caregivers (see Fearon & Belsky, 2016).

These attachment patterns are believed to be different behavioral strategies that would have solved adaptive problems posed by different kinds of rearing environments during evolutionary history (Belsky, 1997; Chisholm, 1996). Mothers of securely attached infants do tend to be available and responsive to the needs of their

children (De Wolff & van IJzendoorn, 1997). As a result, secure children need not worry about the availability and responsiveness of their caregivers, which allows them to regulate their emotions and engage in other important life tasks.

Anxious-ambivalent children have caregivers who routinely behave in an inconsistent or unpredictable manner (Ainsworth et al., 1978). The persistent demandingness of anxious-ambivalent children may, therefore, be a strategy designed to obtain, retain, or improve parental attention and care (Cassidy & Berlin, 1994), which should have improved an anxious child's chances of survival leading toward reproduction.

Avoidant children typically have caregivers who are cold and rejecting (Ainsworth et al., 1978). Bowlby (1980) conjectured that avoidance allows infants to disregard cues that might trigger their attachment systems. If such cues were fully processed, avoidant infants might recognize the actual inaccessibility of their caregivers, which could prove incapacitating. Offering perhaps a more plausible evolutionary explanation, Main (1981) surmised that the distant, self-reliant behavior of avoidant children allows them to maintain sufficiently close proximity to their belligerent or poorly motivated caregivers without driving them away.

When children enter adolescence, new relationship experiences are assimilated into their internal working models, which are continuously being updated and revised (Bowlby, 1973). Working models now, however, represent the degree to which individuals (1) believe they are worthy of love and affection, and (2) view significant others as loving, affectionate, and likely to stay (Mikulincer & Shaver, 2016). Moreover, unlike in childhood, the attachment system in adulthood becomes integrated with the mating and caregiving systems (Shaver, Hazan, & Bradshaw, 1988).

In adulthood, romantic partners become the central attachment figures. Securely attached adults have learned how to regulate their emotions more constructively and effectively (Mikulincer & Shaver, 2003), work to build greater intimacy with their romantic partners (Mikulincer & Shaver, 2016), and thus have higher quality, more stable romantic relationships (Feeney, 2016). In addition, these attributes should lead secure individuals to develop better self-regulation abilities, which allows them to forge better, more meaningful, and more sta-

ble interpersonal ties across most life domains (e.g., family, work, leisure). Anxiously attached adults, in contrast, regulate their emotions more poorly (relying on hyperactivating strategies; Mikulincer & Shaver, 2003), yearn to feel more secure in their romantic relationships (Mikulincer & Shaver, 2016), but have lower quality and more conflict-prone relationships (Feeney, 2016). Avoidantly attached adults also regulate their emotions rather poorly (using deactivating strategies; Mikulincer & Shaver, 2003), strive to achieve and maintain a high degree of personal autonomy and control (Mikulincer & Shaver, 2016), and also have lower quality romantic relationships that are more vulnerable to dissolution (Feeney, 2016).

### Life-History Theory

Having reviewed the evolutionary foundations of attachment theory, we now turn to life-history theory (LHT; Del Giudice, Gangestad, & Kaplan, 2016; Kaplan & Gangestad, 2005; see also Del Giudice, Chapter 2, this volume), which actually encompasses attachment theory (Simpson, 1999). LHT is a metatheory that explains why certain traits and behaviors typically emerge when certain kinds of events occur across the lifespan. The amount of time, effort, and resources that an organism can expend at any point during development is finite. Because of this fact, all organisms—including human beings—must make *trade-offs* in how they allocate the limited amount of time, effort, and resources they have at each life stage enroute to eventually reproducing. Since individuals cannot simultaneously maximize each component that comprises their overall reproductive fitness (which entails surviving to reproductive age, successfully reproducing, then caring for offspring and/or kin), they have to prioritize the specific life-domains into which they make investments. Broadly speaking, LHT specifies the primary selection pressures in our evolutionary past that should have governed when, and the environmental conditions under which, individuals devoted more versus less time, energy, and resources to their physical development, growth, mating, and parenting.

All individuals must make three trade-offs when deciding (typically unconsciously or outside of awareness) how to partition their resources at each stage of development in order to increase their reproductive fitness: (1) whether

to invest more in current (immediate) reproduction versus future (delayed) reproduction; (2) whether to invest more in higher quantity versus higher quality offspring; and (3) whether to invest more in mating versus parenting. Individuals cannot invest large amounts of time, energy, or resources to one side of these trade-offs (e.g., mating or having a large number of children) without investing less in the other (e.g., parenting or having fewer children).

Consider, for example, the trade-off that Claire had to make between current reproduction (having her first child at the relatively young age of 19) versus future reproduction (having her first child later in life). By investing in immediate reproduction, Claire could not invest as much time, effort, and resources in future reproduction (e.g., having children at a slightly older age, when more resources might be available to raise them). Indeed, in contemporary Western societies, people who have children as teenagers usually do not have the time, money, or energy to obtain further education or valuable job experiences, which could allow them to attract better mates and invest more time, effort, and resources in a smaller number of children somewhat later in life (Griskevicius et al., 2013).

### An Evolutionary Model of Social Development

The first and most influential evolutionary model of personality and social development was proposed by Belsky and colleagues (1991; see also Belsky, 1997). According to their evolutionary model of social development, one primary evolutionary function of early social experience is to prepare children for the social and physical environments they will most likely inhabit during their lifetimes. The model focuses mainly on the trade-off that must be made between offspring quantity versus quality. Certain types of information contained in the early environment should help a child adopt an appropriate reproductive strategy later in life—one that should have increased his or her reproductive fitness, on average, in similar environments during our ancestral past. For example, harsh or unpredictable environments in which competition for limited resources is intense should lead most parents to behave in a more demanding or rejecting manner toward their children, and offspring who themselves are more aggressive and less co-

operative should have higher reproductive fitness as adults compared to offspring who lack these traits. Conversely, offspring reared in less stressful environments with more plentiful or better resources could have increased their reproductive fitness by adopting a more cooperative, communal orientation in adulthood (see Hinde, 1986).

**The Belsky and Colleagues Model**

The Belsky and colleagues (1991) model, which is displayed in Figure 15.1, has five developmental stages. It proposes that (1) early contextual factors in the family of origin (e.g., the amount of stress, spousal harmony, financial resources) affect (2) early childrearing experiences (e.g., the amount of sensitive, supportive, and/or responsive caregiving). These experiences then affect (3) psychological and behavioral development (e.g., the child’s attachment orientation, trust, opportunism), which influence (4) somatic development (e.g., how quickly sexual maturation is reached) and eventually (5) the adoption of specific reproductive strategies (e.g., the timing of first sexual intercourse, the stability and quality of romantic pair-bonds, the amount of parental investment). Although these

stages are sequentially linked, earlier stages may statistically interact with later ones to predict downstream outcomes. For example, early contextual factors in Claire’s family of origin (e.g., the instability of her early home life) could interact with some of her later childrearing experiences (e.g., the quality of caregiving she received from her mother) to predict later outcomes in Claire’s life (e.g., her propensity for taking risks as a teenager).

Belsky and his colleagues (1991) also surmised that two developmental trajectories (pathways) should exist, with each one reflecting a distinct reproductive strategy. As shown on the left side of Figure 15.1, one strategy entails a fast, short-term, opportunistic orientation toward relationships, especially mating and parenting relationships. In this strategy, sexual intercourse happens relatively early in life, romantic pair-bonds tend to be short-lived and unstable, and parental investment is reduced. This orientation ought to have increased the quantity (total number) of offspring in most ancestral environments. The second strategy, depicted on the right of Figure 15.1, entails a slow, long-term, investing orientation toward relationships in which sexual intercourse occurs later, romantic pair-bonds tend to be stable and more endur-

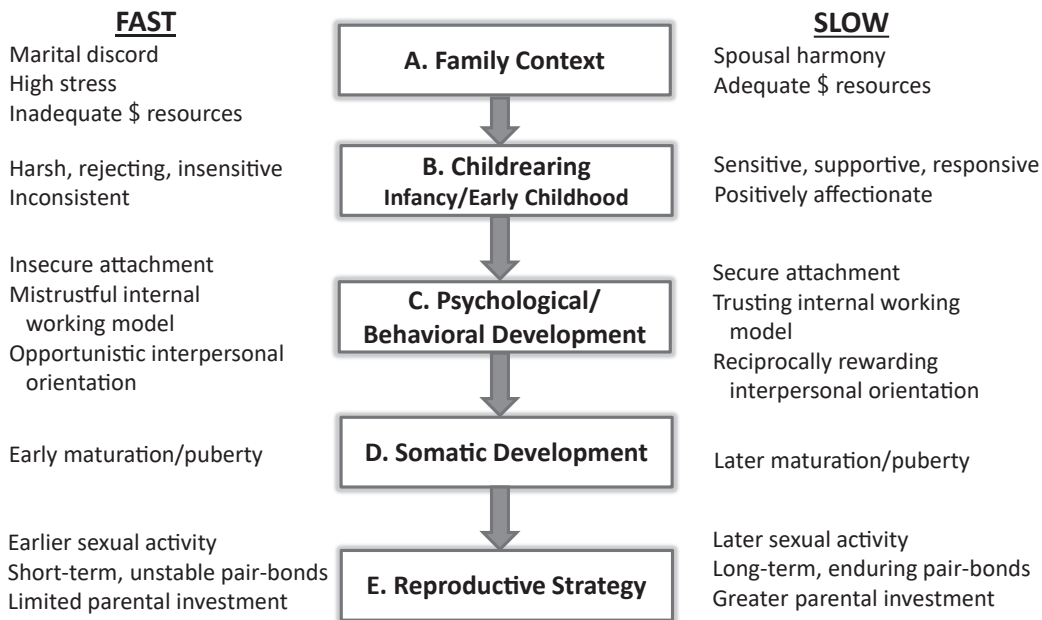


FIGURE 15.1. Developmental pathways of divergent reproductive strategies. Based on the evolutionary model of social development by Belsky, Steinberg, and Draper (1991).

ing, and parental investment is higher. This orientation should have enhanced the quality of offspring (the quality of their phenotypic traits) in most ancestral environments.

### ***Nomothetic Evidence for the Model***

A considerable amount of *nomothetic evidence*, most of it cross-sectional, supports the evolutionary model of social development (for reviews, see Belsky, 2012; Simpson & Belsky, 2016). Nomothetic evidence comes from information collected across many people, whereas *idiographic evidence* focuses on specific individuals. Nomothetic evidence is used to test predictions derived from models, which assume that most people are influenced by the same basic physical and biological laws of nature. With respect to the evolutionary model of social development, for example, higher levels of socioemotional stress in families are strongly associated with more insensitive, harsh, rejecting, and inconsistent parenting styles. Greater economic hardship (McLoyd, 1990), more occupational stress (Bronfenbrenner & Crouter, 1982), and higher marital discord (Belsky, 1981; Emery, 1988) are also clearly related to more hostile or withdrawn parenting styles. Greater social support and more economic resources, on the other hand, are reliably linked with warmer, more sensitive parenting practices (Lempers, Clark-Lempers, & Simons, 1989), mainly because less burdened parents tend to be more patient with and tolerant of their children (Belsky, 1984).

The link between parental sensitivity and the psychological and behavioral development of children is also well documented, and it functions through the attachment system. During the first year of life, more insensitive and less responsive caregiving results in insecure attachment orientations in young children (De Wolff & van IJzendoorn, 1997), which in turn forecast behavior problems later in development. Insecurely attached preschoolers, for instance, typically are more socially withdrawn (Waters, Wippman, & Sroufe, 1979), less sympathetic with distressed peers (Waters et al., 1979), and less well liked by peers (LaFreniere & Sroufe, 1985). During elementary school, insecure children also manifest more severe behavior problems, including aggression and disobedience (Lewis, Fiering, McGuffog, & Jaskir, 1984). All of these behaviors are driven by their insecure working

models, which prepare insecure children for environments in which most people are likely to be more opportunistic and less communal.

The most novel feature of the model centers on the hypothesized predictors of the rate of physical development (i.e., sexual maturity). Belsky and colleagues (1991) hypothesized that children exposed to higher amounts of socioemotional stress should develop insecure attachments to their parents, have more behavioral problems, and reach puberty—and thus reproductive capacity—sooner than children who do not have this developmental trajectory. According to LHT (Kaplan & Gangestad, 2005), environments in which resources are scarce or difficult to obtain, relationships are typically unstable, and the risk of early death is high, should motivate people to divert more energy to accelerated physical development, earlier mating, and shorter-term pair-bonds. This developmental strategy would have improved the odds of reproducing before dying at a relatively young age in our evolutionary past. Conversely, environments in which resources are plentiful and relationship ties tend to be reciprocal and communal should motivate individuals to shift their energy, effort, and resources to delayed physical development, later mating, and longer-term pair-bonds that should have fostered greater parental investment. In these environments, individuals could have increased their reproductive fitness by waiting to reproduce until they had acquired the skills and resources necessary to maximize the quality of each child. Each child could thus benefit maximally from all of the embodied capital (e.g., socialization, training, education) invested in him or her.

The findings of several lines of research support most of these predictions (see Belsky, 2012, for a review). For example, greater parent–child warmth and cohesion predict delayed pubertal development in both prospective longitudinal studies (e.g., Ellis, McFadyen-Ketchum, Dodge, Pettit, & Bates, 1999; Graber, Brooks-Gunn, & Warren, 1995) and retrospective or concurrent ones (e.g., Kim, Smith, & Palermiti, 1997; Miller & Pasta, 2000). Moreover, greater parent–child conflict and coercion, which are associated with harsh and unpredictable environments, forecast earlier pubertal timing in both prospective longitudinal studies (e.g., Ellis & Essex, 2007; Moffitt, Caspi, Belsky, & Silva, 1992) and retrospective or concurrent ones (e.g., Kim et al., 1997). In addition, spouses who have happier, less conflictual marriages tend to have

daughters who reach pubertal maturation later, as confirmed by both prospective longitudinal studies (e.g., Ellis et al., 1999; Ellis & Garber, 2000) and nonprospective ones (e.g., Kim et al., 1997). Finally, girls who are insecurely attached early in life (at 15 months) tend to experience both onset and completion of pubertal development earlier in life (Belsky, Houts, & Fearon, 2010), whereas being securely attached at 15 months buffers (protects) girls who were exposed to higher levels of stress early in life from experiencing earlier menarche (Sung et al., 2016).

A few studies have not found puberty-related effects. Steinberg (1988), for instance, did not find a relation between the amount of family conflict/coercion and pubertal timing in girls. However, family experience/pubertal developmental effects have been documented in studies that consider possible genetic confounds (e.g., biological reasons for earlier menarche) that might be due to the shared genes of mothers and their daughters in sibling design studies (Tithers & Ellis, 2008) and in natural experiments (Pesonen et al., 2008). It is important to note that all of these puberty-related effects are confined to girls. No such effects have been found for boys.

Empirical support for the last stages of the Belsky and colleagues (1991) model comes from research linking adult attachment styles to mating and romantic relationship functioning, and from research relating adult attachment orientations with parenting behavior. Women and men who report being more securely attached to their romantic partners are less likely to have promiscuous sexual attitudes and engage in extrapair sex (Brennan & Shaver, 1995) and more likely to want a single sexual partner during the next 30 years (Miller & Fishkin, 1997). Women who are securely attached in romantic relationships typically have first sexual intercourse at a later age (Bogaert & Sadava, 2002). Securely attached men and women have more satisfying romantic relationships (Feeney, 2016), experience less negative affect (Simpson, 1990), and engage in more constructive conflict resolution tactics (Simpson, Rholes, & Phillips, 1996). In light of these tendencies, secure adults are less prone to divorce or separate (Feeney, 2016), and both partners are more committed to and trusting of each other (Fuller & Fincham, 1995).

To date, virtually all of the studies that have tested segments of the Belsky and colleagues (1991) model have relied on cross-sectional

or short-term longitudinal methods. Very few studies have followed individuals from birth over their lives. In the next section, we report recent findings from a study that prospectively assessed many of the key constructs in this model over the first 23 years of life in a well-known longitudinal sample.

### **The Development of Mating Strategies: A Prospective Longitudinal Approach**

According to Belsky and colleagues' (1991) model, a slow (*restricted*) reproductive strategy entails a slower pace of development and reproduction, which should be associated with greater investment in fewer but higher-quality offspring. A fast (*unrestricted*) reproductive strategy, on the other hand, involves a faster pace of development and reproduction, often resulting in more offspring but less investment in each one. Slow strategists should, therefore, invest more time and effort in maintaining long-term, committed relationships that facilitate greater investment in fewer offspring, whereas fast strategists should put more time and effort into multiple, short-term mating opportunities.

### **Harsh, Predictable, and Unpredictable Conditions**

As discussed earlier, the adaptive value of a given life-history strategy, whether slow or fast, should depend on the environment in which it develops. Two key environmental factors ought to be the amount of morbidity/mortality (harshness) in the local area and the quality of parental care that children receive (Belsky et al., 1991; Simpson & Belsky, 2008). However, another key environmental factor needs to be considered—the extent to which the environment is predictable versus unpredictable (Ellis, Figueredo, Brumbach, & Schlomer, 2009). Unpredictability is typically indexed by the frequency of changes in the immediate family environment that directly affect parents and their children (e.g., Belsky, Schlomer, & Ellis, 2012; Simpson, Griskevicius, Kuo, Sung, & Collins, 2012). The distinction between harshness and unpredictability is important to make because environments may be harsh *or* unpredictable, both, or neither. A harsh environment, for example, may be characterized by consistent poverty that still allows for survival. Although living in poverty is very stressful, it is predict-



able, so individuals can learn to prepare for and cope with such harshness-related events. In unpredictable environments, however, stressful events occur unexpectedly, meaning that individuals cannot necessarily prepare for them. The resulting stress is therefore more difficult to manage because events are often sudden and uncontrollable. Unpredictability can, as a result, have more lasting effects on people, especially when it occurs early in life (see Simpson et al., 2012).

The costs and benefits of initiating and then maintaining long-term romantic relationships should be influenced by the degree to which the local environment is predictable versus unpredictable. In predictable environments, parents can increase the survival and well-being of their children through supportive biparental care and higher investment, which requires the devoted help of long-term, committed mates in most instances. Taking the time to invest in long-term relationships that produce fewer but perhaps higher-quality offspring makes sense when individuals can be reasonably confident that their long-term investments will result in good outcomes. In unpredictable environments, in contrast, long-term investments may result in catastrophic outcomes, especially if environmental conditions change and become dire. Unexpected increases in juvenile mortality rates, for example, might lead slow strategists to lose their entire investment in offspring. In these unstable, unpredictable environments, it makes more sense from an evolutionary standpoint to start reproducing at an earlier age and have more offspring in order to improve the odds that some offspring will survive and eventually reproduce as adults (Ellis et al., 2009). This strategy can also diversify the genetic material of one's offspring through mating with different partners (Donaldson-Matasci, Lachmann, & Bergstrom, 2008). Thus, fast strategists who enact an unrestricted sociosexual orientation—such as Claire—should have higher reproductive fitness in unpredictable environments, whereas slow strategists who enact a restricted sociosexual orientation ought to have higher reproductive fitness in more stable, predictable environments.

### ***Importance of the Early Environment***

According to Ellis and colleagues (2009), exposure to unpredictable environments early in life should lead people to adopt faster reproductive

strategies (unrestricted sociosexuality), whereas exposure to predictable environments should yield slower reproductive strategies (restricted sociosexuality). Such patterns have been documented in a few prospective longitudinal studies. For example, exposure to more predictable environments in the opening years of life uniquely predicts having fewer sexual partners by age 15 (Belsky et al., 2012) and being older at first pregnancy (Nettle, Coall, & Dickins, 2011). Moreover, exposure to more predictable adolescent environments indirectly predicts engaging in restricted sociosexual behaviors and being more likely to use contraception in early adulthood (Brumbach, Figueredo, & Ellis, 2009). Moreover, exposure to more predictable environments during the first 5 years of life in particular forecasts fewer sexual partners by age 23 (Simpson et al., 2012), above and beyond the effects of both environmental harshness across the first 16 years of life and the effects of unpredictability experienced after age 5.

### ***Parental Support and Attachment as Mediators***

The information contained in early environments must be detected by children in order to shape their future development. Most young children, however, are not aware of the conditions that exist in the wider environment. Belsky and his colleagues (1991) suggest that parents provide their children with *critical information* about the local environment through the quality and sensitivity of their parenting practices. A great deal of research has confirmed that it is more difficult to provide good, high-quality care in stressful conditions (Belsky & Jaffee, 2006; Crnic & Low, 2002). Thus, the quality of parental care should be a particularly valid cue indexing conditions in the local environment (Del Giudice & Belsky, 2011; Simpson, 1999).

According to a life-history account, harsh and/or unpredictable early-life environments should reduce the quality of care that children receive, eventually resulting in fast reproductive strategies (unrestricted sociosexuality; Belsky et al., 1991; Chisholm, 1993; Ellis, 2004). The few prospective longitudinal studies that have investigated whether and how disruptive parenting is associated with girls' sexual development have supported this prediction. Disruptive parenting has been indexed by father absence (Ellis & Essex, 2007), maternal separation and lack of paternal involvement (Nettle et al., 2011), and maternal depression (Belsky et

al., 2012). Parental disruption also predicts becoming involved in lower-quality romantic relationships (Conger, Cui, Bryant, & Elder, 2000; Cui & Fincham, 2010). These findings therefore provide preliminary evidence that the quality of parental care might be one route through which early environmental conditions start shaping adult reproductive strategies.

We know surprisingly little, however, about *how* early parental care shapes the development of reproductive strategies as individuals move into adulthood. One possibility is that the quality and/or consistency of early parental care instills beliefs and expectations in children regarding what their future interactions with others will be like, which in turn affects their later psychological and behavioral adjustment (Del Giudice, 2009; Simpson & Belsky, 2008). If so, this process should be governed by the attachment system, which motivates individuals to seek and maintain close proximity to supportive others, especially when they are stressed, afraid, or feel overly challenged (Bowlby, 1969; Simpson & Rholes, 1994).

Bowlby (1969, 1973, 1980) proposed that when a potential threat is detected, the attachment system generates a sequence of psychological, physiological, and behavioral responses designed to elicit support from caregivers, which, if successful, restores a sense of emotional safety and felt security. Early caregiving experiences influence the beliefs and expectations that individuals have about the support they are likely to get from attachment figures in threatening situations, which also provides valuable information about the safety and predictability of the current environment. Caregivers who can be counted on to provide good, reliable support tend to instill positive expectations about the availability of support from other people (i.e., secure attachment representations), whereas caregivers who provide inconsistent or poor support usually instill negative expectations about the availability of support from others (i.e., insecure attachment representations). Once formed, attachment representations tend to guide an individual's thoughts, feelings, and behavior within close relationships over the lifespan (Bowlby, 1973).

Research has also confirmed that securely attached individuals not only prefer long-term relationships, but they also function better in them (Mikulincer & Shaver, 2016). For example, individuals who are securely attached in infancy display better conflict resolution skills and

more positive emotions in their adult romantic relationships (Simpson, Collins, Tran, & Haydon, 2007), and they also have higher-quality relationships (Roisman, Collins, Sroufe, & Egeland, 2005). In addition, priming attachment security experimentally increases the desire for long-term relationships in most people (Gillath & Schachner, 2006). And cross-sectional studies have shown that securely attached adults are more committed to and supportive in their romantic relationships (e.g., Collins & Feeney, 2000; Simpson, 1990), whereas avoidantly attached adults (who represent one of two types of attachment insecurity) prefer short-term relationships and are less emotionally involved when they are involved in longer-term relationships (Birnbaum, 2010; Schachner & Shaver, 2004).

In summary, consistent with the Belsky and colleagues (1991) model, these findings suggest that attachment representations should mediate the connection between exposure to predictable versus unpredictable early environments and reproductive strategies in early adulthood. More specifically, exposure to predictable early-life environments should facilitate more reliable, higher-quality parenting, which should generate secure attachment representations, leading to slower, more restricted sociosexual orientations.

### ***The Minnesota Longitudinal Study of Risk and Adaptation***

To test these ideas prospectively and longitudinally, we (Szepeswol et al., 2017) analyzed data from the Minnesota Longitudinal Study of Risk and Adaptation (MLSRA; Sroufe, Egeland, Carlson, & Collins, 2005). The MLSRA has followed approximately 180 individuals from before they were born into middle adulthood. All of the participants were born in the mid-1970s to first-time mothers who were living below the poverty line when their children were born. At multiple points of development across the lifespan, the MLSRA has excellent measures of each participant's early-life environment (e.g., coder-rated measures of the predictability and harshness of each environment), coder-rated observational measures of parenting quality/support based on videotaped mother-child interactions early in life, and interview measures (coded by observers) of attachment representations and markers of restricted (slow) versus unrestricted (fast) sociosexuality from late adolescence and early adulthood.

### Measures

What makes this study unique is the nature and quality of the measures, particularly those relevant to certain components and stages of the Belsky and colleagues (1991) model (see Figure 15.1). *Early predictability* was assessed by three items from the Life Events Schedule (LES; Egeland, Breitenbucher, & Rosenberg, 1982). These interview-based items ask each mother to report and discuss the disruptive nature of three types of changes in her life during the preceding year: (1) changes in employment status (e.g., periods of unemployment), (2) changes in residence (e.g., moving to a different house or apartment), and (3) changes in cohabitation status (e.g., whether and how often romantic partners moved in or out of the home). Each item was then rated by coders for the degree of disruption associated with each event on a scale of 0 (*no disruption*) to 3 (*severe disruption*). This measure encompassed the first 4 years of each participant's life when the LES was administered (when he or she was 12, 18, and 48 months old). Consistent with earlier studies (e.g., Simpson et al., 2012; Szepeswol, Simpson, Griskevicius, & Raby, 2015), we first created an unpredictability measure by summing the three items from each of the three assessments. We then subtracted this score from the maximum possible score to create a composite predictability score, which was then divided by three to form a 0 (*highly unpredictable*) to 9 (*highly predictable*) scale.

*Early harshness* was assessed by participants' socioeconomic status (SES) during the first year of life. SES is a good marker of harshness in Western societies because it is linearly related to morbidity and mortality (Adler, Boyce, Chesney, Folkman, & Syme, 1993; Chen, Matthews, & Boyce, 2002). The first SES assessment (collected at 42 months) was based on mothers' educational attainment and the revised version of the Duncan Socioeconomic Index (SEI; Duncan, 1961; Stevens & Featherman, 1981). The second assessment (collected at 54 months) was based on only mothers' SEI. SES scores were transformed to *t* scores within each assessment period in order to remove negative values, and the average of the 42-month and 54-month scores were treated as our composite measure of early harshness.

*Early maternal support* was assessed by videotaped social interactions between each mother and her child (participant). When participants were 24 and 42 months old, they and

their mothers were observed doing a set of problem-solving and teaching tasks. The tasks were designed to increase in complexity until they became too difficult for any child to solve without some help. Mothers were told to allow their child to attempt each task independently, but to offer help if/when they thought it was appropriate to do so. Each videotaped session was then rated by coders for mothers' quality of support on 7-point scales. Mothers who showed interest and were attentive to the needs of their child, responded contingently to their child's emotional signals, and reinforced their child's success were given high scores. Mothers who were distant, hostile, and/or unsupportive were given low scores. The average of the 24- and 42-month scores served as our measure of early maternal support.

When participants were age 19, their *attachment representations* were measured by the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1985), a semistructured interview that assesses the degree to which individuals have a coherent narrative about their early experiences with caregivers (parents), primarily between ages 5 and 12. Participants were asked to describe their early relationships with their caregivers and to discuss periods of separation, rejection, abuse, and loss. The transcribed AAIs were then rated by coders on 9-point scales using Main and Goldwyn's (1998) coding system. We used the Coherence of Mind scale, which assesses each individual's ability to freely explore his or her feelings about childhood experiences in an organized/emotionally well-regulated versus a nonorganized/emotionally dysregulated manner, as our measure of attachment security (see Raby, Cicchetti, Carlson, Egeland, & Collins, 2013; Roisman, Madsen, Hennighausen, Sroufe, & Collins, 2001).

*Sociosexuality in early adulthood* was assessed from an interview participants completed at age 23. The sociosexuality coding was based on participants' responses to 14 interview items that asked about their current romantic relationship, their relationship history in the prior 2 years, and their ideal romantic relationship. Coders rated participants' responses to all 14 items for evidence of restricted versus unrestricted sociosexuality on a 5-point scale. High scores were given to participants who displayed no evidence of short-term dating or sexual promiscuity, who wanted to be in a romantic relationship with just one person, and/or who were currently in a long-term romantic relationship

(or had been in one recently). Low scores were given to those who reported multiple dating and sexual partners (most or all of which were short-term), and who were interested in dating multiple people. The averaged ratings of the coders was our measure of sociosexuality in early adulthood.

We also assessed the *current predictability* of each participant's environment at age 23. Current predictability was measured with the same items used to assess early predictability (i.e., changes in employment status, changes in residence, and changes in cohabitation status during the past year). Specifically, coders rated each interview-based item for level of disruption on a scale ranging from 0 (*no disruption*) to 3 (*severe disruption*). A current predictability measure was then calculated by summing the ratings and subtracting the sum from the maximum possible sum to create a 0 (*highly unpredictable*) to 9 (*highly predictable*) scale. This measure was used to determine whether the effects of early-life predictability continued to be significant once current predictability was statistically controlled.

### Findings

To determine whether early predictability uniquely (independently) predicted greater restricted sociosexuality at age 23, we conducted a series of hierarchical regression analyses. Consistent with our central hypothesis, greater early-life predictability forecasted more restricted sociosexuality at age 23. Framed another way, individuals like Claire who experienced more unpredictability early in life were more likely to have a fast, unrestricted mating orientation at age 23. The level of predictability in the current environment at age 23 was also uniquely associated with greater restricted sociosexuality, but the effects of early predictability remained significant. As expected, men were more unrestricted than women on average, but gender did *not* moderate the effects of either early or current predictability in predicting sociosexuality at age 23.

Following this, we examined whether receiving more supportive parenting early in life (based on behavioral observations of maternal supportive presence when participants were 2 and 3.5 years old) and whether secure attachment representations in adolescence (based on AAI scores at age 19) mediated the link between exposure to predictability early in life and re-

stricted sociosexuality at age 23. The model we tested is shown in Figure 15.2. Consistent with our hypothesis, exposure to more predictable environments early in life was associated with receiving better parental support during the same time period, controlling for the effects of early harshness. Higher-quality early parental support, in turn, predicted having more secure attachment representations of one's childhood at age 19, which in turn predicted being more restricted at age 23. Cast another way, individuals like Claire who grew up in more unpredictable environments were more likely to receive poorer parental support, which led them to develop insecure attachment representations by adolescence, which then predicted a faster, more unrestricted sociosexuality orientation at age 23.

Considered as a whole, these recent findings show that the impact of early predictability on restricted sociosexuality in early adulthood partially flows through the quality of early parental support and then attachment security in adolescence. These findings provide novel, prospective longitudinal support for several key components of the Belsky and colleagues (1991) model.

### Claire's Life: An Idiographic Examination

To this point, we have reviewed nomothetic evidence relevant to various components of Belsky and colleagues' (1991) evolutionary model of social development. To date, the only developmental stage for which nomothetic evidence has *not* been found is reproductive timing (sexual maturation) in boys. Unlike girls, boys who experience higher levels of stress or are insecurely attached to their parents early in life do not mature faster physically than boys exposed to less stress or who are securely attached.

There is, however, another form of evidence one can use to evaluate theoretical models—*idiographic evidence*. Idiographic information comes from studying specific individuals who are viewed as unique agents with a unique life history, some of whom may experience life events or have attributes that distinguish them from other people. Claire's rather unique developmental history provides just this sort of evidence, and her fast developmental trajectory is remarkably consistent with the Belsky and colleagues (1991) model (see Figure 15.1).

During the first 2 years of her life, Claire's family context was highly stressful, containing a lot of unpredictability. Before her first birth-

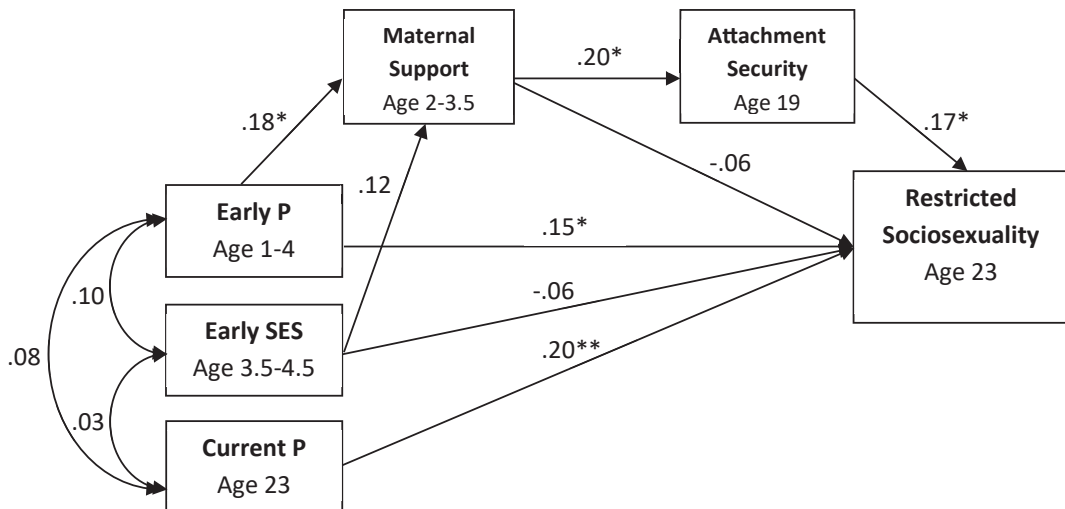


FIGURE 15.2. Mediation analysis (from Szepeswol et al., 2017): Standardized direct and indirect effects (betas) of early predictability (P) on restricted sociosexuality in early adulthood. Effects are estimated using full information maximum likelihood.  $N = 155$ .  $*p < .05$ ;  $**p < .01$ .

day, Claire's on again—off again parents—both of whom were unemployed—moved four times. Her parents also reported having numerous heated arguments in Claire's presence, most of which centered on their chronic unemployment and associated money, alcohol, and drug issues. When interviewed about her life during this period of time, Claire's mother stated that her main problem in life was “putting too much trust in other people.”

When Claire was 12 and 18 months old, she and her mother completed the Strange Situation task to assess the attachment pattern that characterized their relationship. Once again, the Strange Situation involves a series of short separations and reunions, during which the parent (usually the mother) leaves her child in a room (both alone and with a stranger), then returns shortly thereafter. Most young children find this task distressing, but what distinguishes securely attached parent–child pairs from insecurely attached pairs is how the child reacts when his or her parent reenters the room. Claire was classified by observers as insecurely attached in both Strange Situation assessments, being rated as anxiously attached at 12 months but then avoidantly attached at 18 months.

One likely reason for her insecurity was the sustained unpredictable stress that pervaded her early life, which most likely affected the quality

of care she received during infancy and early childhood. Between ages 2 and 5, for example, Claire's father had repeated run-ins with the law, then suddenly died in a freak accident. Her home life was further complicated by the birth of a sister during a time when Claire's mother lived alone and continued to be chronically unemployed. When Claire was 2 and 3½ years old, she and her mother were videotaped engaging in a series of tasks that started out easy for Claire to complete, but became much more difficult, making the interactions stressful for both Claire and her mother. During these tasks, Claire's mother was rated as being unsupportive and even hostile, berating Claire for her inability to complete the more difficult tasks. Claire's mother was also abusive toward her at home, although this information did not come to light until Claire reported it many years later. These negative caregiving experiences are likely to have affected Claire's demeanor at preschool, where her teachers described her as irritable, worried, distressed, hypersensitive, fearful of new situations, and not liked by her preschool peers. On the positive side, the chaos in Claire's home life subsided some, partly because she finally had her own bedroom that contained her own books and toys.

During middle childhood (the elementary school years), the level of unpredictability with-

in her home declined some, but the amount of unpredictability in the surrounding environment remained high. One of her relatives was charged with committing a major violent crime, there were more alcohol problems with other members of her extended family, her mother continued to have different live-in boyfriends (some of whom treated Claire badly), and one of her playmates died of cancer. Fortunately, Claire was bright and wanted to have friends, so her school grades and friendship ties gradually improved over elementary school. Nevertheless, she started to display more psychological vulnerabilities. In first grade, for example, Claire's teachers reported that she worried about dying and being abandoned. By the end of elementary school, she scored high on standard measures of depression and having suicidal thoughts. Her teachers indicated that Claire was stubborn and defiant in the classroom, displayed little motivation to do well in school, had difficulties with several of her peers, had low self-esteem, and was "emotionally unresponsive" much of the time.

According to the Belsky and colleagues (1991) model, this cascade of early life events should have accelerated Claire's physical and sexual maturation, which it did. Claire had her first menstrual period at age 10, approximately 3 years sooner than the average girl. She first engaged in sexual intercourse at age 12, and reported having more than 10 sexual partners by the time she was only 16 years old. During early adolescence, Claire reported using alcohol or drugs almost daily, started engaging in petty (minor) criminal activities, was suspended from school multiple times, and eventually dropped out of high school before graduating.

When she was 19, Claire completed the AAI, which asks people to think back to when they were growing up (between ages 5 and 12) and answer a series of questions about their parents, how they remember being treated as a child, whether or not certain traumatic events happened to them in childhood, and how their caregivers responded when such events happened. Individuals who are rated as dismissive/avoidant on the AAI remember their parents and upbringing as normal or even ideal, but they cannot support these claims with specific, episodic memories of significant childhood events. Dismissive/avoidant people also disregard the importance of attachment figures and related emotions early in life. Individuals who are rated as preoccupied/anxious discuss their

childhood experiences with attachment figures extensively during the interview. Their interviews typically reveal deep-seated, unresolved anger toward one or both parents, which taints their descriptions and interpretations of past experiences. Individuals who are rated as secure present a clear, well-supported description of their past relationship with both parents. Their episodic memories of childhood are clear and coherent, and they have no difficulty recalling important childhood experiences, even if their childhood or upbringing was difficult. Claire was classified as unresolved/preoccupied on the AAI, revealing a high level of incoherence during the interview. She had not worked through and set aside some of the difficult experiences she remembered having with her mother and the string of quasi step-fathers she had, and she rambled on about these experiences in a poorly organized, angry manner during the AAI interview, consistent with the Belsky and colleagues (1991) model.

As Claire entered early adulthood, the quality and support of her romantic relationships and friendships based on interviews were rated as below average. She had her first baby at age 19 all on her own, without any financial or social support from the biological father. During the first year of her son's life, she completed her high school equivalency degree, moved back into a more stable home environment with her mother, and began looking for a steady, better paying job. When her son was 12 months old, they completed the Strange Situation task, just as Claire and her mother had done approximately 20 years earlier. The relationship between Claire and her son was classified as secure. Thus, unlike Claire when she was an infant, her son was able to use Claire as a source of comfort and security to reduce his distress upon reuniting with her in the Strange Situation. One likely source of his security was Claire's parenting behavior. Indeed, when Claire participated in teaching tasks with her son when he was 2 and 3½—the same tasks she had completed with her mother 20 years earlier—she was rated as being supportive and completely nonhostile.

By age 23, Claire was no longer living at her mother's home, she had moved around a lot, and there were periods of time when she was homeless. She continued to have a string of short-term boyfriends but never maintained a serious romantic relationship for more than a few months. During this time, she received some help parenting her son from one set of his

grandparents, but she worried about the quality of her parenting. She was still drinking and taking drugs on occasion and found it difficult to sustain the motivation it took to remain gainfully employed. At age 26, she started having debilitating panic attacks, which further undermined her ability to work and develop anything more than short-term romantic affairs. By age 28, Claire and her son had moved back in with her mother once again, where they spent several more years.

In summary, this more fine-grained idiographic glimpse of Claire's life trajectory fits the Belsky and colleagues (1991) model in most, but not all, ways. For example, it strongly supports Belsky and colleagues' accelerated somatic development prediction in light of the early age at which Claire started sexual maturity (age 10) and began having sex (age 12). At the same time, this idiographic information also reveals some departures from what the model predicts. Unlike Claire, for example, her son was securely attached in the Strange Situation, perhaps because Claire gained sufficient insight *not* to replicate the unsupportive, hostile care that she received as a child. In addition, due to her use of contraception, Claire had only one child by the time she reached her late 20s, which is not characteristic of many people who are following a fast reproductive strategy. This highlights an important point: Life trajectories can and sometimes do change in meaningful ways, either within the life of a person as he or she has new experiences and encounters new life events, and/or at intergenerational transmission points between the lives of two people, such as Claire and her son.

## Conclusion

LHT provides a powerful theoretical lens through which different events in the lives of different people can be interpreted and understood. The linchpin that connects what happens early in life with how individuals think, feel, and behave interpersonally as adults is the attachment orientations and underlying working models they carry in their heads during their lifetimes. Attachment orientations and working models can and sometimes do change as people enter new relationships and have new experiences (Fraley & Roisman, 2015), especially those that contradict the working models they have developed (Simpson, Rholes, Campbell,

& Wilson, 2003). This may be partially true of Claire, who did not "transmit" her insecure attachment tendencies to her son, at least, not early in his life.

From the standpoint of her mental and physical health, Claire's life appears to be maladaptive and replete with negative outcomes. Her mental and physical state at most periods of her life were objectively worse than most people at similar ages. From an evolutionary standpoint, however, Claire made the best of a very difficult series of life events by reproducing before she could have died at a young age. Individuals in evolutionary history who were exposed to similar unpredictable, risky environments early in life would have achieved higher reproductive fitness by being wary of other people and not trusting them (reflecting insecure attachment), rapidly taking advantage of opportunities when they arose, reaching reproductive age sooner, and reproducing at a younger age, even without long-term mates. Thus, the genes associated with the development of these characteristics should have remained in the gene pool during evolutionary history. Consistent with this notion, recent prospective research examining attachment early in life (assessed in the Strange Situation) and adult personality has revealed that individuals who were insecurely attached as children have lower scores on the metatrait known as "stability" in adulthood. Specifically, individuals who were insecurely attached as children are less agreeable, less conscientious, and more neurotic in adulthood than individuals who were securely attached as children (Young, Simpson, Griskevicius, Huelsnitz, & Fleck, 2017). It is believed that this constellation of traits—being more disagreeable, less conscientious, and more emotionally unstable—should have facilitated the enactment of a fast life-history strategy, including its many behavioral outcomes (Simpson, Griskevicius, Szepeswol & Young, 2017).

The evolutionary model of social development depicts just one possible way to construe the intricate patterning of lives through time. There are other models, including many non-evolutionary ones, that also explain how life experiences might be interconnected to reveal different kinds of life trajectories. The Belsky and colleagues (1991) model, however, has some unique selling points. It is anchored in a major theoretical perspective that has been supported by a vast amount of data collected on many different species; it makes novel predic-

tions that other models did not anticipate or cannot make (e.g., the accelerated sexual development hypothesis, which exists for girls); and it has garnered a considerable amount of support in both cross-sectional and prospective studies on humans. Many of the details of Claire's complicated life provide further idiographic support for key predictions in the model.

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