Chapter 43

The Place of Attachment in Development

L. Alan Sroufe

Attachment theory has been remarkably successful, with achievements beyond what could have been imagined when Bowlby was first formulating his ideas or when he published the first volume of his trilogy in 1969. Its contribution to our understanding of the nature of development is virtually without parallel. It is worth savoring some of these achievements, and I do so in the first part of this chapter. At the same time, like any major theory in the social sciences, with success come certain hazards. These include overextensions of the theory (thinking it can explain everything, including things for which it was not designed), misunderstanding and misapplication, and even complacency. A truly successful theory can withstand modification and certainly should suggest new directions for fruitful research. Some of the vulnerabilities of the theory, its rightful place in an understanding of development, and some suggestions for future direction constitute the remaining parts of the chapter.

Achievements of Attachment Theory

Conceptual Achievements

Without doubt, attachment theory instigated a revolution in psychological science, having a profound impact on clinical psychology and psychiatry, developmental psychology, and social psychology. It played a major role in moving away from a one-person psychology to a relational psychology, with relationships becoming the unit of analysis.

I have previously described how the rise of attachment theory saved psychoanalytic or psychodynamic perspectives in the clinical field and preserved these perspectives for the good of all of psychology (Sroufe, 1986). For more than 100 years, the experience of psychoanalytically oriented clinicians, working with adults in individual therapy, had suggested an agreed-upon set of propositions: (1) that the root of many adult disturbances and distorted world views had their origins in childhood, beginning in the earliest years, (2) that many of these experiences now lie outside of awareness, yet (3) were somehow internalized and represented in the mind of the client. Freud's theory had encompassed such notions. However, despite wide agreement regarding such ideas, they remained “articles of faith” until the last four decades. Laden with archaic energy concepts, Freud's theory was essentially not testable, and psychoanalysis as a scientific theory and psychodynamic practice in general were floundering. (See also Fonagy, Luyten, Allison, & Campbell, Chapter 34, this volume.)

The outgrowth of attachment theory from psychoanalytic theory and other theoretical positions exemplifies the general nature of development.
VII. PERSPECTIVES ON ATTACHMENT

Development. All development “builds upon itself” (Stiles, 2008), with old parts reorganized in new ways. Thus, attachment theory brings forward the most developmentally serviceable parts of psychoanalytic theory—the formative influence of early experience, the centrality of affective life, the critical importance of close relationships, and the reality that much of psychological functioning lies outside of awareness. At the same time, in reorganizing these ideas within a biological perspective, a radically different and more fully developmental account emerges. In a true conceptual revolution, Bowlby turned Freud’s theory upside down. He began not with disturbed adults in his effort to construct a general theory but with normal development, viewing disturbance as developmental deviation. And he drew not on 19th-century physics but on evolutionary biology for his guiding frame of reference. The relationship between infant and caregiver was explained as a primary condition for human adaptation and survival, not as a product of association with drive reduction. Disturbance often derives from inner conflict. However, according to Bowlby, such conflict emerges not from the internal fantasy life of the young child but from the child’s real lived experiences in vital relationships. Propositions from this new framework—that quality and effectiveness of attachment relationships derive from interactive history, and that quality of attachment is the foundation for later personality formation—were eminently testable. They awaited only development of the tools for assessing parent–child interaction, the effectiveness of the attachment relationship, and measures of representation to explain the process wherein experience is carried forward. The wait was not long.

Another way Bowlby inverted psychoanalytic theory concerned the relation between relationships and the self. Theories of Freud and his descendants conceived of a primitive self, cathecting (investing with energy) part objects (the breast) and then objects (people), in order to form relationships. Bowlby and like-minded theorists (Sander, 1975) conceived of the self as deriving from relationships. From an organized relationship, at first orchestrated by the caregiver, but in time truly dyadic, comes the organization of attitudes, expectations, and behaviors we know as the self (Sroufe, 1989). Again, while measuring hypothetical constructs, such as degree of cathexis of an object or strength of the “paranoid position,” eluded measurement, one could measure the organization of the infant–caregiver relationship (i.e., how well affect regulation was achieved by the pair) and actually test whether this predicted later self-management, self-esteem, executive function, and the like. This perspective, wherein relationships are primary, led to a new way of conceptualizing both healthy development and the development of disturbance.

For most of its history, psychology was almost exclusively a science of individual behavior. Even subfields such as “social cognition” were concerned with how individuals viewed the social world, not how relationships impacted individual thought. The work of Bowlby and like-minded theorists Robert Hinde (1979) did much to change this, with the suggestion that relationships could also be a unit of analysis. This movement had profound effects on developmental psychology and social psychology.

An early demonstration of the power and validity of relationship measurement came from the dissertation research of Everett Waters (1978), who showed that attachment relationship assessments were stable between 12 and 18 months, whereas frequencies of individual attachment behaviors were not (e.g., crying, smiling, clinging, proximity seeking). Thus, infants who at 12 months cried a great deal, and immediately sought physical contact upon reunion following a brief separation, might have smiled, vocalized, and taken a toy to their mothers in the same context at 18 months. The individual behavior was transformed, but in both cases the relationship was characterized by its effectiveness in supporting exploration. This was only the beginning. In countless ways in our Minnesota longitudinal studies, we showed that attachment relationship assessments predicted later relationship functioning or individual behavior better than did any assessments of individual infant behavior. Dependency, self-management, capacity for empathy, self-esteem, and behavior problems are better predicted by infant relationship assessments than by any individual child characteristics that can be assessed in the first 2 years of life (Sroufe, Egeland, Carlson, & Collins, 2005a; see also Thompson, Chapter 16, this volume).

Some of the most powerful achievements of a relationship perspective derive from the study of peer relationships (see Groh et al., 2014, for a recent summary). Understanding peer relationships as relationships—in terms of their symmetry and age changes—opened the way for an intensive study of the role of peers in individual development (Hartup, 1999). Some of the strongest findings in the attachment field concern the links
between early attachment and later functioning with peers. Social competence is strongly related to attachment history (e.g., Sroufe, Egeland, & Carlson, 1999), but beyond this, so too are measures of the quality of specific peer relationships. Both frequency of close friendships and closeness of friendships are related to attachment history (e.g., Elicker, Englund, & Sroufe, 1992; Shulman, Elicker, & Sroufe, 1994). One final example here concerns bullying relationships (Troy & Sroufe, 1987). Again, no measure of individual behavior in the first years has been shown to predict later bullying. Within an attachment perspective, prediction became possible. Moreover, this study showed that the most powerful predictions came from consideration of the attachment histories of both partners. Those with secure histories neither bullied nor were the victims of bullies in our extensive play pair assessments. Those with insecure/resistant histories were bullied by those with insecure/avoidant histories but nurtured by those with secure histories.

In adult social psychology as well, the power of studying relationship quality, as opposed to simply individual characteristics or perceptions, has become manifest (e.g., Mikulincer & Shaver, 2007; Simpson & Rholes, 2012). In addition to studying the quality of adult attachment relationships, investigators are probing the details about how adult relationships work, both poorly and well. Thus, for example, studies have concerned mutual regulation between partners and how partners are or are not able to resolve conflict (which itself is predicted by relationship history measures; Salvatore, Kuo, Steele, Simpson, & Collins, 2011; Simpson & Overall, 2014).

Another conceptual advance came from the methodology developed by Ainsworth (e.g., Ainsworth, Blehar, Waters, & Wall 1978). Direct observation is a key to rigorous psychological science, yet observational work is fraught with challenges. For years it seemed that there were only two choices, neither of which was adequate. On the one hand, one could record frequencies of very reliable discrete behaviors (how often a baby cries or smiles, or a mother vocalizes or picks up the infant). Numerous problems plagued this approach. First, much observation was required for such measures to be stable. Second, the same behavior could mean many different things depending on context. (Did the mother pick up the baby when it wanted to be picked up or did her behavior in fact interfere with an infant goal?). Finally, even apparently clear behaviors were ambiguous (was the verbalization too loud?). Attempts were made to solve some of these problems with complex contingency analyses of behavioral chains, but this proved unwieldy. The second option relied on judgments of observers who typically would watch entire episodes of behavior, then make ratings based on their impressions. Although this had the virtue of attempting to capture the meaning of behavior, such judgments were notably unreliable across raters.

Ainsworth provided a third option, both for her scales of maternal behavior and her attachment rating scales (Ainsworth et al., 1978). She retained the goal of capturing meaning, but she also utilized specific behavioral referents. For illustration, consider the following three vignettes: immediately upon reunion following a brief separation, a baby (1) begins approaching the caregiver, then halfway to her turns off to the side; (2) starts to approach the mother, then halfway to her stops and shows her a toy, smiling broadly; (3) starts to approach, then turns away to a toy, picks it up and, smiling, shows it to the mother. Only the first of these would receive a score for avoidance, and that score would be higher or lower depending on what happened next (e.g., higher, if the infant subsequently ignored the mother’s efforts to gain his or her attention). Ainsworth and colleagues (1978) provided multiple possible scenarios for each scale point. While she could, of course, not describe every possible scenario, the varied scenarios allow the rater to engage in template matching, with quite adequate reliability. We used this same approach in many of our behavioral observations across the Minnesota longitudinal study (Sroufe et al., 2005a).

Attachment theory also played a crucial role in solving conceptual problems that were of great importance in the soon-to-emerge field of developmental psychopathology (e.g., Sroufe & Rutter, 1984). These included the problems of explaining continuity and change, understanding the particular role of early experience, and explicating pathology as a developmental outcome. The concept of “developmental pathways,” adapted by Bowlby from the work of Waddington (1957), was central to each of these problems.

The pathways model dissolved the question of whether development was characterized by continuity or change by suggesting that there would be increasing probability of following a pathway the longer it had been followed, and that continuity would not be in terms of identical behavior; rather, it would be characterized by transforma-
tion and a branching family of outcomes related in terms of meaning. Change was possible at any point of development, but change was constrained by previous adaptation. As Bowlby (1973, p. 412) put it: “Development turns on each and every stage of the journey on an interaction between the organism as it has developed up to that moment and the environment in which it then finds itself.” Early experience has a special place in this model because of the cumulative nature of development, always building on what was there before. It certainly does not preordain all outcomes, but neither is it without significance or “erased” (Kagan, 1984) by later experience. Finally, psychopathology is viewed as a product of the cumulative adaptations of the individual as he or she faces the series of developmental issues and challenges. Predictably, problems tend to become more stable with development, and pathway is a more powerful predictor of outcome than are manifest symptoms at a given age (e.g., Moffitt, 1993).

The heterogeneity of all childhood disorders and the ubiquitous comorbidity among them becomes understandable within this framework (Sroufe, 1997). Most important, this approach leads to a new research agenda. The first objectives become to identify early variations in patterns of adaptation that mark initiation of pathways and identify the complex of factors that initiate such patterns. Attachment experiences—that is, parental responsiveness and secure-base provision—are only a part of this picture, but an important part. Other objectives are to trace continuity and change in adaptations in the face of subsequent developmental issues and determine factors that maintain individuals or deflect them from the pathway previously “chosen.” In time, this approach would potentially lead to a new system for classifying later problems. In addition, it provokes new attention to prevention and early intervention efforts (see Berlin, Zeanah, & Lieberman, Chapter 32, this volume).

**Empirical Achievements**

Empirical achievements of attachment theory, both in adult social psychology and in developmental psychology, are found throughout this volume. Therefore, here I feature only a few, drawing primarily from the Minnesota Longitudinal Study of Risk and Adaptation (e.g., Sroufe et al., 2005a). I group achievements in terms of core hypotheses from attachment theory. These include the following: that variations in infant attachment are rooted in the quality of early parent–infant interaction, that these attachment variations are the foundation for personality formation, and that “internal working models” or representations of the interactive history are the means by which lived experience is carried forward. Work on continuity, change, and “resilience” is highlighted.

**Predicting Attachment Variations from Parent–Infant Interactive History**

Based on her extensive observation (72 hours per case), Ainsworth showed that, indeed, caregivers’ sensitive responsiveness predicted later attachment security (e.g., Ainsworth et al., 1978). Others using less extensive but still substantial observation replicated these results, with a correlation of about .50 (Pederson, Gleason, Moran, & Bento, 1998; Posada et al., 1999). Correlations are more modest with less observation but are still consistently found (see De Wolff & Van Ijzendoorn, 1997, for a meta-analysis). Moreover, studies that included measures of infant temperament find that only caregiver sensitivity, not temperament, predicts attachment outcomes (e.g., National Institute of Child Health and Human Development Early Child Care Research Network [NICHD ECCRN], 1997; Sroufe et al., 2005a). (See also Fearon & Belsky, Chapter 14, and Vaughn & Bost, Chapter 10, this volume.)

**Predictability of Later Behavior from the Early Years**

In the 1960s and early 1970s, before attachment theory had taken hold, developmental psychology was in a strange place. It was being put forward that there was little to no continuity in development, especially from the early years of life (Kagan & Moss, 1962). Moreover, it was claimed that constructs such as attachment (Masters & Wellman, 1974) and even personality (Mischel, 1968) were of little use because behavior of individuals was so unstable across time and contexts. Thus, it has been of great importance to the entire field to establish that such cross-time and even cross-context linkages can be established. As discussed earlier, this was done by moving to the level of the organization of behavior and showing that individual patterns of organization in early life forecast patterns of adaptation with regard to the salient issues of subsequent developmental periods. Behavior is...
expected to change across contexts; for example, the well-adapted infant explores actively in the caregiver’s presence but effectively seeks contact when distressed, and the well-adapted preschooler plays with exuberance in the play yard but sits quietly during story time (Block & Block, 1980). And behavior must change with development. Children who are ineffective in using the caregiver for comforting, including those who show avoidance, later are more dependent, whereas those who are effectively dependent infants later are more autonomous (Sroufe, Fox, & Pancake, 1983). No one expects loyal friendships among infants, but they are a hallmark of successful adaptation in middle childhood. Using such an understanding, clear evidence of continuity (coherence of adaptation) from infancy to adulthood has been demonstrated (Sroufe et al., 2005a). Links are especially strong to measures of self-management, dependency, and peer relationships. With adequate outcome data, which we were able to obtain in our extensive preschool and summer camp studies, correlations in the 40s and 50s were common. Nothing in the early years predicted better than attachment history, likely because it summarizes so much of what is going on in the development of the infant.

A more recent body of work provided dramatic evidence of intergenerational continuity. Every step in a cyclical chain beginning with disorganized attachment has been established. Disorganized attachment in one generation predicts disorganized attachment in the next (Main, Hesse, & Kaplan, 2005; Raby, Steele, Carlson, & Sroufe, 2015). More important are the links in the chain. Disorganized attachment predicts the tendency to dissociate throughout childhood and into adulthood (Carlson, 1998). As reviewed by Lyons-Ruth and Jacobvitz (Chapter 29, this volume), disorganized attachment and dissociation predict lack of resolution of loss or trauma in the Adult Attachment Interview (AAI), and lack of resolution in the AAI predicts frightening parental behavior. Furthermore, frightening parental behavior predicts, as theoretically specified, disorganized attachment in the infant of the next generation, so the cycle is complete (Jacobvitz, Hazen, & Riggs, 1997; Schuengel, Bakermans-Kranenburg, Van Ijzendoorn, & Blom, 1999).

For many reasons it is not surprising that early attachment experiences forecast later development (Sroufe, Egeland, Carlson, & Collins, 2005b). First, having experienced responsive care, those with secure histories tend to experience a basic sense of connection with others and a belief that relationships are valuable. Second, such individuals also begin life with positive expectations about themselves and their ability to elicit support from others. Having had a secure base for exploration, they bring to the social world a curiosity, a zest for discovery, a positive problem-solving attitude, and a set of instrumental skills that make them attractive social partners. Having experienced effective dyadic affect regulation during infancy, children with secure histories have a solid foundation for emotion regulation and self-management in later years. They believe that self-regulation in the face of challenge and recovery from periods of dysregulation are possible, and they have brain excitatory and inhibitory systems that are properly tuned for achieving both. Finally, as part of an empathic, reciprocating relational system, they now have an understanding of how effective relationships work and a capacity for empathic responsiveness to others. (See also Thompson, Chapter 16, this volume.)

None of this is to say that attachment experiences by themselves determine later development, or that early secure attachments are a guarantee of later healthy adjustment, or that anxious early attachments cannot be overcome. Change, as well as continuity, is central to the theory.

**Continuity, Change, and Studies of Representation**

Although demonstrating continuity from the early years forward was an important achievement, the predictability and coherence of change also followed from Bowlby’s theory. Indeed, in the Minnesota Longitudinal Study of Risk and Adaptation, we were able to account for change, age by age (Sroufe et al., 2005a). During the infancy period, when family stress decreased or social support increased, change from anxious to secure attachment was more likely. At later ages also, as family stress and support changed, or as maternal depression waxed and waned, so too did child behavior problems. Moreover, we were able to show that representations of experience played a key role in continuity and change (Carlson, Sroufe, & Egeland, 2004). First, assessments of representation—through stories, drawings, projective techniques, and narrative interviews—were predictable throughout childhood and adolescence into adulthood from infant attachment variations. Second, there was interplay between representation and experience as predicted by theory. At any given age, measures of representation predicted adapta-
tion at the next age, with earlier behavior held constant. At the same time, measures of behavior predicted representation at the later age, with prior representation controlled. This is the same thing as saying that representation predicted change in behavior, while, reciprocally, experience predicted change in representation, age by age. (For discussion of representational processes, see Bretherton & Munholland, Chapter 4, this volume.)

The Fate of Early Experience
Following Change: Resilience

According to Bowlby's pathways model, one's entire developmental history is always part of the array of influences acting on the person. This suggests that, even following change, early experience is not erased. The Minnesota longitudinal study provided data for examining this hypothesis (Sroufe et al., 2005a; Sroufe, Egeland, & Kreutzer, 1990). We began by defining what we viewed as two groups of preschool-age children. They had in common a consistently high level of behavior problems across three assessment periods. (Indeed, based on a position that change erases early experience, there is only one group.) What distinguished them was that some had a history of secure attachment, whereas others had an insecure history. When we conducted follow-up research when children were in third grade, children with secure histories had significantly fewer behavior problems than those with insecure histories. We repeated such a demonstration at subsequent ages. Similarly, those with insecure attachment histories, who for a time do well, are more vulnerable to subsequent problems. Early experience is not erased.

These findings shed light on the phenomenon of resilience as a developmental process. Had our study only begun, for example, in the preschool years, we still would have found that some children bounced back from their period of difficulty and by this criterion could be said to be resilient. However, it would have been fallacious to consider this capacity simply an inherent characteristic of some children. It is simply a label for the phenomenon of recovery. More of an explanation derives from knowing the history that provides the foundation for recovery. When history and current supports are taken into account, very little mystery remains in this kind of resilience.

A more classic definition of resilience is the capacity to do well in the face of adversity (Masten, 2001). For example, high family stress is associated with child behavior problems. But not all children facing high stress show such problems, and it would be possible to "explain" this by saying they are resilient. Once again, our data show that those with histories of secure attachment are significantly less likely to manifest problems in the face of stress (Pianta, Egeland, & Sroufe, 1990). A secure attachment history provides a foundation for coping with adversity, likely both because of internal resources and the capacity to draw on external social support. The capacities to rebound, to cope with adversity, and to take advantage of turning points for growth all are predicted by attachment history (Sroufe et al., 2005a).

Vulnerabilities of Attachment Theory

All theories have vulnerabilities—incoherence in propositions, illogical deductions, predictions that are not distinctive, and the like. But a very successful theory faces two particular and related hazards. These are overreaching, or trying to explain everything, and the belief that the theory is the total explanation for any phenomenon. These are certainly risks for attachment theory. With such expansionism, the theory risks losing its core, losing sight of what it was specifically designed to explain and explain well. As Sandra Scarr (personal communication, September 1978) once asked, "Is attachment theory simply a theory that all good things go together?" Were this so, it would not be much of a theory.

Over the years almost everything has been suggested at one time or another to be related to attachment variations, from grammatical language acquisition to map reading to IQ. One actual finding from our study is that infant attachment security predicted math achievement scores in high school. Although one can come up with a rationale to explain this finding (and possibly even posit post hoc some common underlying brain mechanisms), we resisted the idea of publishing this finding that we believed to be misleading. It is not likely that attachment evolved to prepare individual brains for understanding math. In fact, the most likely explanation of this correlation is that math achievement is highly related to school attendance, and for a variety of reasons (including getting along with peers and teachers, and having parents who support schooling), those with secure histories have better attendance. In support of
this, attachment history does not predict reading achievement, which is not as dependent on attendance as is math achievement.

Attachment theory makes very specific predictions—to positive expectations concerning self, other, and relationships; to a basic sense of security; to the capacity to draw support from, and offer support to, others; to emotion regulation; and to a well-functioning personality. It should not and does not predict to everything, including many aspects of cognitive functioning.

Likewise, attachment history is not the only thing that predicts important outcomes, even in the social arena. There are many critical influences on development, including other relationships both inside and outside of the family, as well as the broader contextual situation surrounding the developing child. Siblings, peers, schools, neighborhoods, and socioeconomic status all are known to have important influences. As pointed out in the earlier discussion of resilience, attachment history was important; but intervening changes in social support and life stress being experienced by the family also played a role. To account fully for resilience, all of these factors needed to be considered.

Attachment is not even all there is to parenting. Parents do much more than provide a haven of safety and a secure base for exploration, important as these provisions are. Parents provide limits and boundaries, socialize the expression of emotion, instill values through their example, promote or inhibit exchanges with the broader social environment, select and encourage a range of experiences to which the child is exposed, among many other things (see Table 43.1). Assimilating all of this to attachment will curtail our knowledge of parental influence and even interfere with the task of understanding attachment because it disallows the possibility of studying how attachment experiences work in concert with other experiences.

We developed strong measures of several key aspects of early parenting that we viewed as outside the purview of attachment. These included measures of limit setting, parent–child boundary dissolution (a form of overstimulation), and parental scaffolding of problem solving. In addition, we also assessed parental intrusiveness (Ainsworth’s Cooperation–Interference Scale in infancy), the quality and stability of the home environment, and promotion of autonomy in early adolescence (Sroufe et al., 2005b). Although each of these show some correlation with attachment security, they certainly are not identical to attachment, and they play distinctive roles in development.

A first example concerns school outcomes. Attachment history does correlate with a range of school outcomes, mostly tapping relationships with school personnel and commitment to school. For example, it predicts dropping out of school. But parental scaffolding for problem solving, which we measured at age 3½ years in our laboratory, was a far stronger predictor. This measure tapped how well the parent structured four problems for the child, provided relevant help, and properly sequenced this help, moving neither too fast nor too slow, helping but not taking over (Englund, Luckner, Whaley, & Egeland, 2004; Sroufe et al., 2005a). This single measure predicted a host of educational outcomes, everything we measured, from years of school completed to returning for a general equivalency degree (GED) for those who dropped out.

Prediction of attention-deficit/hyperactivity disorder (ADHD) symptoms provides another example. Although insecure attachment is probabilistically related to behavior problems in general

<table>
<thead>
<tr>
<th>TABLE 43.1. The Tasks of Parenting</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Regulation of arousal</td>
</tr>
<tr>
<td>• Appropriately modulated stimulation</td>
</tr>
<tr>
<td>• Provision of secure base and safe haven</td>
</tr>
<tr>
<td>• Appropriate guidance, limits, and structure</td>
</tr>
<tr>
<td>• Maintenance of parent–child boundaries</td>
</tr>
<tr>
<td>• Socialization of emotional expression and containment</td>
</tr>
<tr>
<td>• Scaffolding for problem solving</td>
</tr>
<tr>
<td>• Supporting mastery and achievement</td>
</tr>
<tr>
<td>• Supporting contacts with the broader social world</td>
</tr>
<tr>
<td>• Accepting the child's growing independence</td>
</tr>
</tbody>
</table>
and certain forms of specific problems, it is not at all well related to ADHD symptoms in particular (Sroufe et al., 2005a). In contrast, certain other aspects of parenting, as well as other features of the developmental landscape, are clearly predictive of ADHD, both as a category and as symptom scores. Ainsworth’s Intrusiveness measure at 6 months and parent–child boundary problems at 24 and 42 months are all related to ADHD. The 42-month measure, taken from the problem-solving task described earlier, was the single best predictor at multiple follow-up ages (Carlson, Jacobvitz, & Sroufe, 1995). This measure taps a particular issue with dysregulation. A high score results when the parent provokes, cajoles, teases, flirts with, or otherwise increases the child’s level of stimulation precisely at those times when the child is already becoming overtaxed by the problems and is beginning to lose control. Thus, as the child approaches the edge of overarousal and loss of control, the parental behavior pushes the child over the edge, undermining the child’s belief in his or her ability to modulate arousal, as well as the actual capacity for self-control. Parents receiving low scores maintain a calm, reassuring presence at these times and increase their support, helping the child achieve both the sense of and capacity for self-regulation. This is a critically important parental role. In addition to this parenting measure, we found that measures of family life stress and stability or chaos in the home environment also predicted ADHD symptoms. When the measures of overstimulating parenting were combined with these measures of the surrounding environment, predictions to ADHD symptoms became quite strong, dwarfing endogenous measures of neurological status or temperament. But security of attachment played a minor role in this picture.

Even when we focus on an outcome with clear theoretical links to attachment, such as quality of later social relationships, other aspects of parenting proved to be important as well. For example, in our summer camp studies, we were able to develop a measure of “friendship competence” (forming and maintaining a reciprocal, loyal friendship; Elicker et al., 1992). This was indeed related to attachment history, while accounting for 13% of the variance. However, when attachment was combined with the other measures of supportive parenting described earlier, the variance accounted for doubled, with a multiple r of .52. Time after time, with a range of outcome measures, the broader measure of parenting was almost always more powerful than attachment alone.

Peer experiences also are an important influence on development, without doubt. The question of whether they are more important than attachment or other parenting variables misses the mark (Harris, 1998). The most important developmental question concerns how the two influences work together. We miss this question entirely when we try to explain everything in terms of attachment.

As reported earlier, infant attachment security is a clear predictor of peer competence, at every age. It provides an important motivational foundation for close relationships and exploratory and regulation capacities that make one attractive to peers. Still, what one gains from peer experiences also contributes to later social competence. We see social competence as constructed step by step, with each phase based on the foundation that was laid down before. Thus, with preschool peers, one learns a great deal about sustaining and chaining interactions in the face of difficulties, about selecting preferred partners, and about participating in groups per se. These experiences are unique because peers are equals (as the word signifies): One does not hold authority over the other. All of these experiences prepare the child for the loyal friendships and adherence to peer group norms that are the hallmark of middle childhood. These latter experiences then support the more intimate relationships of adolescence and negotiating the complexities of the adolescent social world, with same- and cross-gender friendships and same- and mixed-gender group functioning. It is no surprise that peer functioning at each age predicts social competence measures at the next. Moreover, when peer experiences are combined with attachment history and other aspects of parenting history, predictions increase over what either parenting or peer experiences alone can predict. In the case of the middle childhood friendship competence measure I discussed earlier, adding preschool teacher peer competence ratings to the equation raises the resulting multiple r to .62 ($r^2 = .38$), now triple the variance accounted for by attachment history alone.

Early attachment history and later family experiences or later peer experiences can combine in a variety of complex ways depending on the particular outcome (Sroufe et al., 2005b). Sometimes the joint influence is simply additive, as I have just described. Another example of this concerns the prediction of observed hostility in adult couple interaction. Such hostility is predicted by insecure attachment in infancy. But it is also predicted by
43. The Place of Attachment in Development

Sometimes the impact of early attachment is partially mediated by another influence. We obtained observation-based measures of parental support for the 13-year-old child's emerging autonomy. Some of the variance of attachment history in predicting hostility in adult relationships was mediated by this later parenting measure. Still, early attachment remained a significant predictor. But with another adult outcome—conflict resolution, infant attachment history fell to nonsignificance once the age-13 measure was included. Depending on outcome, a variety of results were obtained, and this was also true when peer relationship measures at various ages were combined with attachment history. Sometimes only attachment history predicted, and sometimes only the peer measure predicted. But much more often, consideration of both was critical, with joint effects, including mediation, being the rule (Sroufe et al., 2005b). None of this trivializes the importance of attachment history. In fact, infant attachment gains importance as a construct when it is considered within a broader developmental framework.

Another potential hazard in attachment research is assuming the existence of a causal link when infant attachment is related to some later outcome. First, it is important to show that a third factor, such as IQ, life stress, or other experiential variables, is not a primary player. Second, as I just discussed, it is important to explore whether the link is mediated by some third variable. It is perhaps even more hazardous to conclude causal developmental linkages in the case of correlates of adult attachment measures. Not only must there be controls for relevant third variables, in addition, one must be cautious regarding assuming developmental antecedents. One example here will suffice.

Individuals with borderline personality disorder (BPD) features have been reported to be both “unresolved” and “preoccupied” in the AAI. This is a replicable finding (Dozier, Stovall-McClough, & Albus, 2008; Macfe, Swan, Fitzpatrick, Watkins, & Rivas, 2014; Stovall-McClough & Dozier, Chapter 31, this volume). Given the prevalence of trauma in the history of these problems, it is almost statistically guaranteed that they will more likely be unresolved regarding trauma. (One cannot be unresolved with regard to trauma if there was no history of trauma.) It is also plausible given the emotional volatility of such persons that nonmodulated anger would characterize the transcripts of these individuals when describing their parental relationships. So these results make sense. But the conclusion that these interview responses and BPD itself are the result of resistant attachment in infancy is not a logical deduction and cannot be justified by the adult correlation itself. This can only be determined with prospective, longitudinal data. Although such data confirm that disorganized attachment in infancy and a history of trauma predict borderline symptoms (Carlson, Egeland, & Sroufe, 2009), anxious/resistant attachment in infancy does not predict borderline symptoms. In fact, with the exception of anxiety, and to a lesser extent depression, we did not find resistant attachment to be a risk factor for severe psychopathology. In our high-quality data set, in which infant attachment was assessed twice and efforts were made to distinguish resistant from disorganized attachment, resistance does not even predict conduct problems (Sroufe et al., 2005a).

This is in contrast to avoidant attachment. This does not make the correlation between preoccupied AAI status and borderline symptoms meaningless. It has the importance of any other marker of a disturbed process. But it is an overreach to speak of preoccupied status as a cause of borderline symptoms.

**The Place of Attachment in Development**

Our understanding that attachment experiences work in concert with other developmental influences raises larger questions about how to conceptualize the place of attachment in the organic *process* of development. I suggested earlier that attachment provides a foundation for entrée into the peer group, but then peer experiences in turn promote new capacities for social relationships. A "developmental issues" perspective (Breger, 1974; Erikson, 1950/1963; Sander, 1975; Sroufe, 1979) is useful for expanding this observation into a more general framework.

Although they have certain similarities, a developmental issues framework is distinctive from classic stage theories in important ways. First, the series of issues that may be outlined are not tasks to be passed or failed; rather, each issue is negotiated in the continuing process of development. Children evolve patterns of adaptation with respect to any given issue, but regardless of how
VII. PERSPECTIVES ON ATTACHMENT

well the issue is engaged, one has no choice but to
move on to the negotiation of subsequent issues.
There is no concept of developmental arrest, nor
is a premium placed on age of accomplishment.
Moreover, while issues come to the fore in vari-
ous developmental periods, an issue is not perma-
nently put behind but rather is negotiated further
in subsequent phases of life.

There is, of course, an important way in
which a developmental issues position is like a
stage theory; it is proposed that adaptation with
regard to each issue frames in part the person's
negotiation of subsequent issues. However, it is
also assumed that negotiating a subsequent issue
provides an opportunity for reworking all previous
issues.

Table 43.2 outlines a proposed series of issues
to illustrate this approach. Adaptation builds on
the history of functioning in each previous period,
while also providing opportunities for transform-
ing previously established adaptations. For ex-
ample, consider the second issue. This is labeled
“Guided Self-Regulation,” because toddlers may
achieve varying degrees and styles of self-regu-
lation, but they can do so only within guidance
and scaffolding provided by caregivers. Adequate
regulation—that is, a balance between free ex-
pression of desires and containment of impulses
and an ability to remain organized in the face of
moderate frustration—requires clear, firm support
and containment, as well as encouragement, on
the part of parents. When parents are unavailable
for support, provoke or ridicule the child when he
or she becomes frustrated, and/or harshly punish
the child for expressions of emotions or impulsive
behaviors, various forms of dysregulation are ob-
served. This guided self-regulation process in gen-
eral proceeds more smoothly when it has been pre-
ceded by an effective attachment relationship (or
establishment of trust in Erik Erikson's scheme).
As research has clearly shown, infants with a se-
cure attachment relationship are more compliant
with parental directions (Londerville & Main,
1981; Matas, Arend, & Stroufe, 1978) and even
more “committed” to compliance (Kochanska,
1997) and to maintaining a coordinated relation-
Thus, effective attachment, and the experience
with dyadic affect regulation and positive expecta-
tions regarding caregivers that is part of it, provides
the foundation for beginning autonomy and self-
control. Those with secure histories have already
learned to count on parental availability and know
that parents are dependable and therefore will fol-
low through on what they say. Reciprocally, when
parents are firm and supportive with toddlers, the
child's trust in them is deepened. Some parents,
of course, find this developmental period difficult
given the child's strong impulses and labile feel-
ings. Even parents who provided a secure base
in infancy may be unable to meet the challenges
posed by toddlers. So while early attachment pro-
vides a foundation for negotiating Phase 2, it does
not by itself determine the outcome.

Forecasting the quality of adaptation in
Phase 3 is even more complex. The well-adapted
preschool child can flexibly adjust behavior to
fit requirements of a particular context (run and
shout on the playground, sit quietly and be atten-
tive during story time), can direct his or her own
activities, can follow rules without constant adult
presence, and can effectively engage peers and
sustain interactions despite challenges that inevi-
tably arise. These capacities draw on attachment
experiences that color the child's attitudes and
expectations about self, other, and relationships,
and an early pattern of basic affect regulation. But
they also draw on the history of more autonomous
regulation during Phase 2 and the supports that are
currently available. From infancy, some children
bring forward a capacity for engaging the object
world with curiosity and positive affect. From the
toddler period, if it goes well, they bring forward
the capacity to stay organized in the face of frus-
tration and a belief that they can cope with chal-
lenges. If emotional support remains available and
if opportunities are provided, they now manifest a
capacity for self-regulation and are attractive play
partners, well liked by teachers and children. On
the other hand, children who are lacking in feel-
ings of self-worth, who are easily frustrated and
dysregulated, who lack empathy or the skills for
positive engagement, or are chronically angry,
inhibited, or withdrawn, are at a notable disad-
vantage for engaging the world of preschool. The
cumulative nature of development—the way it
builds upon itself—helps to account for the strong
intercorrelations among competence indices in
the preschool period, including sociometric sta-
tus, self-confidence, dependence—inddependence,
empathy, ego-resilience, self-control, and rule-
abiding behavior (e.g., Stroufe, 1983, 2005a). All
of these, and other currently in vogue constructs
such as “executive function,” build on the same
preceding core experiences (Bernier, Whipple, &
Carlson, 2010).

As was true in Phase 2, strong support in the
preschool period can help those with less adequate
TABLE 43.2. Salient Issues of Development

<table>
<thead>
<tr>
<th>Period</th>
<th>Major issue</th>
<th>Subsidiary issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infancy</td>
<td>Formation of an effective attachment relationship</td>
<td>Beginning reciprocity, Dyadic affect regulation, Attachment/exploration balance</td>
</tr>
<tr>
<td>Toddler</td>
<td>Guided self-regulation</td>
<td>Increased autonomy, Increased awareness of self and others, Self-conscious emotions</td>
</tr>
<tr>
<td>Preschool</td>
<td>Self-regulation</td>
<td>Self-reliance with support (agency), Self-management, Expanding social world, Internalization of rules and values</td>
</tr>
<tr>
<td>School years</td>
<td>Competence</td>
<td>Personal effectance, Self-integration, Competence with peers, Place in group, Functioning in group, Loyal friendships, Competence in school</td>
</tr>
<tr>
<td>Adolescence</td>
<td>Individuation</td>
<td>Autonomy with connectedness, Identity, Peer network competence, Place in network, Functioning in network, Intimate relationships, Coordinating school, work, and social life</td>
</tr>
<tr>
<td>Transition</td>
<td>Emancipation</td>
<td>Launching a life course, Financial responsibility, Adult social competence, Coordinating partnerships and friendships, Coordinating colleagues, partners, and friends, Stable partnerships, Coordinating work, training, career, and life</td>
</tr>
</tbody>
</table>

beginnings move toward increased self-regulation capacities and more positive expectations regarding relationships. Our research has shown that those with histories of insecure attachment are better adjusted during the preschool period if social support for parents has increased in the years since infancy (Sroufe et al., 2005a). We also found that supportive preschool teachers can have a positive impact (Sroufe, 1983). Others have shown that social skill may be increased through play with more competent peers (Hartup, 1999). Again, both developmental history and current support play a role in adaptation. New issues are faced within the framework of prior adaptations, yet transformation remains possible, for better or worse.

The process continues in middle childhood. Having expanded the capacity for self-regulation, having had positive experiences in an expanding social world, and having rapidly acquired the skills needed in social interaction, some children are now well prepared for the more complicated world of middle childhood, with its greater academic and social challenges. For many, self-confidence becomes real-world competence, and interactive skill merges into durable, loyal friendships that can be maintained even given the need to function in the larger group. The basic sense of connection from infancy, the impulse control and autonomy from the toddler period, and the self-management capacities from the preschool period are all called upon. Reciprocally, positive social experiences in middle childhood or developing some special talent can enhance self-esteem now and help children become more able social partners.

Adolescence can be the most challenging developmental period of all in modern society. Social demands are extraordinarily complex, with same- and mixed-gender peer groups, same- and mixed-gender friendships, and beginning intimate relationships. Cognitive and physical changes can be both helpful and daunting. For example, the individual now confronts the future in a new way. Though challenging for all, the issues faced here are certainly easier for some. Whereas many teens develop psychiatric problems, many actually flourish. There are no guarantees, of course. However, for some, the foundation for successful negotiation of the issues of adolescence has been laid down every step of the way. The capacity to be vulnerable and to commit in relationships has roots in the trust established in infancy. Autonomy with connectedness already was established once during the toddler phase. Self-regulation (and effec-
tive use of social support) has been practiced since the preschool years. And a sense of competence and mastery was firmly established during the years of middle childhood, along with first experiences of close, durable relationships with agemates.

This developmental perspective certainly highlights many features of experiential support beyond the quality of early attachments. At the same time, infant attachment experiences certainly are not trivialized by this description. Development is a cumulative process, which each phase building on all that has gone before, just like the developing embryo or the developing brain (Stiles, 2008). Therefore, the infant–caregiver attachment relationship, coming as it does at the beginning, is of notable importance. It represents an inner core of an emerging self that, while certainly open to modification, remains an important feature of the developmental landscape.

Goals for the Future

Fifty years ago it was generally accepted in psychology that early experience had little predictive power, that individual characteristics were unstable, and that constructs such as personality might not even be useful. Today we know that early life does leave a lasting legacy, that individual development and behavior are coherent when assessed at an appropriate level of complexity, and that constructs such as personality and attachment not only have validity but are crucial for the field. We also can put aside debates about whether early experience or later experience, or parenting or peer experiences, are more important. We know they are all important, and we know they work together to shape development. Likewise, important progress has been made toward an integrated view of experience and neurophysiology. It is clear that the developing brain is experience-dependent (Stiles, 2008). There is also support for the idea that early experience retains potential for influence even following developmental change, and that representations are the carriers and preservers of early experience. These are monumental achievements, and attachment research has played a vital role in all of this.

What might be important goals for this field going forward? I suggest just four areas that seem of great importance to me. A central theme in all of them is that work in each area would promote our understanding of both attachment and development. At the same time, it is important to retain some focus on the core of attachment theory, namely, Bowlby’s questions regarding how parent–child interactions influence the nature of the attachment relationships that are formed and how it is that attachment experiences are the foundation for individual differences in personality.

Regarding Bowlby’s first question we need more detailed studies regarding exactly what kinds of experience promote later effective secure-base behavior. Ainsworth’s Sensitivity Scales, soon to be published in the revision of the classic book (Ainsworth et al., 1978), provide a wealth of ideas about the kind of attunement and responsiveness that are important, but this topic requires a great deal of further exploration. There also are very few data regarding experiences that lead to resistant versus avoidant attachment. A modicum of data suggest that avoidance results from rejection precisely when the infant signals a tender need (e.g., Ainsworth et al., 1978; Isabella, 1993), but the origins of these two patterns—if indeed they are coherent and distinctive—is not really established. Some argue that a security dimension captures what there is in valid individual differences. But if there are distinctive patterns, and if they prove to have distinctive outcomes, this is of great theoretical and practical significance. There are some data supporting different outcomes for avoidant and resistant histories (Sroufe et al., 2005a), but the case is not nearly as strong as it would need to be to conclude that these are distinctive patterns.

A very important developmental question arises from findings concerning the discordance between infant attachment classifications with two parents. In general, studies report significant but moderate concordance between the two classifications (Fox, Kimmerly, & Schafer, 1991; Main & Weston, 1981). Some of the lack of concordance may be due to methodological issues (e.g., including cases in which both parents are not actually attachment figures), but this cannot be the total explanation. Main and Weston (1881), for example, provides information that specific interactive history with the particular parent predicts security and also that considering the two attachments bolsters outcome predictions. Therefore, we can conclude that at least in a substantial number of cases, an infant may be secure with one parent and anxious with another. According to Bowlby’s theory, the infant would have two separate working models of attachment. The intriguing question then becomes, how do these disparate models become integrated into a singular state of mind re-
Regarding attachment, as is suggested to be the case in all of the adult attachment literature (Hesse, 1999, Chapter 26, this volume)? Main's data suggest the possibility that infant attachment status with the more primary figure might hold sway, but other factors have to be involved as well. To date I know of no studies of this truly critical question.

In general, we need to know much more about how attachment experiences combine with other developmental influences, be they child vulnerabilities (however they may arise), other aspects of parenting, or other features of the environment. We know, for example, that insecure infant attachment is a risk factor for various kinds of later problems, but we currently understand little about why one child with a particular attachment history develops one problem, whereas other children with the same early attachment develop different kinds of problems or no psychiatric problems at all. Such an understanding is critical for the field of developmental psychopathology and embodies the hope for a new approach to psychiatric classification. This example also points us to the more general problem of continuity and change, a core issue for all developmental study. We know by now that continuity depends on supports for pathways being followed and that change is lawful, that is, that it can be predicted to some extent. Over periods of time, representations change or behavior changes, and some intervening variable accounts for some of this change. But at this point our knowledge is rather crude, usually based on broadband predictors (e.g., changes in life stress or parental depression). Thus, we have associations between some measure and some indicator of change, but we still know very little about the process of change. We do not even know, for example, whether attachment representations change gradually or quickly, or much about how they change. Do certain kinds of experiences lead to more rapid change and others to gradual change? Is gradual change sustained better? Do changes in representations of partners lead to changes in representations of parents? There are myriad questions about attachment and the process of development.

Finally, it is important to increase research on attachment and the mind exponentially. There are many articles and chapters on attachment and the brain, and that is a topic for this volume also (see Bretherton & Munholland, Chapter 4, and Coan, Chapter 12, this volume). But little has been written about attachment and the developing mind. With the exception of the connection between unresolved status on the AAI and early trauma and disorganization, we are not even very far along in understanding the origins and course of adult states of mind regarding attachment. Beyond this, we know little about processes linking attachment experiences and distortions of the mind, including various defensive postures. We know that cognitive skills are rarely impaired in those having histories of insecure attachment, but there is more to the mind than this. There are vast differences in the individual process of finding meaning, and in the meanings individuals make of particular experiences; for example, how it comes to be that the same experience is threatening to some and benign or amusing to others. Perhaps Kahneman's (2011) distinction between fast and slow mental systems is a starting point. The "fast" system, which is intuitive, unreflective, and uncritical (the source of many biases and distortions in thinking and perception), may be more colored by an individual's particular history, especially by trauma and distortions in attachment. Whether this is truly so, the process through which it develops to be this way, and the particular role of attachment in this process, all wait to be discovered.

Attachment theory has proven to be quite robust and generative. Its contributions are apparent in diverse fields of study. Whether it will continue to grow in utility in the future may well hinge on keeping it wed to a developmental perspective, where it was in the beginning.

References


Main, M., Hesse, E., & Kaplan, N. (2005). Predictability of attachment behavior and representational processes at 1, 6, and 19 years of age. In K. E. Grossmann, K. Grossmann, & E. Waters (Eds.), The power of longitudinal attachment research: From infancy and childhood to adulthood (pp. 245–304). New York: Guilford Press.


Pianta, R., Egeland, B., & Sroufe, L. A. (1990). Ma-


