

# Relationships and the Developing Mind

by Daniel J. Siegel

Children need adults in their lives with whom they can be attached. Attachment can involve a few selected individuals, including parents, grandparents, other relatives, nannies, child care providers, and preschool teachers. These “selective attachments” offer children the chance to develop an internal model of security about the world, and allow their minds to develop a sense of emotional well-being and psychological resilience. In *The Developing Mind: Toward a Neurobiology of Interpersonal Experience*, I propose a view of how these attachments shape the structure and function of the brain, starting early in life and continuing throughout the lifespan.

## The Truth About Attachment

Attachment relationships are important in the unfolding of the emotional and social development of the child during the early years of life. Development is an ongoing process, and so close, emotionally involving relationships continue to influence us throughout the lifespan. The importance of the first years may be that the brain structures that mediate social and emotional functioning begin to develop during this time in a manner that appears to be dependent upon interpersonal experience.

## Brain Development

Patterns of interpersonal communication may have a powerful effect on how the early brain develops in very

specific ways. There are circuits that are responsible for emotional and social functioning (not just perception and motor action) that come “on-line” during the first years of life. While this period may not be the “last chance” for ongoing development in these areas, it is a time when basic circuitry is being established for the first time — especially in a region called the orbitofrontal cortex. Books that discount the importance of the early years, or of attachment in general, fail to examine what we know about the development and the possible neurobiological foundations of emotional and social processes.

PATTERNS (not quantity, but quality) of interactive experience for the young child’s life are important in shaping both pruning (the removal of existing neural connections) and possible synaptic growth during the early years of life. The orbitofrontal region, which is central for a number of processes such as emotion regulation, empathy, and autobiographical memory, may have an experience-influenced development that depends upon the nature of interpersonal communication during the early years of life. Interactions with “older people,” with attachment figures, are essential during this time to create the contingent, collaborative communication necessary for the proper emotional and social development of the child. It is not a matter of overwhelming “enrichment” or excessive sensory stimulation that is needed during this time, but one of attunement between adult and child. This collaborative, attuned communication establishes patterns of interaction by which the caregiver can help to regulate the child’s positive and negative emotional states. These emotion-regulating interactions are required for the experientially influenced maturation of the infant’s developing emotional and social brain.

## Attachment Relationships and Emotional Communication

At its emotional communication core, attachment relationships are about the sharing and amplification of positive emotional states (such as joy and elation) and the sharing and reduction of negative states (such as fear or sadness).

Daniel J. Siegel, MD, is director of the Center for Human Development in Los Angeles, California; medical director of Infant and Preschool Service and associate clinical professor of psychiatry, UCLA; and director of interdisciplinary studies, Children’s Mental Health Alliance Foundation, New York, New York.



These emotional transactions allow a child to “feel felt,” to have the experience that another individual is experiencing a similar state of mind. Such nonverbal, attuned communication involves the adult’s sensitivity to the child’s signals, such as tone of voice, gestures, and facial expression.

In addition to these empathic connections, secure attachments may involve “reflective dialogues” in which the adult is able to explore, in words, the state of mind of the child. Such discussions can focus attention on the feelings, perceptions, thoughts, memories, intentions, beliefs, and attitudes of the child and caregiver. The “co-construction” of stories about lived events can also help the child and adult to focus verbally on the subjective, internal worlds of the child and others. These interpersonal interactions allow the attachment figure to help the child to elaborate on her own and others’ internal experiences and the nature of the human mind. Such reflective dialogues and mutually constructed stories, I believe, are at the core of how secure attachments encourage a sharing of states as well as a deepening of the nonverbal sense of “feeling felt.”

This collaborative, contingent communication also fosters the capacity for self-reflection and the awareness of one’s own and others’ emotions — the heart of empathic development. Furthermore, when such contingent, attuned communication is disrupted, the timely interactive repair of these ruptures allows the child to have a sense of “well-being,” knowing that misunderstandings or missed opportunities for connection can be corrected and a sense of “joining” reestablished. When emotions are especially uncomfortable, staying with a child and helping him to understand his experience may be crucial in providing the interactive experiential learning required to know that emotions can be experienced, communicated, and useful in understanding himself. These are all a part of building emotional competence. With these verbal and nonverbal attuned experiences, the child can develop what I have termed “response flexibility”: the capacity to take in a complex array of internal and external information, sort through it, and make responses that are mindful and not merely reflexive and impulsive.

In these ways, interactive communication allows the child to first use the attachment figure to “regulate” his internal emotional and external behavioral responses. As these patterns of interactions directly shape the child’s developing brain, they become the foundation for the capacity for more autonomous “self-regulation.” Because the areas of the brain, including the orbitofrontal cortex, responsible for emotional and social functioning are first developing

in the early years of life, this is a time when attachment experiences can shape an individual’s patterns of self-regulation. This emotional and social learning, then, may create “predispositions” in a child that have their origins in patterns of attachment.

## Adults in Children’s Lives

As parents, we are faced with the challenges of modern life in which information bombards us daily on what to do and not to do with our children. One lesson from these findings of neurobiology and from attachment studies is that relationships with a selective few adults, not sensory flooding, are the most important form of experience for the growing mind. Adults who are sensitive to a child’s signals, who can offer consistent and predictable behaviors, and who care about the child’s internal experiences are those that are likely to foster a secure attachment.

A child may have a different form of attachment with each caregiver, depending on the nature of the specific patterns in communication and interaction. Attachment is a relationship measure, not a feature of the child alone. Some authors argue, in fact, that having several selective attachments may in fact be good for the child in order to have a variety of close, personal experiences. This variety may confer a sense of resilience by preparing her for the complex world of other individuals outside the home.

In this manner, a selective few other caring adults — such as grandparents, child care teachers, nannies, and other emotionally involved, dedicated individuals — may serve as attachment figures. A child will seek proximity to such a figure, go to him when upset for a sense of reassurance as a “safe haven,” and develop an internal model of that person and their relationship to give a sense of a “secure base.” By 18 months, the child will develop a sense of “evocative memory,” in which it is believed an internal multisensory image of the attachment figure can be evoked at times of stress. This sense of the attachment figure’s face, smell, and voice, and the patterns of interpersonal communication that characterize the child’s relationship with the individual, all can be retrieved when needed as an image of that attachment figure. Clearly, relationships that are “problematic” will not serve to soothe the child as well as those that are “secure.”

## Interpersonal Relationships

We can summarize several basic elements of interpersonal relationships that are likely to foster emotional well-being and psychological resilience. As a parent, providing a life for your child in which others can share in the joys and

challenges of being an attachment figure can be an important process. Grandparents, child care teachers, educators, and other individuals in the role of an attachment figure may find the following ideas useful in considering how their relationship with your child may foster healthy development. You may also find that these suggestions may be useful for understanding the impact of close, interpersonal relationships of all sorts throughout the lifespan. These suggestions are based on findings from attachment research and other studies in the field of developmental psychology and are supported by independent but convergent findings from various domains in the field of neurobiology.

**1 Collaboration.** Secure relationships are based on collaborative, contingent communication. The non-verbal signals of each member of an attuned dyad (or pair) are directly responsive in quality and timing with each other. These attuned communications often have their foundation in the nonverbal signals that are shared between two individuals. Such a shar-ing creates a joining of two minds and a basic level of “primary” emotions. Each person may come to “feel felt” by the other. Some individuals may find such joining experiences exhilarating and easy to create; others may find them uncomfortable or unfamiliar and be unable to participate in such an intimate “connecting” experience. Relationships that are “connecting” and allow for collaboration appear to offer children a wealth of interpersonal closeness that supports the development of many domains, including social, emotional, and cognitive functioning.

**2 Reflective Dialogue.** Secure attachment relationships may involve the verbal sharing of a focus on the internal experience of each member of the dyad. Internal experience, or “states of mind,” can involve emotions, perceptions, thoughts, intentions, memories, ideas, beliefs, and attitudes. By directly focusing on these aspects of mental life, the adult can create a sense that subjective experience is both important and able to be communicated and shared. In this manner, the “mind” itself becomes a central focus of sharing in the discussions by two minds.

**3 Repair.** When attuned communication is disrupted, as it inevitably is, repair of the rupture can be an important part of reestablishing the connection within the dyad. Repair is healing as well as important in helping to teach the child that life is filled with inevitable moments of misunderstandings and missed connections that can be identified and connection created again. An adult’s pride may at times impair the movement toward repair and leave the child isolated in what may be a

shameful state of disconnection. Intense uncomfortable emotional states in the child or parent may lead to a disconnection in collaborative communication. Prolonged disconnection, especially if combined with hostility and humiliation, can have significant negative effects on a child’s developing sense of self.

**4 Coherent Narratives.** The connection of the past, present, and future is one of the central processes of the mind in the creation of self-awareness. The coherence of an adult’s own life story has actually been found to be the most robust predictor of the child’s attachment to that adult. Adults can teach children about the world of self and others by joining with them in the co-construction of stories about life events. These stories focus on activities as well as the mental life of the characters. In so doing, the adult is both collaborating in the construction of reality for the child as well as giving her the very tools she needs to make sense of the internal and external worlds in which we all live.

**5 Emotional Communication.** Attachment figures can amplify and share in the positive, joyful experience of living. These heightened moments of sharing a sense of vitality are important in creating the foundation for a positive attitude toward self and others. Equally important is the attachment figure’s ability to remain connected to the child during moments of uncomfortable emotion. Helping a child learn that he will not be emotionally abandoned during these moments and that he can learn to understand and soothe his painful emotional state is an important role for the attachment figure to play. Such interactive forms of emotional communication may be at the core of how interpersonal relationships help to shape the ongoing emotional and social development for the growing mind of the child.

## References and Suggested Reading

- Siegel, D. J. (1999). *The developing mind: Toward a neurobiology of interpersonal experience*. New York: Guilford Press.
- Schore, A. N. (1994). *Affect regulation and the origin of the self: The neurobiology of emotional development*. Mahwah, NJ: Erlbaum.
- Carlson, E. A. (1998). A prospective longitudinal study of disorganized/disoriented attachment. *Child Development*, 69, 1107-1128.
- Cassidy, J., & Shaver, P. R. (Eds.) (1999). *Handbook of attachment*. New York: Guilford Press.
- Boris, N. W., Aoki, Y., & Zeanah, C. H. (1999). The development of infant-parent attachment: Considerations for assessment. *Infants and Young Children*, 11, 1-10.