

Developing Brains-
Ideas for Parenting and Education
From the New Brain Science
www.developingbrains.org

**Social and Emotional Implications
of Brain Research¹**

*"The strength and the vulnerability of the human brain lie in its ability to shape itself to enable a particular human being to survive its environment."
(Karr-Morse and Wiley, 277)*

Nurturing

Nurturing behaviors (holding, touching, eye contact, speaking, and rocking) assist in the baby's regulation of basic biological functions (immune system, blood pressure, body temperature, appetite, sleep, cardiovascular regulation).

"The baby comes to associate physiological security or homeostasis, which he or she experiences as contentment, with proximity to the mother [or other person to whom he or she has formed an attachment]. The baby's natural opiate network in the brain is stimulated by the normal nurturing and attending behaviors" of the caregiver linking "attachment to the central reward system--the same system that is stimulated by addictive drugs." When a baby is upset and crying, the nurturing parent soothes the baby to calm them down. If a baby seems "droopy or depressed, an attuned mother will attempt to raise her baby's state to a more elevated mood." These behaviors help maintain an "even balance of neurochemicals in the baby's brain" resulting in contentment in the baby and, "over time becomes the child's internalized model for self-regulation of strong emotions." (207-8)

¹ Material Taken From: Karr-Morse and Wiley. Ghosts from the Nursery: Tracing the Roots of Violence. New York: Atlantic Monthly Press, 1997.

What can we learn from primate research?

Results from primate research, by Kraemer, show that "deprivation of adequate nurturing in early life leads to the dysregulation [or disruption] of neurobiological processes, one result of which can be violence." (Karr-Morse and Wiley, 209)

Behaviors seen in primates deprived of nurturing include:

- exaggerated or blunted emotional responses
- hypo or hyper responsive (under or over responding)
- unpredictable responses
- self-injury
- being extremely inhibited or uninhibited
- difficulty in shifting from one behavior strategy to another
i.e., more rigid and less flexible in learning new tasks (209-10)

This "research points toward the fact that the traditional approach to educating children who have been deprived of early nurturing by placing them in environment designed for nondeprived youngsters ignores their totally different neurobiological wiring - an oversight that contributes to their growing alienation and aggression." (Karr-Morse, 210)

Classroom Applications

"Canned" discipline approaches (such as use of "time out" for all disruptive behavior) are inappropriate, especially for children at greater risk for impulsive-aggressive behavior and who have bold, uninhibited temperaments and are insensitive to punishment.

For example, children with ADHD lack the ability for focused listening which is necessary in a communication based system of guidance such as Parent Effectiveness Training (PET). Children with ADHD tend to react better to a "clear structure of the child's environment and a regimented, well-explained, and well-rehearsed reward system." (Karr-Morse and Wiley, 218)

"Children who are bold or relatively undeterred by parental disapproval also need a clear, reward-based system; punishment-based systems don't work well with

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children who are unfazed by social disapproval." (Karr-Morse and Wiley, 218)

"On the other hand, children who are very sensitive, inhibited, or shy will respond easily to gentle, communication-based discipline systems. Even as babies, such children may immediately be deterred by a loud voice; serious consequences such as a loss of privileges or time out may be overkill, necessary only in rare circumstances." (Karr-Morse and Wiley, 218)

Attachment:

Attachment is the enduring emotional connection between a person and a particular other person that produces a desire for consistent contact as well as feelings of distress during separation.²

Attachment provides for the child a working model (internal) of adult/child interactions, and "attachment behaviors serve the purpose of maintaining homeostatic balance in the baby's physical and emotional systems." (Karr-Morse and Wiley, 207)

Child Care and Attachment

Some researchers have found that "preschool teachers respond differently to children in ways that reflect children's attachment histories." (206) There are different forms of attachment, and they are described in the following manner:

Secure Attachment: "A healthy parent-child connection, signaled by the child's being confident when the parent is present, distressed at the parent's absence, and comforted by the parent's return."³

Insecure Attachment: "A troubled parent-child connection signaled by the child's overdependence on, or lack of interest in, the parent. Insecurely attached children are not readily comforted by the parent and are less likely to explore

² Berger. The Developing Person Through the Life Span. 4th Ed. New York: Worth Publishers, 1998, G-1

³ Ibid., 211.

their environment than are children who are securely attached."⁴ There are three types of insecure attachment:

Anxious and Resistant: These children "cling nervously to their mother even before her initial departure and thus are unwilling to explore the playroom; they cry loudly each time she leaves; they refuse to be comforted when she returns, perhaps continuing to sob angrily even when back in her arms."⁵

Avoidant: These children "engage in little interaction with their mother; they often show no apparent distress when she leaves; and on her return, they tend to avoid reestablishing contact, sometimes even turning their backs."⁶

Ambivalent and Disoriented or Disorganized: These children "show an inconsistent mixture of behavior toward the mother, such as avoiding her just after seeking to be close to her."⁷

According to Karr-Morse and Wiley, teachers tend to *respond differently* to children with different histories of attachment: (206)

Anxious/avoidant attachment	Provokes teacher's anger
Ambivalent attachment	Teachers tolerate "immature or dependent behavior"
Anxious attachment	Teachers give messages of low expectations
Secure attachment	Teachers remain "warm, confident and matter-of-fact," and teacher assumes compliance with their expectations."

⁴ Ibid.

⁵ Ibid., 212.

⁶ Ibid.

⁷ Ibid.

In the NAEYC Statement of the Position on Developmentally Appropriate Practices, the second of the three important kinds of information on which we are to base our decisions is “what is known about the strengths, interest, and needs of each individual child in the group to be able to adapt for and be responsive to inevitable individual variation.”⁸ Teacher-caregivers need to look at their responses to see if they are falling into this pattern, and then try to problem solve a way to better support each child.

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⁸ Bredekamp and Copple, Ed. Developmentally Appropriate Practice in Early Childhood Programs. Revised Edition. Washington, D.C.: NAEYC, 1997.