

What is the Mind? And what does it have to do with the brain?

When looking at the roots of emotional regulation, one may begin with the work of developmental psychologist, Mary Ainsworth and attachment patterns in children. Of the four attachment patterns in children, the first is “Secure Attachment.” Parents with a “coherent” narrative concerning their recollection of their own childhood are 85% predictive that their children will have secure attachment.

Securely attached children have, in addition to nurturing parents with coherent narrative, emotional regulation and relationships that are stable, flexible and adaptive. In “Insecure Attachment” from parents with incoherent narrative, children show emotional dysregulation and problems with relationships. Narratives with “coherence” include connectedness, openness, harmony, engagement, receptivity, emergence, noesis (knowing), compassion, and empathy. Incoherent narratives show deficits in one or more of these nine traits of coherence.

An open system, like a cloud, is capable of change with internal and external constraints and self-organizational flow. With self organizational flow, the system moves, in chaos theory, toward complexity, which is stable, flexible and adaptive. Either rigidity or chaos can result in incoherence. In brain/body terms, the system is naturally driven toward healing. We help the system flow from rigidity or chaos toward complexity by promoting differentiation and integration. Secure attachment promotes differentiation and integration of the neural fibers in the child’s brain so self regulation occurs in a coherent manner. Secure attachment promotes healthy brain states, which neurofeedback allows us to recapitulate.

At eight weeks, Dr. Allan Schore has suggested, development of the anterior cingulate commences, allowing for regulation of play and separation behaviors, laughing and crying, face representations, and autonomic activity modulation. The first year is a critical period of experience dependent maturation in the right insula (in the temporal lobe), which is involved in the subjective awareness of inner body feelings and emotionality. Also in the first year, the right parietal cortex is developing experientially; involved as it is in the representation of the physical self and the ability to distinguish self from others. Dr. Schore has suggested that in mutual gaze transactions, a mother is downloading her limbic system into the child’s limbic system.

Dysregulation of the right brain is a fundamental mechanism of traumatic attachment and the psychopathogenesis of posttraumatic stress disorder. Disorganized-disoriented insecure attachment (common in infants abused in the first 2 years), manifests as an inability to generate a coherent strategy for coping with relational stress. Early abuse negatively impacts right brain development, setting a template for the coping deficits of both mind and body that characterize PTSD. These data suggest that early intervention can significantly alter the intergenerational transmission of PTSD.

Common adverse childhood experiences that can damage healthy attachment include disruptions, abnormalities, and/or trauma during the first years of life, physical, sexual or emotional abuse, abandonment by or traumatic separation from primary caregiver(s), including extreme family stress or mother’s postpartum depression. Neglect, including ineffective and incompetent parenting, inconsolable pain (physical pain such as recurring ear infections or pain associated with medical interventions/surgeries), numerous or frequent

changes in homes or caretakers, and pre- and peri-natal insults (i.e., exposure to drugs/alcohol in-utero or birth trauma.

An attachment relationship that provides security and safety seems to protect children from the effects of stress, even severe stress or traumatic life events. In contrast, early trauma may put the child at risk for developing psychological problems.