



Literature Monitor

BOOK REVIEW

The neuroscience of human relationships, Attachment and the developing social brain.
Louis Cozolino, 2006, *W.W. Norton and Company.*

Reviewed by Sam Tyano, Professor Emeritus at Tel-Aviv University Sackler Medical School.

Reading this book has been a special experience for me, as a child and adolescent as well as an adult psychiatrist, because the author brilliantly puts “under one roof” the knowledge that has accumulated from the 1990s from basic neurology sciences as well as from developmental psychopathology research. This very concise, clear, and scientific integrative book enables each of us, regardless of our professional background, to understand how the brain is a social organ built through interpersonal experience, and to make new formulations of the clinical cases

we encounter in our daily practice. Concepts of neural plasticity, mirror neurons and the biology of attachment, are very clearly explicated, with in-depth description of the links between cognitive and emotional development with specific brain areas. The mediating effect of good-enough parenting on the infant’s brain becoming a social organ is clearly defined. Here is just one example the author’s virtuosity at integrating knowledge from different domains, while explaining the biochemical cascade activated by infant-mother interaction: “What impact does the sight of a mother’s face have on the baby’s social brain? For one, it triggers high levels of endogenous opiates, which are responsible for the pleasurable aspects of social interactions and act directly on the subcortical reward centers. Positive and exciting stimulation by the mother also triggers the production of CRF in the infant’s hypothalamus, thereby activating the sympathetic nervous system. CRF, which controls endorphins and ACTH production in the anterior pituitary, also stimulates production of dopamine”. Louis Cozolino also relates to what he calls “social smells”, being the earliest

evolving form of social communication biological basis.

Relationships become biological structures. The amygdala is the hub of emotional processing. Empathy requires many levels of neural processing and integration beyond resonance behaviors. Social memory: the system of memory is especially important for the formation of emotional regulation and cultural identity. The author views the superego as the result of the parents’ implicit memories of their own experiences and unknowingly transferred by them to their child.

Colonizo clusters under the category of “Disorders of the social brain”, the clinical entities of social phobia, borderline personality disorder, psychopathy, and autism, and brilliantly shows the impact of prolonged stress child abuse and neglect stress on the developing brain.

He ends with a chapter untitled “Social neural plasticity”, and through vignettes of his own clinical cases, he shows the benefit for the therapist to think the cases in terms of Loving brain, Fearful brain. In short, I strongly recommend this captivating and well written book. It is not an everyday experience to find an easy-to-read real scientific book!

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