



RESEARCH SUMMARY

**Allan N. Schore “Minds in the Making: Attachment, the self-organizing brain, and developmentally-oriented psychoanalytic psychotherapy”
British Journal of Psychotherapy 17(3), 2001.**

The decade of the 1990s has been called the ‘decade of the brain’ (p. 299) because of the tremendous advances it saw in the field of neurology. In this paper, Prof. Schore utilises the knowledge gained from these advances to reflect on the importance of “attachment bond formation” (p.307) between an infant and its primary caregiver in the first three years of life for later personality development, social adjustment and personal happiness.

The thrust of the paper is that the right hemisphere of the brain develops first - a process that begins as early as two months (Yamada et al. 2000) - and, therefore, it is this part of the brain that is most highly impacted by the care received in the first three years.

The main mechanism through which the primary caregiver of an infant influences the development of the right hemisphere of the brain is basically non-verbal “Face to face interactions’ (Feldman et al. 1999, p. 223)” (p.303). “It has been observed that the pupil of the eye acts as a non verbal communication device’ (Hess 1975)” (p. 303). The mother and child engage in mutual gazing and the tuned-in mother alters her stimulation to suit the child’s psychobiological needs. The rapidity and effectiveness of this communication between the attuned mother and her child have led to the suggestion of “the existence of a bond of unconscious communication’ (Papousek and Papousek 1995)” (p.303) between the two. This interaction with “a familiar, predictable primary caregiver” (p.307) in “the context of an intimate positive affective relationship” (p.307) does not only affect the baby’s brain but is necessary for the growth of the baby’s brain. It establishes secure attachment in the infant and creates a sense of safety that has both immediate and long-term effects.

In the immediate context, it promotes “a positively charged curiosity that fuels the burgeoning self’s exploration of novel socioemotional and physical environments” (p.307). At the same time, “[T]he right brain stores an internal working model of the attachment relationship” (p. 311) which gets “built into the nervous system’ (Ainsworth, 1967, p. 429)” (p.307) through the early maturing orbitofrontal regions of the brain which are “especially expanded in the right cortex” (p.309). For purposes of studying the brain’s regulation of emotions and behaviour scientists have found the orbitofrontal system to be of utmost importance.

“Current neurobiological studies show that the mature orbitofrontal cortex acts in ‘the highest level of control of behaviour, especially in relation to emotion’ (Price et al. 1996, p. 523) and plays ‘a particularly prominent role in the emotional modulation of experience’ (Mesulam 1998, p. 1035)” (p.>308).

The right hemisphere, more than the left, is central to “processing of facial expressions without conscious awareness’ (Critchley et al. 2000a)” (p.309), adapting to “a rapidly changing environment’, in ‘the organization of new learning’ (Mesulam 1998, p.1028)” (p.309) and in somatic expression of one’s own emotions. Furthermore, it is involved in facilitating a positive response to “optimally challenging” or “personally meaningful” situations (Ryan et al. 1997) and is crucial in allowing the individual to deal “actively and passively with stress” (p.310).

Current neuroimaging studies also show that one's concept of the 'self' is represented in the right frontal areas of the brain (Craik et al 1999 and Keenan et al. 2000) (p.312) and one can easily imagine how any developmental aberrations in this part of the brain would adversely affect one's happiness and self-esteem in times of stress and strain.

But what is of utmost importance regarding early care and the development of the 'right brain' is that the orbital cortex matures in the middle of the second year, a time when the verbal and linguistic skills of the child are at a very basic level (p. 311). The learning of this period is therefore stored "at a level beneath awareness" but is not less important because of it. It is reflected in the "unconscious processes" of the mind—what may be described as instincts, drive or emotional expressions central to one's social and emotional life. It should be pointed out, therefore, that the development of this part of the brain is not amenable to measurements aimed at assessing cognitive development. It is through tests specifically designed for testing right-hemisphere-dominant skills that one may gauge the development of a child's 'personality traits', his/her capacity for forming and maintaining successful social and interpersonal relations and handling stress.

Earlier advocates of this point of view, like John Bowlby, were sometimes dismissed as promoting theories for which there was no physical evidence. But the evidence in this paper is both physical and scientific and supports Bowlby's theories that the care received in the first three years of a child's life stays with him/her all through life. It is important to point out that the Orbitofrontal regions go through repeated growth phases throughout life but, one would suppose, that any help in later years would have to come from specialists and will still have affected the individual's social and personal happiness before it comes.

Summary by Dr Sasmita Sinha

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