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ALLAN SCHORE: Attachment

[more](#)

Attachment and development

Schore's perspective on mind seeks to root the unfolding of human development, especially early development, in the biology of the body and in particular in the process of 'attachment'. John Bowlby and Mary Ainsworth outlined the vital importance of an infant's relationship with carers 30 years ago, and Allan Schore takes forward their notion of attachment by relating the fine grain of infant-mother contact to the recent research in the biology that is invoked in this relationship.

Schore's take on attachment theory, and especially the language in which it is expressed, seems to be skewed by his proximity to the prevailing orthodoxy of cognitive science with its perspective on 'behaviour', 'measurement', and 'evidence'. However, behind the technocratic language Schore offers valuable scientific support for what might seem commonplace, at least to most parents—that the early days, weeks, and months of life are critical for later development.

Infant stress-management

Schore argues that the quality of the parent/child attachment fundamentally shapes the infant brain-body systems that cope with stress, systems that are now understood to be located in the brain, specifically the non-verbal right hemisphere that is dominant for the first three years. An infant-toddler that has been able to engage well enough with her mother will accumulate an internal sense of emotional security—knowing, not necessarily consciously, that when in a period of stress, she will be able to cope and/or seek help. Through the process of attachment, external regulation of the infant body-mind is gradually internalized, the infant learns with and through her mother, to regulate her emotional life. This learning, whatever its form, takes place dur-

ing the prodigious spurt in growth of the brain from the end of the last trimester of pregnancy through the first two years of life.

The internalized experience of attachment builds mind models, shaped of course by the parent's cultural style, that later guide us in our day-to-day relations with other people. The engagement of the infant's non-verbal right hemisphere with recurring experiences of joy, delight and pleasure, hugely amplified by the intimacy of mother-child contact, lays the foundations of an ability 'to detect salient features, signals of safety and danger in the world. Indeed, these nonconscious self-regulatory mechanisms, acting on a moment-to-moment basis, more so than the analytic, reasoning, and conscious functions, move us through the social and physical world of every day life.'

Play

The infant-toddler's opportunities for play, says Schore, that arise at the end of the second month, exactly the time when major metabolic changes in the infant brain are taking place, are an essential part of attachment. Through these early play experiences, co-created with the mother, the infant forms her model of how relationships in the world may be expected to work out. Well-regulated play 'with a familiar, predictable, primary caregiver creates not only a sense of safety, but also a positively charged curiosity that fuels the burgeoning self's exploration of novel socioemotional and physical environments'.

Disruption and repair

Attachment theory these days includes the notion that part of what is learned by the infant-toddler is that, after an

[more](#)

upsetting experience, say, of separation or frustration, the attachment bond can be repaired or recovered, again laying down learning of what can be expected later in life of how such situations will play out.

Psychobiology

Schore persistently relates attachment to the developing biological landscape of the infant-toddler: ‘The right brain plays a central role in organizing the psychobiological processes that underlie a number of essential functions that occur beneath levels of awareness. This includes storage of internal working models of the attachment relationship that appraise social context and encoding strategies of affect regulation. This, along with the ability to empathize with the emotional states of other humans, guides the individual in his interactions.’

The right brain holds autobiographical memory—our story—and also mediates the vital involuntary autonomic functions of the body that enable us to survive and cope with stress and which give us our emotional and feeling life. Schore says their research strongly confirms that, from late pregnancy through the second year, the infant brain’s prodigious growth, its urgent need for well-regulated rapport with the mother, and essential nutrients constitute a ‘critical period’... where accurately meeting the infant-toddler’s needs is overwhelmingly important. Since the rate of development is prodigious, a rate of growth that will never again be attained, at this time the brain is highly susceptible to nutritional deficits and what he calls ‘dysregulating interpersonal affective experiences’.

The social brain

Attachment theory points to the brain being a ‘bioenvironmental’ or ‘biosocial’ organ, a ‘social brain’ for which emotions play a central role in communication. Optimum development of the ‘experience-dependent maturation of the brain’ requires an ‘enriched’, ‘growth-facilitating’ environment for the infant-toddler.

Attachment theory research seeks to establish whether infant-toddlers ‘are relatively independent or fundamentally dependent on adult caregivers, are passive or active agents, are open and plastic or closed and fixed systems, are durable or fragile biological organisms, are cognitive machines or feeling, sensate beings’. ‘Because infants have no verbal abilities, are they mindless or do they possess a communicating, developing consciousness?’

Schore does not appear to directly support the latter, but as he presents it, the whole thrust of attachment theory’s focus on the key elements of early development seems intended to contradict the mechanistic scientific tendency of medical and cognitive science to treat persons as machinery.

Uncertainty and unpredictability

Schore gives particular emphasis to the orbitofrontal cortex, a right-brain system that is specialized for dealing with uncertainty or unpredictability, i.e. coping with stress, how we respond to challenges and threat. Through handling the control of arousal it also controls emotion and mood, ‘due to the interconnections of the orbitofrontal system into the cervical, thoracic, lumbar, and sacral divisions of the spinal cord

[more](#)

... and into the vagal nerve that delivers autonomic information, it receives (like the amygdala and anterior cingulate) moment-to-moment interoceptive information from the entire body, especially information concerning changes in autonomic arousal and in bodily or “somatic” states.’

More specifically, the parts of the brain that mediate coping capacities are both under the main control of the right cerebral cortex: this hemisphere contains ‘a unique response system preparing the organism to deal efficiently with external challenges’, and so its adaptive function mediates the human stress response.

An important companion to this understanding is that stimuli that have an emotional charge are decoded by the non-verbal right hemisphere; also this hemisphere, rather than the later developing verbal-linguistic left hemisphere, forms the foundation for autobiographical memory. Schore suggests that the right hemisphere stores an internal mind model of the attachment relationship, which in turn is the holder of the individual’s strategies for handling emotion.

The orbital cortex matures in the middle of the infant’s second year at a time when a child commonly has a vocabulary of around 70 words. Schore argues that the core of the self, the foundation of the mind, is non-verbal and unconscious and lies in patterns of emotional regulation held in the right hemisphere. When the quality of the infant’s attachment experience has been good enough, ‘This structural development allows for an internal sense of security and resilience that comes from the intuitive knowledge that one can regulate the flows and shifts of one’s bodily-based emotional states either by one’s own coping capacities or within a relationship with caring others’.

Why does this matter? Looking at mind through the lens of attachment reminds us that the regulation of what we are feeling—seeking to minimize unpleasant feelings and maximize delight and pleasure—drives much of human motivation; and that due to the mediation of emotion by the right hemisphere, most of daily life depends on out-of-consciousness processes. Following on from this, attachment theory indicates that successful social development requires a high degree of skill in negotiating emotional communication, much of which is non-verbal.

Summary

Attachment theory, as updated by Allan Schore, reminds us of the extent to which the infant mind is structured by the micro and macro interactions between infant and mother. The essential value of these interactions in the first days and weeks is to generate self-regulation of emotion via co-regulation. The prime focus of this are the core processes of fight/flight (energy expending) and rest/digest (energy conserving) mediated by the autonomic branches of the nervous system. For close on two years (and before the development of verbal communication) this learning, that is vital for later emotional security/insecurity and the foundation of coping with stress, goes on in the right-brain hemisphere, specifically the orbitofrontal cortex.

To the extent to which the attachment process between infant and mother is well attuned, a sense of emotional security is installed that, later in life, enables us to meet and respond well to unprecedented challenges, that supports curiosity and helps us navigate relationships adroitly.

[more](#)

Introduction

[Schore: Attachment](#)

[Damasio: The biology of consciousness](#)

[Lakoff: Embodied metaphor](#)

[Heron: Psyche and personhood](#)

[Gazzaniga: Mind and evolution](#)

[Critical review](#)

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