

# Affect, attachment and attunement

## Thoughts inspired in dialogue with the three-volume work of Allan Shore

Affect regulation and the origin of the self, 1994 New Jersey Lawrence Erlbau

Affect dysregulation and disorders of the self, 2003, New York & London: Norton & Co.

Affect regulation and the repair of the self, 2003, New York & London: Norton & Co.

Reviewed and discussed by David Boadella

### **Introduction: the relevance of bio-energetic metabolism within the contexts of body-psychotherapy: backgrounds to the relevance of the work of Allan Schore.**

In body-psychotherapy in recent years there has been the tendency for a rift to develop between approaches which emphasise the body, the energies of the body and emotional dynamics, on the one hand, and approaches which emphasise psycho-dynamics, relationship and transference, on the other hand.

In the work of Wilhelm Reich this rift did not exist. Reich's insights into bio-energetic metabolism developed alongside his insights into the psycho-dynamics of character formation. In 1950 John Bowlby published his work on maternal care, for the World Health Organisation. In the same year Wilhelm Reich initiated a two year research study of the infant-mother relationship, in which he emphasised the vital role of energetic contact in the development of the child. Reich emphasised "self-regulation" of the infant, in the context of the warm, empathic and contactful relationship with at first the mother, later the father. These same contact principles were emphasised by Reich also in the therapeutic relationship, where he taught the principle of vegetative identification, and where the whole focus of therapy was on deepening the natural contact functions of the client, his expressive language of the living.

Since Reich's death in 1957, there have been a number of crucial



Maternite "Mother and Child", Picasso 1963

developments which have supported, confirmed and extended these fundamental insights: these developments have arisen in a number of independent sciences, each divergently working with its own methods and research principles, but each converging towards a congruent picture of the human being, his body, mind, and world. Among the most significant, for therapy, of these research areas have been:

**a) Cellular bio-energetics:** major researchers are the Nobel prize winning biologist, Albert Szent Györgi, and his colleague James Oschmann. These studies have greatly enriched our understanding of fundamental energetic metabolism in the body. They have been extended at organismic level by the studies of Hess, Gellhorn and others into the ergo-tropic and tropho-tropic actions of the autonomic (vegetative) nervous system; by the work of Robert Ader and his colleagues, in psycho-neuro-immunology; and by the work of Candace Pert on molecules of emotion (neuro peptides).

**b) Functional neurology:** the tripartite brain studies of Alexander Luria were at the foundations of Biosynthesis and have recently been rediscovered by modern neuro-science. The complexity of the brain with ten milliard neurones each with ten thousands of synapses, reveals a functional simplicity based on its embryological development. Luria emphasised that there were three functional systems in the brain which were supported by many different regions of the brain. Function was primary, and structure was secondary. Henri Laborit in France developed a different three-level bio-systemic model of the brain, described later, which strongly influenced Biosynthesis. The work of Antonio Damasio, a leading neuro-scientist, has shown how the brain is intimately coupled to the body. Modern neuro-science is leading us finally back to the body.

**c) Attachment theory:** developed by John Bowlby and his colleagues in England from 1960 onwards. This was a development of psychoanalysis which focussed on ethological insights from behavioural biology, and with detailed studies of bonding patterns between mother and child. These bonding patterns are related in Biosynthesis to different stages and phases of the development of empathy and of its disturbances.

**d) Attunement theory:** this can be seen as a development of attachment theory. Key concepts have been developed by Daniel Stern, in English, and by

Martin Dornes in German. The emphasis is on the dance-like interaction between mother and baby, in the early non-verbal periods of the developing self, which form a somatic foundation of the verbal self which develops in the third year of life. In Biosynthesis we work with a model of dialogue, invasion and deprivation. Dialogue corresponds to a flow of contact through touch, eye contact, tone of voice and empathic resonance: these contact forms are aspects of good attunement. Invasion and deprivation, which correspond in Stern's model to over-stimulation and under-stimulation, can be seen as opposite forms of disturbed relationship.

**e) Dynamic Systems theory:** developed from the work of Bertalanffy, this interdisciplinary science is associated with several key developments: chaos theory, related to the study of non-deterministic change; catastrophe theory, related to the study of sudden extreme exaggerations of normal patterns of behaviour. Chaos theory has been applied to the understanding of schizophrenic behaviour, and of heart rhythm disturbances, to name two examples. Catastrophe theory has been related to traumatic shock, and to extremes of hyper and hypo-arousal. Dynamic systems theory particularly in the work of Esther Thelen and Linda Smith, has been applied to the understanding of the connections between behaviour, cognition, and motoric development, a theme which is central to Biosynthesis. Thelen and Smith draw on many sources. For the understanding of motility, which is fundamental to the concept of motoric fields in Biosynthesis, Thelen and Smith draw particularly on the work of Kurt Lewin, on motivational forces in the life space; and on the work of Nicholas Bernstein, on the force fields of intentional movement. All these sources emphasise the importance of the life long reality of experience-dependent learning, and the plasticity of the brain.

There have been two massive works of integration since the death of Reich that support and confirm the insights of body-psychotherapy in general, and of Biosynthesis in particular. Both of these include and build on many of the key research areas of fundamental importance to therapeutic work, which are mentioned above. Firstly, I refer to the integrative psychosomatics of Thure von Uexküll, which is separately reviewed; and secondly to the three volume study of Allan Schore on affect, regulation and the self which is described below.

## Principles of regulation

Allan Schore is both a clinical psychodynamic therapist, and a researcher from the Department of Psychiatry and Behavioural Sciences at the University of California at Los Angeles School of Medicine. A central concept underlying all three volumes of his work (totaling 1,465 pages) is the concept of regulation. Regulation is a concept known in cybernetics, physiology, information theory, neurology, psycho-dynamics and developmental psychology. It is in fact a more fundamental feature of the universe, since regulation processes are also studied also in geology, and cosmology. Regulation is related to patterns of organisation, and the maintenance of ordered relationships between parts and wholes, which allow systems to change and evolve, without falling apart. It was a strong focus in the work of Wilhelm Reich, and of the great French neuro-physiologist, Henri Laborit.

Schore studies regulation in relation to the following five major areas of relevance for the understanding of human health, neurosis and disease, and treatment or therapy: the body, the brain, the mind and personality including the formation of the self, the bio-psycho-social fields in which development takes place, and the therapeutic processes which seek to repair disturbances to the self. I will try to give an overview of some central concepts Schore presents, in each of these five areas. My task is not an easy one as his work is summarising the conclusions he reached is based on research supported by a total of around 6,000 references from a wide range of sciences. I attempt to give in my own words my understandings of, and reflections on, his central conclusions.

### 1. The body, and the energies of life.

Schore emphasises throughout his work that the life process depends on energy intake, circulation and output, a theme which is foundational to body-psychotherapy. The energetic processes of cellular and tissue metabolism are fuelled by aerobic and anaerobic processes. In the aerobic processes breathing is fundamental to the life process. The energies of the autonomic nervous system, which is central to the regulation of all the organ systems of the body, is divided into two major functional systems. The sympathetic nervous system is an energy-arousing system, which is characterised as ergo-tropic: tending to activate, arouse, and energise. The parasympathetic nervous system, on the other hand, is an energy-conserving system which is characterised as tropho-tropic: supporting reduction

of arousal, withdrawal, rest, and lower levels of energisation. The normal challenges of the environment require sometimes one of these systems to be more active, sometimes the other. The organism alternates between rhythms of higher or lower energetic output. Each system gives a rest to the other. In extreme environmental conditions, acute stress, trauma or chronic dysfunctional relationships, the normal regulatory balance between ergo-tropic and tropho-tropic, is pushed out of balance. There are three principal forms of imbalance:

#### a) Extreme hyper-arousal

#### b) Extreme hypo-arousal

**c) Double autonomic activation:** extreme hyper-arousal and extreme hypo-arousal co-exist in a paradoxical condition. In the human emotional system this third state was especially studied by Ernst Gellhorn, and Jerome Liss, and is a basis of bio-systemic insights into trauma. Schore describes it poetically as equivalent to driving the car with full acceleration with the brakes on.

The three forms of gross imbalance represent organismic crises. In the language of catastrophe theory, they are catastrophe jumps. In the language of Ivan Pavlov, and the work of Frank Lake and in Biosynthesis, which is based on this concept, we talk of trans-marginal swings. Schore gives the example of manic-depressive states. In Biosynthesis, following Lake, we recognise the schizo-hysterical swing as one example of strong exaggerated imbalance in character development. The three forms of imbalance represent forms of dysregulation, and organismic crises may result which may require medical, psychotherapeutic, psychiatric help, or other forms of energetic or spiritual healing, in order to support a return to natural regulation. The body is in constant contact with the coordinating centres in the brain. Schore emphasises that there is "bi-directional" two-way communication between brain and body, between organs, tissues and cells; and in the discipline of psycho-neuro-immunology, which Schore draws upon in places, it is well established that mental and spiritual states of alienation can be transmitted through brain and body right down into the immune system at the level of individual molecules. We are dealing with fundamental systemic pathways of upward causation and downward causation.

Schore looks favourably on Freud's early energetic insights: psychoanalysts have tended to distance themselves from these, but modern neuroscience is rediscovering the wisdom of the early insights of Freud into libido, affect and drive. Schore validates these strongly, and

this validation is supported by recent work from Solms and Nersessian.

Needless to say the revalidation of Freud's energetic insights leads to implicit support for the Reichian energy-theory which was a logical consequence and development of Freud's first instinct theory.

More aspects of bodily awareness will be described in section 3 on perception, shortly.

## 2. Dynamics of the brain

Allan Schore has extraordinarily deep and complex understanding of the myriad connections within the myriads of neurones within the brain, electro-physiologically, bio-chemically, and molecularly. This wealth of information leads a non-neurologist like myself to fall back upon functional principles to try to grasp the underlying dynamics without getting lost in the Amazonian jungle of the brain. Schore's immensely detailed neurology can best be grasped, in my opinion, by drawing on two central concepts from neuroscience: those of the triune brain and the tripartite brain.

More than a century ago Pierre Janet in France, and Hughlings Jackson, the father of British neurology, introduced a hierarchical view of the brain which emphasised three levels of organisation and control, rather than localisation, as keys to understanding the brain. Both men influenced Henri Ey, in France, whose organo-dynamic view was one of the fore-runners for the functional neurology of Henri Laborit, a key influence on Biosynthesis. Drawing on the work of his pre-decessors, Laborit emphasises the following three levels in the brain, linked with specific aspects of function:

### **The lower brain** (brain stem)

linked with more automatic, instinctive behaviour and autonomic adjustments in the present

### **The intermediate brain** (archo cortex)

linked with emotional and procedural memory and the conditioning of the past

### **The upper brain** (neo-cortex)

linked with reflection, planning, imagination, episodic and narrative (verbal) memory

The concept of the triune brain was related both to the individual development of the child (especially by Janet) and to the evolutionary development of animals, especially by Hughlings Jackson. This later aspect was popularised by Paul Mclean, who distinguished the neo mammalian brain (the neo cortex), beneath which lay the paleo-mammalian brain, (the archaeco-cortex), and the

reptilian brain (the brain stem, consisting of mid-brain and hind brain). This hierarchical structuring of the brain develops early in embryological development. Schore is using this hierarchical understanding to constantly point out the bi-directional flow of information passing from new cortex to old cortex and through to the brain stem and back. He implies that the nearer processes are to the cortex the more conscious they are, and the deeper down into the brain stem the more unconscious they are. The difference between more conscious and less conscious is recognised as a difference between two kinds of learning, and two kinds of memory: implicit and explicit, each of which is processed by different levels or regions of the brain hierarchy. There are direct connections between the triune brain concept, as Schore also suggests between Freud's "psychic embryology". This was the term used by Freud, who was strongly influenced by Hughlings Jackson, for his triad of superego, ego, and id. A special refinement within the neo cortex is the division into left and right halves. The left brain which is more specialised for so called "cool cognition" and linguistic processes, develops later than the right brain, which is more specialised for so called "hot cognition", for emotional processing of instinctual energies, and for the social regulation of these. Schore writes at length about the orbito-frontal cortex which is situated in the front of the forehead just above the orbit of the eyes, and which (although it is found in both hemispheres) is more strongly dominant in the right hemisphere.

Since the lower brain centres are more instinctual, and can become chaotic if they are thrown out of balance by trauma or heavy environmental stress, the regulatory functions of the orbito-frontal cortex need to be re-engaged in order to help restore the lost balance. In body psychotherapy a generation ago this principle was not understood: emotional release, and de controlling were encouraged with a view to helping to free people from repression and what Wilhelm Reich called "armouring". In 1971 Stanley Keleman and I independently introduced a major paradigm shift into body-psychotherapy, emphasising that borderline and traumatised people could be fragmented by a one-sided over emphasis on catharsis, and pointing out the need for a complementary awareness on "containment". In the light of Allan Schore's comprehensive researches, this paradigm-shift is fully supported: catharsis, in other words very strong emotional expression which for some persons leads to a fragmentary flooding, would reflect an overstrong ergo-tropic process, (hyper-arousal) whereas containment would represent the self-regulation of this in the context of a supportive relationship (child with parent, or patient with client).

Laborit points out that when the higher regulating centres are suspended, there is a regression to earlier, more primitive levels, of functioning. Freud spoke of the shift from secondary process to primary process. In therapeutic work at one level we seek to suspend over-control which is responsible for too much "inhibition of action" (Laborit), and to make space for the return of more spontaneous patterns of pulsation, regulated by lower centres of the brain and mind. At another level, we seek to help our clients to re-organise higher levels of regulation, and symbolisation, which are congruent with, and not in conflict with, more primitive expressions. The English psycho-dynamic therapist, Michael Balint, made a very helpful distinction between malign and benign regression. Malign regression is a catastrophic and retraumatising fall into the black hole of early painful feelings, sensations and symptoms. It tends to rupture self-contact, and contact to others, and is thus anti-therapeutic, and can be seen as a form of unconscious acting out. It is anti-therapeutic. Benign regression, on the other hand, is regression in the service of progression. It is a form of what Arthur Koestler has called "*reculer pour mieux sauter*". Here there is a loosening of dysfunctional over-control, a creative disorganisation which is the prelude to a creative re-organisation.

The second brain model which helped me to navigate through the complexity of neural processes is the model of the tripartite brain, introduced by Alexander Luria, a Russian neuro-physiologist, who was also influenced by Jackson, and who corresponded with Freud.

This model was adopted by and became intrinsic to the theoretical model of Biosynthesis since 1975. Luria distinguishes three functional systems in the brain which correspond to the tripartite division of the body into ectoderm, mesoderm and endoderm. Luria's tripartite distinction was not hierarchical, as it passed through all levels of the hierarchy described above. Luria described three parallel functional systems, all three of which were mutually interconnected: firstly a sensory system, bringing information from the outside world, secondly an energetic (arousal-quiescence) system, which was connected with emotionality and basic metabolism, and thirdly a motoric system related to intentionality and action towards the outer world.

Allan Schore is well familiar with Luria's work. Luria was not only a neurologist but a psycho-analyst, and his work has been rediscovered by neuro-psychoanalysis, particularly in the work of Mark and Karen Solms a few years ago. Schore is concerned particularly with the sensoric brain system and the emotional-energetic system (which includes the limbic system, responsible

for affective interactions). The third system, the motoric one, is less emphasised, though in several places Schore points out the effects of emotional balance or imbalance on our kinaesthetic awareness and proprioceptive responses. This aspect has been especially developed in Biosynthesis in our concept of motoric fields, and is a major focus in dynamic systems approach to movement developed by Esther Thelen and Linda Smith, mentioned above.

Schore's researches remind us that the limbic system has what he calls a "dual circuit": in other words there are two pathways of ascending and descending channels of communication within the limbic system: one of these is ergo-trophic (energy-arousing), and one is tropho-trophic (energy-conserving). Each involves different neural channels and different neuro-transmitters.

### **3. The flow of sensory information and perception**

Perception is a mental process studied by psychologists: it is part of the immense and rapidly growing field of consciousness studies. Perception, normally, is dependent on sensations coming to the person from the environment, or from within the body. Many decades ago the British neurologist, Charles Sherrington, classified sensory perceptions into three classes: firstly, interoception, arising from within interior of the body, (for example heart beat, breathing rhythms, peristalsis); secondly, proprioception, arising from the muscle tone in movement and posture; and thirdly exteroception, arising from the outer world through the normal five senses.

The father of German neurology, Wernicke, introduced more than a century ago the concept of three functional systems in the psyche which closely correspond to Sherrington's view. Wernicke spoke of the "auto-psyche" which processed internal organismic information: the "somato-psyche" which processed motoric information and was the basis of the body schema; and the "allo-psyche" which was processing information coming from the external world.

The American-Russian physiologist Paul Yakovlev, whose theories were foundational in the early development of Biosynthesis, described three kinds of energetic movement which he called: endo-kinesis, meso-kinesis, and tele-kinesis. There is a close relationship to the concept both of Sherrington and Wernicke. They show correspondences to the three therapeutic modalities within Biosynthesis, of centering, grounding and facing.

Allan Schore points out that the body communicates with the brain and shapes the mind through these three different primary pathways. The interoceptive signals of pleasure or pain, and of energy-arousal or energy-withdrawal, the patterns of relaxed or stressful breathing, the acceleration or retardation of the heart, and many other inner organ signals are passed up to the brain and can create patterns either of well-being or of disturbance, associated with corresponding "primary emotions" such as excitement, anger, fear, grief or resignation and depression.

Secondly the muscle tonus of the body is transmitted up the proprioceptive pathways. It forms a basis of the body schema, especially studied by Head, Schilder, and Tiemersma. Schore gives examples of total ungroundedness in the body of a dissociated client who felt he had fallen into a black hole. His unbalanced kinaesthetic sensations were channeled up to the brain and were able to fuel his state of unbounded anxiety.

Thirdly, the exteroceptive signals are passing through the five senses. In Biosynthesis we describe these as the fundamental contact channels of development, and of our therapeutic work. Allan Schore suggests that they develop in a sequential order, during the early months of life. The sequential order shown below, I suggest, is a sequence in which a particular sense is more dominant. It does not imply that the other senses are not important or active in a particular period. Schore is beginning his sequence after birth, although there is rich evidence for sensory experience before birth, and Schore in some sections of his work is completely open to the reality of positive and negative conditioning in the pre natal period.

**a) Smell and taste.** These are dominant early after birth, in the early suckling activities.

Schore points out the specially strong connection between smell and the limbic brain. He also shows that when an infant at the breast sucks more strongly it can intensify receptivity in other senses.

**b) Touch.** Body psychotherapy has always emphasised the importance of touch in early development, as well as in the therapeutic "repair of the self" as Schore calls it, whenever the client is able to accept it, and the normal ethics of touch are respected. A classic work on the developmental importance of touch is that of Ashley Montagu. Schore quotes research which shows that brain growth is stimulated by appropriate touching in early development. And also that the immune system is strengthened by good touching. In research with baby rats, the mother rat's touching is known as "gentling" and if this is prevented, in the

critical period, it can lead to non development of the metabolic systems, with resultant death to the baby rat. Schore mentions the well known work of Harlow, with baby monkey who were deprived of skin contact with their mothers, and offered cloth mothers, with resulting retardation of their development. The foetus develops within the body of the mother. Schore points out that after birth he seeks to maximise skin contact, body to body, a major source of learning to trust the world and be nourished by it.

**c) Sight.** Allan Schore becomes extremely eloquent over the function of vision, eye-contact, and gaze, indeed the entire area of face to face contact. He points out that there is a specific process of visuo-limbic energisation, and that brain neuro-chemistry is profoundly affected by qualities channeled through the eyes. Warm eyes welcome excitement, and express love. Fear in the mother's face can lead to dissociation in the child. Cold rage we know can freeze the organism. The empty absent face can lead to depression and withdrawal. In his chapters on the gaze of the eyes Schore makes transparently clear that energetic processes are not only intra-personal, they are inter-personal. He understands perfectly well that through face to face interactions we have one example of what he called "synchronised bio-energetic transmissions", or resonances. These resonances are the basis of good attunement in infancy, and disturbances in these resonances are the basis of personality disturbance.

**d) Sound.** The infant can hear sounds during life in the womb and the importance of this to development has been especially researched by Tomatis. Schore focusses on the dominance of sound at a later period of post natal development. The sound of the parent's voice can be welcoming or repelling, resonant or harsh, and act as a carrier for whatever emotion a person is feeling. The tone of voice is one of the para-linguistic features that accompany language, and its effect on us is parallel to, and sometimes the opposite of the message carried by words.

All the sense inputs described above are non-verbal inputs impinging on body and brain. These non verbal inputs are particularly reflected in the orbitofrontal cortex. The messages from words, during the period of formation of what Daniel Stern calls the "verbal self", are processed for their content (as distinct from their emotional context) primarily in the left brain. Schore points out that if a child is shocked or traumatised, and the right brain is unable to regulate the experience, then there may be the development of "alexithymia": the

loss of the use of words for feelings and emotions. It is as though the left brain can speak, but the right brain has gone dumb.

#### 4. Bonding, attachment and attunement

The British psycho-therapist, Donald Winnicott, published an important book in the nineteen sixties, called "The Maturation Process and the Facilitating Environment". His emphasis is that maturation proceeds well or badly according to how far the intimate biosocial environment is supportive or counteractive. In Biosynthesis we speak of the "formative process and the organising field" and develop this in a more comprehensive context.

Allan Schore's fundamental message, throughout all his writings, is that the body, brain and person, the self, develops out of the interaction of organismic processes (genetic, somatic, neurological) and the quality of care which the infant receives.

One of the most important focuses of Allan Schore is on the relationship between genetic or innate brain processes, where the neurones are pre-programmed towards particular functions, and on the social education of the brain through "experience-dependent learning" from the environment. Pessimistic brain scientists have often argued that trauma creates irreversible changes in the brain. Schore supports the insight that dysfunctional environments can be reflected in dysfunctional brains, but he sees the opposite truth, which is vital for therapists to understand: new learning can lead to new brain development.

Most specifically Schore provides evidence that face to face contact and eye contact which is growth supporting, directly affects visuo-limbic pathways, which result in new messages to the genes within the neurones. *The eyes, it appears, send signals to the genes.*

There can be synaptic death resulting from deprivation or over-stress during "critical periods" of development. But there can be synaptogenesis, and chemical biosynthesis within neurones, leading to what is colloquially known as new "sprouting" of nerve connections within the brain. Not only does good parenting support the growth of the baby's body, brain and self, but Schore provides evidence that the flow of contact from the baby to the mother can also stimulate new neurological growth in the mother.

The channels of contact described above, through the different sensory-perceptual pathways, are the first environment the child discovers. Schore traces the development of the child through the classical stages

studies by Mahler, autism, symbiosis, practising and rapprochement. He also links his observations to Daniel Sterns description of the emergent self, the core self, and the intersubjective and verbal selves. There seem to be parallels between Stern's psychodynamic description, and an independent neurological description by Antonio Damasio of the proto-self, the core self and the extended or autobiographical self. The three levels of Damasio, I suggest, related to the three levels of the triune brain described earlier by Laborit. Schore explains in detail how the emotional regulating centre, the orbito-frontal cortex begins to develop only around one year, and matures around 18 months. Regulation of the infant's emotional life before that depends on regulation from the mother, who helps to manage the experiences of the emergent self, and the core self, before the social learning of the intersubjective self has begun to stabilise.

Schore demonstrates that the regulatory functions of the mother have two aspects: vitalisation, and soothing. Vitalisation relates to the rewarding of excitement, support for the ergo-tropic energies, and is particularly stimulated through play and exploration, and the encouragement of vitality affects. Soothing supports the tropho-tropic processes and is present, for example, in the mother who can comfort the crying child, can contain the anger of her baby or can reassure her in states of anxiety.

The interpersonal-regulation of the mother or caregiver can gradually be internalised by the growing child through a process of self-soothing which is related to the capacity for intra-personal self-regulation through the containment function of the maturing right brain.

Schore is strongly influenced by and deeply values the ethological-psychodynamic work of John Bowlby, from England, whose attachment theory has been one of the best foundations for understanding human relationships that we have. Bowlby described how the child builds an "internal-working model" of a good enough parent, and this guides him through upsets in later life. This internal working model is independently described by Daniel Stern as what he calls a RIG. ("representation of interactions that have been generalised") In the "Self-Psychology" of Heinz Kohut, who was influenced greatly by Winnicott, the "internal working model" corresponds to an inner memory and image of the significant other. He refers to the significant other as the "self-object". Schore describes in detail how the locus in the brain for the development of the internal working model is the orbito-frontal cortex. This matures to become a central focus for and carrier of feelings of empa-

thy, conscience, and ethical awareness of the other. Schore links it specifically with hope, wishes, dreams, and images.

Schore emphasises the dance of attunement carried out by a good-enough parent, who needs both to recognise, mirror, amplify and support the enthusiasms of the child. In the exploratory developments during the late practising period he emphasises the need for a counter-balancing regulation through influencing the tropho-trophic side of the child. Schore sees this in terms of healthy shame development. If I understand correctly, Schore uses the word shame, in its benevolent sense, to cover all those ways in which a parent signals to a child, calm down now, don't treat me like that, that's not the way to behave here and so forth. In other words social signals from the other to the self that the other is uncomfortable with what is being expressed. Shame is a two-edged sword, as even so called benevolent shame could be mis-directed at healthy impulses of the child, typically at expressions of sexuality. Shamelessness, as a character trait, can nevertheless be seen as a pathological trait. Schore is clear that malevolent shaming, or pathological shaming, is one of the mal-attunements that create severe character disturbance. In my view we find this typically in masochistic patterns and in some depressive tendencies.

If the early development is disturbed by what Schore calls "relational trauma", in other words of chronically mal-adapted relationships, insecure attachments (Bowlby) and severe mis-attunement (Stern), then what develops are patterns of major "dysregulation" (Schore). The body is disturbed, the whole energetic metabolism is disturbed, the brain is disturbed, the mind is disturbed, the personality is disturbed, social learning is disturbed, empathy is disturbed, the self is disturbed.

In the second part of his second volume Schore looks at some early patterns of disturbance. The insecure-avoidant attachment, Schore suggests, can lead to withdrawal in the form of a kind of autistic narcissism. We would recognise schizoid personality traits. Schore distinguishes between the insecure-resistant attachment of some borderline patients, dealing with high arousal, uncontained rage and tendencies to fragment; and he contrasts this with the cold hate of the anti-social psychopath (sociopathic personality) which he links with strong deprivations and neglect associated with lower levels of arousal. He also describes the personality aspects of the third form of dysfunctional attachment, recognised in attachment theory, namely disorganised attachment. He sees fear as a dominant factor here and suggests that fear in

the mother is a primary energetic basis for dissociation in the child. Traumatic fear has particularly strong dissociating and disorganising effects.

Schore discusses at length the social narcissist, which he sees developing during the late practising period, when self-centred and non-empathic behaviours were not regulated, and a child developed to be too much of a prince in his parents' eyes, and where there has been a lack of balancing tropho-tropic influence through what he calls the regulatory function of non-pathological shame.

Schore's characterological insights, based on energetic foundations in the socio-neuro-psychology of the individual during key stages of development and "critical periods", are fascinating, thought-provoking, but not the last word. They could lead, in the future, to major revisions in psycho-dynamic character models, but I sense that yet more research needs here to be integrated.

## **5. The corrective emotional experience and the repair of the self: bonding and resonance in therapy.**

Franz Alexander introduced the term "corrective emotional experience" for the fundamental process of change which is at the foundation of relationally based forms of psychotherapy. It is central to the work of intersubjective psycho-dynamics and is also central to the work of many forms of humanistic psychotherapy. Since the patient in therapy has been disturbed by relational traumas, (invasive or depriving experiences which have disturbed his emotional development) his primary need is to experience a non-pathological healing relationship. Therefore more important than what the therapist does (interventions), or what he says (interpretations) is how he relates to the patient. It is a question of forming a new therapeutic attachment (known as the "therapeutic alliance"), and of establishing a non-verbal empathy. The empathy is described in Biosynthesis, in the work of Stanley Keleman, and also by Allan Schore as a form of somatic resonance which is communicated through the eye contact of the therapist, through facial expression and through tone of voice. For a therapist working with touch this is clearly also communicated through the qualities of touch (in Biosynthesis, the elements of touch).

Wilhelm Reich used the term "vegetative identification" as a term for the process of what Schore calls "conversations between limbic systems". Jacob Stattman referred to this as "organic transference".

The word "transference" means what transferred, or passed between, two persons in the bi-personal field of therapist and patient. It is a two way process. Psycho-analysis studied this as patterns of "transference" (from patient to therapist) and "counter-transference" (from therapist to patient). In Schore's words it is bi-directional and involves patterns of mutual reciprocal influence.

Melanie Klein introduced the term "projective identification" for the subtle process of unconscious influence in which one of the partners in the relationship projects his inner feelings and attitudes on to the other, who then identifies with it and introjects it into himself. Klein focussed primarily on the negative aspects of projective identification: how the patient can arouse anger, anxiety, depression and so forth in the therapist. The British psychodynamic therapist, Wilfred Bion, spoke of the importance of the therapist becoming a "container" of the negative feelings of the patient, thus providing a mirroring of how to handle such feelings. As the therapist learns to contain, digest and "metabolise" the negative feelings in him induced by the patient, the patient has the opportunity for new emotional learning (the "corrective emotional experience"). He learns to feel no longer punished and threatened by the responses of the other. Allan Schore devotes an entire chapter of his third volume to his psycho-neuro-biological model of projective identification and goes much further than Melanie Klein in emphasising the importance of the transfer of positive "adaptive" feelings of trust, warmth, joy, relief, and empathy. Schore describes positive projective identification as a form of "psycho-biological connection", and relates it to the concept of the "potential space" described by Donald Winnicott in his play therapy experiences with children.

During the therapeutic relationship the process of empathic resonance will include times of mal-attunement, just as in the healthy development of a child within the holding environment of a "good enough" mother or father. The therapist's mistakes are known as "empathic failures". By becoming conscious of his vegetative and limbic automatic reactions, and through learning to regulate them, the therapist can "co-participate in the interactive repair" of these mal-attunements, and so help to build deeper and stronger levels of trust. The most important aspect of his therapeutic role is the ability to monitor, regulate and modulate his own unconscious responses to the material the patient brings to therapy. In Biosynthesis we work with a concept of "double presence" developed by Silvia Boadella, where the therapist can allow his awareness to move freely backwards and

forwards in all contact channels between the other and the self. This process is described by Schore as "binocular vision", with one eye on the patient, and one on the therapist's self. In Biosynthesis we understand that this is the reason why therapists take "supervision", to help them to become conscious of their implicit, latent, and not yet conscious negative counter-transference patterns. These patterns are projections of the therapist's own unmetabolised emotional reactions, or introjections of unassimilated emotional reactions of the patient.

The patient has developed his dysfunctional attachment patterns in unsynchronised relationships which have been characterised by what in Biosynthesis we call distorted mirroring, or depriving mirroring. We seek in our therapeutic work to use what we call inviting mirroring, or reflective mirroring, which are forms of resonance and synchrony. Schore's researches show how in the therapeutic relationship, the human contact between the two persons, in the bipersonal intersubjective field, needs to lead to new forms of synchrony, of mutual insight, and of re-attunement. Neurologically this means that there is what Schore calls a "re-wiring" of the nervous system. This means that new conditions of chemical biosynthesis and of synaptogenesis are occurring in the brain.

We know in our therapeutic approach of Biosynthesis that not only the brain is changing, but the body also: muscle tonus changes from hyper-tonus or hypo-tonus in the direction of "Eu-tonie" (well-balanced tonus). Hyper and hypo-arousal in the tissues and organs get replaced by a self-regulatory pulsation, and the restoration of health energetic rhythms of somatic-emotional charge, the natural rhythmic alternation of ergo-tropic and tropho-tropic patterns of arousal.

## 6. Conclusions

Schore concludes his third volume with a list of "principles of psychotherapeutic treatment" based on his research, which I have formulated below as a series of choices which the therapist has. This is my own attempt to contrast what I understand to be central to Allan Schore's approach with more classical approaches. On the left side of the diagram are focuses of more traditional psycho-analytical intervention. On the right hand side of the diagram are focuses for psycho-dynamic and humanistic interventions based on the understanding of the psycho-biology of mature attachment, attunement, and affect-regulation.

## Conflict based

### Left Brain Dominant

consciousness of mental contents  
cold cognition of clinical insight  
transference of patient in foreground  
therapist's clinical detachment  
analysis of unconscious resistance  
focus on verbal understanding  
awareness of character and history  
therapist own shame blocks patient  
verbal interpretation of transference  
defence seen as part of resistance  
explicit memory from the verbal self  
repetition compulsion is analysed  
focus on intrapersonal problems  
focus on patient's affect tolerance  
emphasis on history, and language  
explicit insight is sought too early  
patient is ready for symbolisation  
emphasis on pathology and illness  
focus: change due to insight  
understanding of character patterns  
as form of protection of the self

## Deficit-based: facilitating new development

### Right Brain Dominant

consciousness of emotional process  
hot cognition of attunement and empathy  
counter-transference of therapist in foreground  
therapist's human attachment and attunement  
receptivity to primitive affects  
focus on visceral somatic processes  
awareness of rhythms of energetic arousal  
trust allows self revelation in spite of shame  
containment of affect within the transference  
defence as protection from re-traumatisation  
implicit memory of the pre verbal self  
repair of re-enactments of breaches of trust  
focus on interactive repair of disturbance  
focus on therapist's affect tolerance  
emphasis on process and body-language  
implicit insight leads in time to explicit insight  
patient matures from pre symbolic to symbolic  
emphasis on self-organising potential for health  
focus: interpersonal & intrapersonal regulation  
re-organisation of internal working models  
as ways of repairing the self

The writing of this attempt to overview and summarise the impressive evidence from the three volumes of Allan Schore, (in relationship to his principal sources which are in many cases sources also for the background and development of Biosynthesis), has not been easy. His writing is densely packed with information, and the six thousand references supporting it come from a wide range of scientific disciplines. I hope I have not done injustice to his wide ranging and deep view, by oversimplification.

Finally I offer the following diagram for the inter-relationships between the fields of emphasis in Allan Schore's understanding, and in our own view within Biosynthesis. Reading the chart below from left to right, we are looking at processes of interpersonal regulation or dysregulation. Reading the chart from top to bottom, we are looking at intra-personal forms of regulation or dysregulation.

### THERAPY

*Bi-personal field  
New states of resonance  
and attunement*

Energy.....Body.....Brain.....Mind.....Self  
Bio-physical...Somatic...Neuro...Psycho...Pneumo

### FAMILY

*Early fields of Attachment  
early patterns of bonding*

We can define four major groups of disciplines which have been strongly interacting during the last decades of the previous century, and which continue to build integration between disciplines concerning the body (bio), the mind (psycho), the human environment (socio), and the soul (phenomeno, pneumo).

1. biological sciences (physiology, embryology, neurology, classical medicine, energy medicine)
2. psychological sciences (psychodynamics, behavioural psychology, cognitive science)
3. socio-educational sciences (developmental psychology, psycho-therapy, family systemics)
4. phenomenological sciences (consciousness studies, transpersonal psychology)

From a systemic perspective these four domains: bio-psycho-social-spiritual are all overlapping, interacting, mutually connecting.

When these four domains are taken account of in therapeutic work with the human being then we have the possibility of a bio-psycho-socio-spiritual therapy.

#### a) Biological studies

Physiology - Stent Györgi, Oschmann, Cannon, Gellhorn, Selye

Embryology - Hartmann, Blechschmidt

Neurology - Hughlings Jackson, Head  
Neuro-biology  
Neuro-chemistry  
Neuro-psychology - Hutherr, Roth  
Neuro-psychoanalysis - Luria, Solms, Nersessian

b) Psychological studies

Psycho-dynamics - Winnicott, Kohut,  
Behavioural psychology - Thelen  
Cognitive psychology - Piaget, Grawe  
Developmental psychology - Bowlby, Ainsworth,  
Mahler, Stern, Dornes

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