

**CURRENT APPROACHES TO THE  
TREATMENT OF TRAUMA**

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**WORKING IN THE RIGHT BRAIN;  
A REGULATION MODEL OF CLINICAL EXPERTISE  
FOR TREATMENT OF ATTACHMENT TRAUMA**

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- Last year I was honored to receive American Psychological Association Division of Psychoanalysis Scientific Award, "In Recognition of Outstanding Contributions to Research, Theory and Practice of Neuroscience and Psychoanalysis."
- Title of award address. "The paradigm shift." the right brain and the relational unconscious."
- *Paradigm shift*: from explicit, analytical, conscious, verbal, rational left hemisphere to implicit, integrative, unconscious, nonverbal, bodily-based emotional right hemisphere.
- Interdisciplinary, across all sciences.

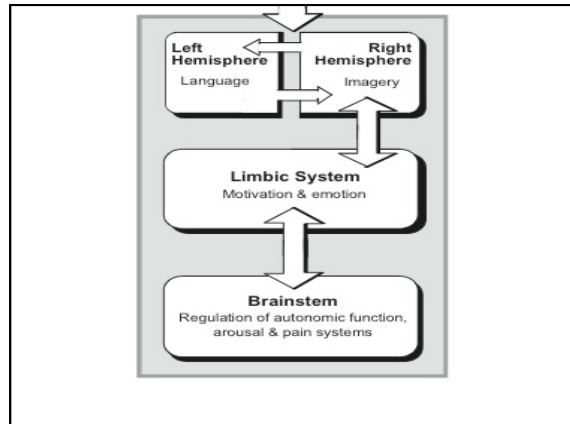
- *Paradigm shift*: from conscious cognition to nonconscious processing of affect:
- Ryan (*Motivation and Emotion*, 2007) on primacy of affective processes in the human experience:
- "After three decades of the dominance of cognitive approaches, motivational and emotional processes have roared back into the limelight."
- "Thus, we are living in an epoch where motivation and emotion 'matter,' not only in an abstract theoretical sense, but also as they inform applied work in areas such as health-care, psychotherapy, education, sports, religion, or other domains."

- *Paradigm shift*: from cognitive UCS to affective UCS
- Mlot (*Science*, 1998): UCS processing of emotional stimuli activation of the right and not left hemisphere.
- Larsen (*J. Psychosom. Res.*, 2003): "In most people, the verbal, conscious and serial information processing takes place in the left hemisphere, while the unconscious, nonverbal and *emotional* information processing mainly takes place in the right hemisphere."
- Not 2 halves of one brain, but 2 cortical-subcortical systems, each with unique structure and functions (CS-UCS minds; implicit-explicit self systems)

- *Paradigm shift*: from an irrational to an adaptive UCS
- Schore (1997): UCS is "a cohesive, active mental structure that continuously appraises life's experiences and responds according to its scheme of interpretation."
- Wilson & Bar-Anan (*Science*, 2008): "Social psychologists have discovered an adaptive unconscious that allows people to size up the world quickly, make decisions, and set goals - all while their conscious minds are otherwise occupied... Without such an efficient, powerful, and fast means of understanding and acting on the world, it would be difficult to survive."

- *Paradigm shift*: irrational to adaptive emotion
- Lane (*Psychosomatic. Med.*, 2008): "Primary emotional responses have been preserved through phylogenesis because they are adaptive. They provide an immediate assessment of the extent to which goals or needs are being met in interaction with the environment, and they reset the organism behaviorally, physiologically, cognitively, and experientially to adjust to these changing circumstances."
- Schutz (*Neuropsych. Rev.*, 2005): "Emotionality is the right brain's 'red phone,' compelling the mind to handle urgent matters without delay."

- Current interest in neurobiology of emotion:
- Buklina (*Neurosci. Behav. Physiology*, 2005): “The right hemisphere...performs simultaneous analysis of stimuli...the more ‘diffuse’ organization of the right hemisphere has the effect that it responds to any stimulus, even speech stimuli, more quickly and, thus earlier.”
- “The left hemisphere is activated after this and performs the slower semantic analysis and synthesis...the arrival of an individual signal initially in the right hemisphere and then in the left is more ‘physiological.’



- *Paradigm shift*: attachment models from cognitive to social-emotional development
- Bowlby (1969): attachment bond “accompanied by the strongest of feelings and emotions.”
- Schore (1994-2008): in emotionally charged right brain-to-right brain visual-facial, auditory-prosodic, and tactile-gestural attachment communications, psychobiologically attuned caregiver regulates infant’s affective states and impacts critical period maturation of infant’s right brain.
- Allman (*Trends Cog. Sci.*, 2005): “The strong and consistent predominance for the right hemisphere emerges postnatally.”

- Lenzi et al. (*Cerebral Cortex*, in press): fMRI study of mother-infant emotional communication offer data “supporting the theory that the right hemisphere is more involved than the left hemisphere in emotional processing and thus, mothering.”
- Noriuchi et al. (*Biol. Psychiatry*, 2008): activation of mother’s right orbitofrontal cortex during moments of maternal love triggered by viewing video of own infant.
- Minagawa-Kawai (*Cerebral Cortex* in press): near-infrared spectroscopy study of infant-mother attachment, “our results are in agreement with that of Schore (2000) who addressed the importance of the right hemisphere in the attachment system.”

- *Paradigm shift*: right brain functions at core of relational trauma and attachment psychopathogenesis
- Cutting (*Brit J. Psychiatry*, 1992): “The role of the right hemisphere dysfunction in psychiatric disorders.”
- Rauch et al. (*Arch. Gen. Psychiatry*, 1996): “With fMRI images of the brain to guide us, it is clear that the right hemisphere is heavily involved in early language recognition, attachment, socio-affective regulation and is additionally highly activated under traumatic circumstances. When we think in terms of later traumatic memory retrieval and processing, early language and object relations are inextricably interwoven.”

- *Paradigm shift*: RH affect at core of psychotherapy
- Schore (1994-): RH relational-emotional mechanisms that operate beneath levels of CS awareness of patient and therapist dominant in therapy.
- Rotenberg (*Neurosci. Biobehav. Rev.*, 2000): “Words can name emotions, but they cannot convey the essence of emotional experience.”
- Maroda (2005): “From my experience there are more therapists who have painfully sat on their emotions, erroneously believing that they were doing the right thing. For these therapists, the prospect of using their emotional responses constructively for the patient is a potentially rewarding and mutually healthy experience.”

- In light of the paradigm shift from left to right brain, body of my work indicates core of both developmental and psychotherapeutic change mechanisms are expressed in affective-relational processes that act at rapid nonconscious time-frames, rather than at the level of conscious cognitive insight.
- Interdisciplinary perspective of regulation theory attempts deeper understanding of critical interpersonal neurobiological change mechanisms that operate at implicit levels of therapeutic alliance, beneath exchanges of language and explicit cognitions.

- Here discuss implications of paradigm shift from conscious cognition to affective and unconscious processes for a model of psychotherapeutic expertise with early-forming severe disorders.
- Paradigm shift alters our conception of the clinical expert from one who creates insight via interpretations that make unconscious conscious, to one who optimally processes and regulates patient's unconsciously communicated bodily-based affective states in order to facilitate development of the UCS.
- Interdisciplinary data and perspective of regulation theory indicates therapist's right (and not left) brain generates essential components of this expertise.

- *Paradigm shift*: Primacy of affect in work with attachment trauma and unconscious affect
- Alvarez (*Journal of Child Psychotherapy*, 2006): "Schoore points out that at the more severe levels of psychopathology, it is not a question of making the unconscious conscious: rather it is a question of restructuring the unconscious itself."
- This clearly suggests that with patients, especially those who lack a reflective function, the change mechanism is not primarily mediated by insight.
- Expert clinician optimally co-creates growth facilitating context that increases complexity of patient's UCS - "re-structures" right brain "emotional" self.

- Although Freud argued work of psychotherapy is always concerned with affect, until recently conceptualizations of the change process have been dominated by models of cognition, too frequently focused only on verbal, conscious cognition.
- Panksepp (2008): "The cognitive revolution, like radical neuro-behaviorism, intentionally sought to put emotions out of sight and out of mind. Now cognitive science must re-learn that ancient emotional systems have a power that is quite independent of neocortical cognitive processes."

- In contrast to prevailing privileged status of verbal conscious cognition, my work suggests
- affects are at psychobiological core of communications between patient and empathic therapist
- regulation of conscious and unconscious feelings is placed in the center of the clinical stage, and
- both patient's and therapist' right brain emotional processes are essential to psychotherapy.
- This perspective emphasizes therapist's skills in the reception, expression, and regulation of patient's conscious and especially unconscious affective bodily-based communications.

- Diener et al. (*American J. Psychiatry*, 2007): clinical research reveals that the more therapists facilitate affective experience / expression of patients, the more patients exhibit positive changes, and that therapist affect facilitation is a powerful predictor of treatment success.
- "Research indicates that contemporary psychodynamic therapies place greater emphasis on encouraging experience and expression of feelings compared with cognitive behavior therapies."

- Principles of relational affective dynamics and interpersonal neurobiology have implications for treatment of all forms of psychopathology, especially early forming personality disorders.
- Severely disturbed patients lack a reflective function, and are refractory to insight-driven cognitive interventions.
- Effective treatment of patients whose subjectivity is dominated by chronic dysregulated and dissociated affects requires much more than clinical techniques that focus on “content analysis” and “accurate” interpretations in order to change unconscious self cognitions.

- General therapeutic principle of working with relational trauma and severe disturbances of affect regulation: empathic therapist helps patient re-experience trauma in *affectively tolerable doses in the context of a safe environment*, so that overwhelming traumatic feelings can be regulated and adaptively integrated into patient’s emotional life.
- Work guided by principle that focus of treatment is not on exact reconstruction of infantile traumatic setting but on effects of early relational trauma on “character structure,” “right brain structure” and deficits in adaptive functions.

- In this clinical work, right brain-to-right brain communications within patient-therapist attachment system facilitate re-expression of the patient’s early attachment experiences, stored and expressed in right brain implicit/procedural autobiographical memory.
- Bowlby (1988): therapeutic relationship reactivates patient’s longstanding expectations about responsiveness and availability of others.
- Schore (*Aust New Zeal J Psychiatry*, 2002): therapeutic progression also re-exposes in the transference patient’s deficits in right brain implicit ability to interactively regulate intensity of feelings, the major developmental effect of early relational trauma.

- Mancina (*Int. J. Psychoanal*, 2006): RH “seat of implicit memory.”
- “The discovery of the implicit memory has extended the concept of the unconscious and supports the hypothesis that this is where the emotional and affective - sometimes traumatic - presymbolic and preverbal experiences of the primary mother-infant relations are stored.”
- All technique sits atop the therapist’s ability to access the implicit realm via right brain “evenly suspended attention” and “unconscious memory.”

- Freud (1912) on “evenly suspended attention”: “He should withhold all conscious influences from his capacity to attend, and give himself completely to his ‘unconscious memory.’”
- Rizzuto (*Psychoanalytic Rev.*, 2008): “Unconscious memory includes affective memory with its atemporal register of a great variety of emotional states and its exquisite capacity to tune in the the sound and the whispers of the human voice.”
- “I suggest that the [therapist] listens with his or her entire unconscious memory as a tool, that is, an affective, relational, and representational memory to be able to hear the whole patient.”

- Right brain unconscious, implicit/procedural autobiographical memory stores not only relational-induced affect dysregulation, but also early-forming right brain survival strategies, the affect dampening defenses of projective identification and dissociation.
- Schore (2001): pathological dissociation = inability of right brain cortical-subcortical system to recognize and coprocess (integrate) external stimuli (exteroceptive information coming from environment) and internal stimuli (interoceptive information from body).
- Spitzer et al. (*J. Neuropsychiatry Clin. Neurosci.*, 2004): “Dissociation may involve a... *lack of integration in the right hemisphere.*”

- Spitzer et al. (*Aust. NZ J. Psychiatry*, 2007): insecurely attached patients dissociate as a response to negative emotions arising in psychodynamic psychotherapy, leading to a less favorable treatment outcome.
- Freud (1915): “Unconscious ideas continue to exist after repression as actual structures in the system Ucs, whereas all that corresponds in that system to unconscious affects is a potential beginning which is prevented from developing.”
- Sato & Aoki (*Brain & Cognition*, 2006): neuroscience now describes “unconscious negative emotion.”
- Clinical focus on patient’s inability to consciously experience UCS dissociated negative affect.

- Kalsched (2003): “For our early trauma patients to get well again, they will have to suffer through a re-traumatization in their transferences. This repetition in the transference will be the person’s way of remembering, and may actually lead to the potential of healing of trauma, provided that the therapist and patient can survive the *furor therapeuticus* that such transformation requires.”
- Tutte (*Int. J. Psychoanal.*, 2004): Such work “implies a profound commitment by both participants in the analytical scenario and a deep emotional involvement on the [therapist’s] part.”

- In following, focus on right brain functions of expert therapist, each of which is expressed on implicit levels, and each of which is communicated directly to the patient’s bodily-based right brain unconscious:
- Clinical sensitivity to patient’s unconscious and nonverbal affective communications.
- Clinical empathy and the therapist’s right brain activity within the intersubjective field.
- Clinical intuition and therapist’s rapid assessment of an uncertain and complex social context.
- Therapist’s capacity for interactive affect regulation.
- These functions increase in complexity over the course of our clinical work with patients.

- *Clinical expertise: therapeutic sensitivity* - ability to receive and express implicit right brain nonverbal bodily-based affective communications within therapeutic alliance
- Romano (2008): “There is a growing consensus in the field of psychotherapy that the personalities of the client and the therapist, together with the therapeutic relationship, play a critical role in psychotherapy processes and outcomes.”
- APA Presidential Task Force (2006): “Psychological practice is, at root, an interpersonal relationship between psychologist and patient.”

- Cloitre et al. (2004): “A large literature indicates that the therapeutic alliance is the most consistently identified predictor of psychotherapy outcome... Alliance has proven to predict treatment outcome across different treatment modalities including short-term cognitive-behavioral treatment, interpersonal therapy, psychodynamic therapy, gestalt therapy, and cognitive therapy.”
- “Thus, the strength of the patient-therapist relationship appears to be a critical common factor across treatment modalities.”

- “Stern (*Infant Mental Health J.*, 2008): “Most of us have been dragged kicking and screaming to the realization that what really works in psychotherapy is the *relationship* between the therapist and the client. That’s what does the work.”
- “We are all devastated by this reality because we spent years and a lot of money learning a particular technique or theory, and it is very disheartening to realize that what we learned is only the vehicle or springboard to create a relationship - which is where the real work happens.”

- Meissner (2006): “We need to know more about the protean manifestations of the alliance.”
- Geller (*JAPA*, 2006): “Therapists of all persuasions would be advised to develop experience-near, empirically grounded guidelines for performing therapeutic techniques that increase receptivity to encounters with the therapist and so provide the basis for what have been characterized as ‘corrective emotional experiences.’”
- What aspects of the therapist’s personality increases receptivity to alliance emotional experiences?

- APA Task Force (2006): “Research suggests that *sensitivity* and flexibility in the administration of therapeutic interventions produces better outcomes than rigid application of...principles.”
- Definition of sensitivity: “susceptible to the attitudes, feelings, or circumstances of others; *registering very slight differences or changes of emotion.*”
- Schore (2005): describes operations of therapist’s right brain by which “the sensitive clinician’s oscillating attentiveness is focused on barely perceptible cues that signal a change in state, and on nonverbal behaviors and shifts in affects.”
- Sensitivity to CS and UCS affects.

- Bugental (1987): “The primary instrument brought to the support of the client’s therapeutic efforts is the therapist’s trained, practiced, and disciplined sensitivity. In many ways, this sensitivity is akin to a musical instrument which must be carefully prepared, maintained, tuned, and protected.”
- Carroll: “Countertransference is all about sensitivity - how much emotional data we can tolerate, its subliminal patterning and complexity, its contextual acuteness and its creativity, ranging from exquisite subtlety to suffering with another.”

- Schachner, Shaver, and Mikulincer (2005): sensitivity to a relationship partner’s nonverbal behavior directly influences quality of interpersonal interactions and relationships, including all forms of attachment relationships. “adult attachment researchers have not paid much attention to *patterns of nonverbal behavior and sensitivity.*”
- Snodgrass & Haring (2005): “greater sensitivity in the right than left hemisphere” for emotionally toned stimuli presented too rapidly for conscious identification.

- Schore (1994-2008): maternal sensitivity expressed in implicit ability to read infant’s nonverbal right brain-to-right brain visual-facial, auditory-prosodic, and tactile-gestural emotional communications.
- Same right brain-to-right brain nonverbal communications at psychobiological core of the therapeutic alliance. Relational UCS of clinician sensitively responding to nonverbal communications of relational UCS of patient.
- van Lancker & Cummings (*Brain Research Reviews*, 1999): “While the left hemisphere mediates most linguistic behaviors, the right hemisphere is important for broader aspects of communication.”

- Burgoon (1985): 60% of human communication is nonverbal
- Blonder et al. (1991): RH centrally involved in nonverbal emotional communications.
- Hugdahl (1995): RH locus of “implicit learning.”
- APA Presidential Task Force (2006): “Central to clinical expertise is interpersonal skill, which is manifested in forming a therapeutic relationship, encoding and decoding verbal and *nonverbal* responses, creating realistic but positive expectations, and responding empathically to the patient’s explicit and *implicit* experiences and concerns.”

- Schore (1994): right brain communicates by implicit primary process cognition; left by explicit secondary process cognition.
- Dorpat (*Psychoanalytic Inquiry*, 2001): "The primary and secondary process may be conceptualized as two parallel and relatively independent systems for the reception, analysis, processing, storing, and communication of information."
- Critical to therapy is "a therapist's ability to suspend attention to secondary process cognition while attending to the patient's and the therapist's own primary process derivatives." [= callosal shift to right brain evenly suspended attention]

- Dorpat (2001): describes "primary process communication," expressed in "nonverbal communication" including "both body movements (kinesics), posture, gesture, facial expression, voice inflection, and the sequence, rhythm, and pitch of the spoken words."
- "The primary process system is immediately and directly involved with perception and with an individual's affective communications with others."
- "Secondary process communication has a highly complex and powerful logical syntax but lacks adequate semantics in the field of relationships."

- "Affective and object-relational information is transmitted predominantly by primary process communication." "Intuitions, images, and emotions derived chiefly from the primary process system provide an immediate and prereflective awareness of our vital relations with both ourselves and others."
- Sensitive therapist is expert at processing not left brain explicit secondary process but right brain implicit primary process nonverbal communications.
- This focus differs from "mentalization" = "thinking about thinking," which is secondary process cognition and left brain function. "Narrative competence" and coherent discourse also left brain.

- Roter et al. (*J. General Int. Med.*, 2006): "High-context communication depends on sensitivity to nonverbal behaviors and environmental cues to decipher meaning, while low-context exchanges are more verbally explicit, with little reliance on the unstated or nuanced."
- Chused (*Int. J. Psychoanal.*, 2007) on therapeutic nonverbal implicit communications: "It is not that the information they contain cannot be verbalized, only that sometimes only a nonverbal approach can deliver the information in a way it can be used, particularly when there is no conscious awareness of the underlying concerns involved."

- Stern (2005): "Without the nonverbal it would be hard to achieve the empathic, participatory, and resonating aspects of intersubjectivity. One would only be left with a kind of pared down, neutral 'understanding' of the other's subjective experience."
- One reason that this distinction is drawn is that in many cases the analyst is consciously aware of the content or speech while processing the nonverbal aspects out of awareness. With an intersubjectivist perspective, a more conscious processing by the analyst of the nonverbal is necessary."

- Jacobs (2005) details problem of focusing exclusively on verbal exchanges, while neglecting "nonverbal behavior in the therapeutic process:"
- "Conveyed through posture, gesture, and movement, in facial expressions, in the tone, syntax, and rhythm of speech, and in the pauses and silence...these unconscious communications anticipated both subsequent conscious recognition in patient and (therapist) of the affects and fantasies to which they referred and the later verbalization of this material..."
- They operated...as an early signal system for affects that were approaching, but had not yet reached consciousness."

- Hutterer & Liss (*J. Amer. Acad. Psychoanal. Dynam. Psych.*, 2006): "Such nonverbal variables as: tone, tempo, rhythm, timbre, prosody and amplitude of speech, as well as *body language* signals may need to be re-examined as essential aspects of therapeutic technique."
- Mathew (*J. Brit. Assn. Psychotherapy*, 1998): "The body is clearly an instrument of physical processes, an instrument that can hear, see, touch and smell the world around us. This sensitive instrument also has the ability to tune in to the psyche: to listen to its subtle voice, hear its silent music and search into its darkness for meaning."

- Clinical sensitivity thus relates to depth and breadth of therapist's capacity to psychobiologically attune to an array of conscious and especially unconscious bodily-based affective states, including right brain states of "unconscious negative emotion."
- This affectively focused model of implicit sensitivity of right brain/mind/body differs from explicit cognitive treatment models, such as Fonagy's mentalization ("*interpreting the mind of another*") and CBT (changing conscious thought to change affect; mind over body).
- Chused (*Int. J. Psychoanal.*, 2007): "I suspect our field has not yet fully appreciated the importance of...implicit communication."

- *Clinical expertise: empathy* and therapist's right brain activity within intersubjective field
- Large body of observations now underscores central role of empathy in the change process.
- Meares (2005): therapist's capacity for empathy is the principal agent of beneficial change in the patient.
- Watt (2005): empathy has been long hypothesized as a critical, and possibly the most critical, outcome variable from therapist side.
- Maroda (1999): "How do you relate empathically to an unexpressed emotion?" [projective identification and dissociated affect]

- Current studies demonstrate perceived clinician empathy is associated with decreased psychological problems and increased health-related behaviors, whereas an absence of perceived empathy is one of the best indicators of poor psychotherapy outcome.
- RH dominant for affective (as opposed to cognitive) empathy (Schoore, 1994; Shamay-Tsoory et al., 2005).
- Havens (1979): most striking evidence of successful empathy is occurrence in our bodies of sensations that the patient has described in his or hers.
- RH mediates therapist's empathic capacity to access UCS communications in order to know early traumatized patient "from the inside out" (Bromberg)

- Schoore (2003): psychobiologically attuned therapist decodes nonconscious communications of patient's right-lateralized unconscious mind "by actual felt emotional reactions, by a form of empathic responding."
- Current "embodied simulation model."
- Adolphs et al. (*J. Neuroscience*, 2000): "Recognizing emotions from visually presented facial expressions requires right somatosensory cortices...We recognize another individual's emotional state by internally generating somatosensory representations that simulate how the individual would feel when displaying a certain facial expression."

- Regarding clinician's expertise in empathy:
- Harrison et al. (*Emotions*, 2007): "Heuristically, enhanced sensitivity to socially salient signals is anticipated in more empathetic individuals. Indeed, subjects who score highly on the rating scales of emotional empathy have reduced visual thresholds for identifying emotional expressions presented for very brief periods and show the strongest degree of automatic mimicry (in their facial muscles) of observed facial emotional expressions."



- Regarding clinician's expertise in empathy:
- Craig (Human feelings: why are some more aware than others? *Nature Neuroscience*, 2004): "Individual differences in subjective interoceptive awareness, and by extension emotional depth and complexity, might be expressed in the degree of expansion of the right anterior insula and adjacent orbitofrontal cortices."
- This expansion arises from therapist's developmental history, her own psychotherapy experience, and her experiences with patients.
- Lenzi (*Cerebral Cortex*, in press): reflective function of empathic mothers show increased activity of right insula.

- Not only empathy but intersubjectivity is dependent on RH function (Decety & Chaminade, 2003).
- Shaw (*Psychotherapy Research*, 2004):
- "Psychotherapy is an inherently embodied process. If psychotherapy is an investigation into the intersubjective space between client and therapist, then as a profession we need to take our bodily reactions much more seriously than we have so far because...the body is 'the very basis of human subjectivity.'"
- Schore (*Psychonal. Dialogues*, 2005): intersubjective transactions between empathic clinician and patient include more than two minds, but *two bodies*.

- Adler (2002) links clinical empathy with therapist's affect attunement, defined as the regulation of physiology. Citing neurobiological studies of attachment (including my own work), he argues that the clinician's use of the empathic process directly affects the patient's psychobiology.
- "Because people in a caring, i.e., empathic relationship convey emotional experiences to each other, they also convey physiological experiences to each other, and this sociophysiological linkage is relevant to the understanding the direct physiologic consequences of caring in the doctor-patient relationship."

- Within co-created right brain-to-right brain intersubjective field (psychobiological interface of two subjectivities), empathic therapist resonates with patient's arousal oscillations and spontaneous implicit expressions of affective engagement/disengagement.
- Machado, Beutler, & Greenberg (1999): "the ability to focus on our own emotional process, or to resonate to others' emotional experiences in interpersonal situations is likely to provide us with important information about others' emotional experiences, enhancing our ability to recognize emotions."
- = expert clinician's expanded capacity for psychobiological resonance.

- Mitchell (2000): "It is in the long and hard struggle to establish an empathic connection that a particular patient can recognize as such and really use that the most fundamental analytic work is done, not in the effective interpretations that presuppose its achievement."
- "There is an enormous difference between false empathy, facile and postured, and authentic empathy, struggled toward through miscues, misunderstanding, and deeply personal work on the part of both the analyst and patient."
- Expert can tolerate the struggle

- *Clinical expertise*: right brain source of *clinical intuition*
- Orlinsky & Howard (1986): the "non-verbal, prerational stream of expression that binds the infant to its parent continues throughout life to be a primary medium of intuitively felt affective-relational communication between persons."
- Intuition: "the ability to understand or know something immediately, without conscious reasoning."
- Commonalities between intuitive psychobiologically attuned primary caregiver (maternal intuition) and an intuitive therapist's sensitive responsiveness to the patient's unconscious nonverbal affective bodily-based intersubjective communications (clinical intuition).

- In cognitive sciences current models of intuition now referred to as an “embodied cognition.”
- Allman et al. (2005): “We experience the intuitive process at a visceral level. Intuitive decision-making enables us to react quickly in situations that involve a high degree of uncertainty which commonly involve social interactions.”
- They show right lateralized frontal-insula and anterior cingulate relay a fast intuitive assessment of complex social situations to allow rapid adjustment of behavior in quickly changing social situations.
- Clinical intuition is a right brain affective strategy for negotiating uncertainty of clinical enactments.

- Volz and von Cramon (2006): intuition is “related to the unconscious,” and is “often reliably accurate.” Derived from stored nonverbal representations, such as “images, feelings, physical sensations, metaphors” (note the similarity to primary process cognition).
- Intuition is expressed in not language but “embodied” in a “gut feeling” or an in initial guess that subsequently biases our thought and inquiry.
- “The gist information is realized on the basis of the observer’s implicit knowledge rather than being consciously extracted on the basis of the observer’s explicit knowledge.”
- Expert’s clinical hunches; somatic countertransference.

- Volz et al. (*Cog. Affective & Behav. Neurosci.*, 2008): intuition represents an implicit “spontaneous judgment process” used in everyday life. As opposed to rational analysis, this fast, implicit, automatic cognitive process is defined as a “feeling of knowing what decisions to make, especially in the presence of uncertainty.”
- Intuitions are “difficult-to-articulate, affect laden recognitions or judgments, which are based on prior learning and experience.”
- “Experts develop an intuitive understanding within their field of expertise through the acquisition of a large number of chunks associated with the relevant action knowledge.”

- Dijksterhuis & Nordgren (*Perspect. Psych. Sci.*, 2006): “immediate intuitions that were good were made by experts (perhaps they have so much knowledge that they can think unconsciously very quickly).”
- Expert clinical intuition is a form of “implicit relational knowledge (Stern et al., 1998) used unconsciously to make rapid spontaneous decisions in heightened affective moments, such as stressful ruptures of attachment bond within therapeutic alliance.
- Stern (*The Present Moment*, 2004): “The vast majority of all we ‘know’ about how to *be* with others (*including the transference*) resides in [implicit] relational knowing.”

- Shotter (1993): Implicit knowledge “does not presuppose conscious reflection or deliberation. It is a knowledge from within our relationships with others, and it determines what we anticipate or expect will happen next...(It) becomes visible only in the process of our interaction with others.”
- Implicit knowledge is embodied, and it relates to how “people are able to influence each other in their being, rather than just in their intellects; that is, to actually ‘move’ them rather than just ‘giving them ideas.”
- Another definition of right brain growth-facilitating capacity an expert psychotherapist.

- Intuition, an expression of RH implicit relational knowledge, also allows expert to detect UCS affect.
- Bugental (1987): describes therapist “being open to intuitive sensing of what is happening in the patient back of his words and, often, back of his conscious awareness.”
- “With experience it can make possible the detection of nuances and feelings that would quite elude any attempt at explicit documentation, the drawing of inferences which are intimately in harmony with the client’s subverbal experiencing, and the phrasing of interventions in terms exquisitely fitted to the client’s needs, both in the moment and long-term.”

- Dijksterhuis & Meurs (*Consciousness and Cognition*, 2006). When one generates thoughts, “conscious thought stays firmly under the searchlight, [whereas] unconscious thought ventures out to the dark and dusty nooks and crannies of the mind.”
- Drago (2008): “Whereas the left hemisphere is dominant for focused attention, the right mediates global or spatially distributed attention, and thus the right hemisphere has an important role in *the ability to see the ‘big picture’ and ‘find the thread that unites.’*”
- Bowlby (1991): “Clearly the best therapy is done the by therapist who is naturally intuitive and also guided by the appropriate theory.”

- *Clinical expertise*: therapist’s right brain affect regulation essential to psychotherapy change process
- Schore (1994-2009): RH interactive affect regulation (mechanism of attachment) expressed across lifespan, including change process of psychotherapy.
- Ponsi (2000): therapeutic alliance now defined as “the regulation of the collaborative relationship between patient and analyst.”
- Clinician’s effectiveness related to capacity to act as an implicit right brain interactive affect regulator of patient’s positive and negative affects. This enables patient, at an UCS level, to experience increasing trust and safety, allowing defenses to be lowered.

- This regulatory skill most highly cultivated in clinical experts, whose effectiveness in short term effectively reduces intensity of patient’s traumatic affective states, and in long term efficiently alters developmental trajectory of an early forming personality disorder associated with a history of attachment trauma.
- Clinical expertise related to therapist’s right brain capacity to remain psychobiologically connected to patient during stressful ruptures.
- Aspland (*Psychotherapy Res.*, 2008): “ruptures are points of emotional disconnection between client and therapist that create a negative shift in the quality of the therapeutic alliance.”

- Castonguay et al. (1996) describe ruptures that resulted from rigid adherence to a treatment model. These ruptures occurred when therapists responded to strains in relationship by persisting dogmatically with application of a therapeutic technique rather than attending to the patient’s concerns and exploring the patient’s difficult emotional experience and its impact.
- “Safran and Muran (1996) define ruptures as “deteriorations in the relationship between therapist and patient” indicated by “patient behaviors or communications that are interpersonal markers indicating critical points in therapy for exploration.”

- Aspland et al. (2008): ruptures are “episodes of covert or overt behavior that trap both participants in negative complementary interactions..an interactive process that involves both client and therapist contributions.”
- “A central idea emerging from this work is the importance of therapists recognizing and acknowledging problems in the relationship...Another repeated theme is the suggestion that ruptures can have positive consequences if successfully resolved.”
- “Therapists’ ability to attend to ruptures emerged as an important *clinical skill.*”

- This clinical skill is capacity to remain “emotionally available” to patient during stressful ruptures of therapeutic alliance. RH availability expressed not in LH interpretation but “self-disclosure.”
- Ginot (1997). Self-disclosure is not...a way to promote a sense of intimacy through seemingly similar shared experience. Rather, the emphasis here is on revealing emotional data growing from and organically related to the intersubjective matrix.”
- Renik (1999): “A willingness to self-disclose on the therapist’s part facilitates self-disclosure by the patient, and therefore productive dialectical interchange between therapist and patient is maximized.”

- Joint exploration of attachment ruptures takes dyad out of left and deeper into right-lateralized cortical and subcortical realm, biological substrate of UCS of each.
- Bugental (1987): “There is a crucial difference between attending to patient reports of subjective experience and actually coming into immediate intersubjective communication.”
- Direct corollary of this neuropsychanalytic model is the complexity of patient’s right brain unconscious can only go as far as the therapist’s unconscious.
- Therapist’s affect tolerance determines types, ranges, and intensities of emotions explored or disavowed in therapeutic alliance.

- Whitehead (*J Amer Acad Psychoanal Dynamic Psychiatry*, 2005):
- “Every time we make therapeutic contact with our patients we are engaging profound processes that tap into essential life forces in our selves and in those we work with.”
- “Emotions are deepened in intensity and sustained in time when they are intersubjectively shared. This occurs at moments of *‘deep contact.’*”
- This regulatory capacity of clinician’s right brain to make not surface but deep contact of mind and body is critical to depth of change process.

- At moments of deep contact, resonance between patient’s relational unconscious and clinician’s relational unconscious produces an amplification of arousal and affect, and so unconscious affects are deepened in intensity and sustained in time.
- This increase of emotional intensity (increased energetic arousal) results from interactive affect regulation, and allows bodily-based affects beneath levels of awareness to emerge into consciousness of both members of intimate dyad.
- Bottom-up interactive regulatory mechanism by which unconscious dissociated affects appear in consciousness (bodily-based felt experience).

- Greenberg (*Clinical Psychology Sci. and Pract.*, 2007) describes 2 forms of regulation:
- A “self-control” form of emotion regulation involving higher levels of cognitive executive function that allows individuals “to change the way they feel by consciously changing the way they think.”
- This *explicit form of affect regulation* is performed by the verbal left hemisphere, and unconscious bodily-based emotion is usually not addressed in this model.
- Notice this conscious mechanism is at core of insight, heavily emphasized in not only classical psychoanalysis, mentalization, and CBT.

- In contrast to this conscious emotion regulation system, Greenberg describes a second, more fundamental *implicit affect regulatory system* is performed by the right hemisphere.
- This system rapidly and automatically processes facial expression, vocal quality, and eye contact in a relational context.
- “The field has yet to pay adequate attention to implicit and relational processes of regulation.”
- Sullivan & Dufresne (*Brain Research*, 2006): describe “the right hemispheric specialization in regulating stress - and emotion-related processes.”

- Greenberg (2007): this form of therapy attempts not control but the “acceptance or facilitation of particular emotions,” including “previously avoided emotion,” in order to allow the patient to tolerate and transform them into “adaptive emotions.”
- Citing my work he asserts, “it is the building of implicit or automatic emotion regulation capacities that is important for enduring change, especially for highly fragile personality-disordered clients.”
- Schore & Schore (2008): clinician’s vary in not only implicit capacity of negative and positive affect tolerance, but also in ability to implicitly regulate positive and negative affect states.

- Especially in cases of early forming severe psychopathologies, therapist's role much more than applying technique of interpreting either relational distortions of the transference, or unintegrated affective-laden attachment experiences that occur in incoherent moments of the patient's narrative.
- We need to go beyond objectively observing the disorganization of left brain language capacities by dysregulating right brain states and feeding this back to the patient in insight-oriented interpretations.

- Maroda (1999): "Interpretation given when affect is needed amounts to anti-communication, resulting in the patient getting worse."
- Sands (1997): "If I allow myself to be taken over by the patient's experience, successfully contain it (and wait until later to interpret it), she becomes calmer and more organized, and her need to communicate through me decreases in intensity."
- Bromberg (2006): "I do not try to attribute a psychodynamic meaning to the emotion. I stay with the structural implications of the experience, the effect on his mental functioning."

- Maroda (1999): "The therapist who places too much emphasis on thoughts and interpretations, and avoids having strong feelings, cannot only fail to stimulate affective expression and management in her patients, but will also fail to think optimally about the patient's condition and needs."
- "The essential role of emotions in effective information processing highlights not only the patient's need for ongoing, regulated affect, but also the therapist's."
- Schore (*Psych. Dial.*, 2005): therapy is not the left brain "talking cure" but the right brain "affect communicating and regulating cure."

- Cloitre (*J. Counsel. Clin. Psych.*, 2004): "In the treatment of childhood abuse-related PTSD, the therapeutic alliance and the mediating influence of emotion regulation capacity appear to have significant roles in successful outcome."
- Foa, Stein, & McFarlane (*J. Clinical Psychiatry*, 2006): "There are data to suggest that emotions associated with PTSD symptoms are mediated by the limbic and paralimbic systems in the right hemisphere."
- "Treatment of PTSD, whether by medication or psychotherapy, may reverse the functional and structural changes in the affected systems, leading to normalization of responses to stress."

- It is undoubtedly true that both brain hemispheres contribute to effective therapeutic treatment. Explicit knowledge we gain from studying the increasing amount of clinical and scientific information on development, psychopathogenesis and psychotherapy process is essential to our professional growth.
- But in an array of emotionally charged clinical moments, the skilled therapist is flexibly accessing a storehouse of right brain implicit relational knowledge and a wide range of affective experiences gained over course of his/her career.

- Previous version of clinical expert based on left brain cognitive model that over-emphasized the role of interpretation and insight in the change mechanism.
- Expert could control emotion; not get swept up into affective tsunami of the transference; remain "neutral" and detached so as to more effectively interpret; remain "uncontaminated" from potentially overwhelming intense affective/motivational states.
- Left brain conscious cognition, verbal, analytic "reason" has been overvalued. Current "primacy of affect."
- Neuroscience shows that LH has other functions, that may not facilitate but interfere with the therapy process.

- Damasio (1999): “Perhaps the most important revelation of human split-brain research is precisely this: that the left cerebral hemisphere of humans is prone to fabricating verbal narratives that do not necessarily accord with the truth.”
- Rotenberg (2003): LH constructs “a pragmatically convenient but simplified model of reality.”
- Panksepp (2008): “When left hemispheric propositional language becomes decoupled from affective values, it readily confabulates, becoming untrustworthy and less authentic...often in attempts to manipulate the minds of others.”

- Kuhl & Kazen (*J. Person. Soc. Psych.*, 2008): “Instrumental planning and linear thinking (presumably associated with the left hemisphere) may be more typical of power motivation, whereas (right hemispheric) holistic and intuitive processing may be more conducive to affiliation-related motivation involving sharing in close relationships.”
- “Persons with high levels of power...tend to perceive others as a means to satisfying one’s personal goals and desires...Alternatively, Schore (2001) summarized studies of RH involvement in empathy (which can be regarded as a correlate of the need for affiliation).”

- van Kleef (2008): “elevated social power is associated with diminished reciprocal emotional responses to another person’s suffering (feeling distress at another person’s distress) and with diminished complementary emotion (e.g., compassion).”
- “Mentalization” (and CBT) change models: “The analyst’s role becomes *making* the patient aware of regressions to action modes, understanding the reasons for doing so, and *subordinating* this tendency to the verbal, symbolic mode.”
- [LH power dynamics over RH empathy in counter-transference and enactments. Or parenting - caregiver responding to attachment communications with LH instead of RH.]

- Shrira & Martin (*Pers. Soc. Psych. Bull.*, 2005): “Generally, the left hemisphere uses tightly organized knowledge representations to guide the acquisition and processing of information (e.g., top-down), whereas the right hemisphere tends to track environmental input in a more open, online way (e.g., bottom-up).”
- “This makes the right hemisphere especially efficient in the processing of novel stimuli...This ability makes the right hemisphere more useful than the left in learning a new task and building an experiential base.”
- [Right brain altered in corrective emotional experience]

- *Paradigm shift*: right brain functions of both patient and effective therapist are essential to relational-affective psychotherapeutic change process, especially self-exploration of unconscious affects that can be potentially integrated into a more complex implicit sense of affective core of the self.
- “Extreme emotional arousal results in failure to integrate traumatic memories” (van der Kolk, 1996).
- Treatment facilitates development of the “right brain’s powerful integrative processing” (Schutz, 2005).
- Right brain acts in “the highest human mental function, responsible for creativity and integration of past, present, and future experience.” (Rotenberg, 2004).

- Weinberg (*Neurosci. Biobehav. Rev.*, 2000): “The right hemisphere is ‘open’ to real-life occurrences as opposed to the openness of the left hemisphere to constructing logical structures that are shut off from the outside world...Only the right hemisphere enables one to sustain experiences in their complexity and in interactive and mutually enriching connections between their various components.”
- “Furthermore, this ability to represent the experiences in a multidimensional way generates a need for new experiences in order to further enrich, deepen, and organize them.”
- [Emotional RH locus of therapeutic change processes]

- *Paradigm shift in models of psychotherapeutic change*
- Bromberg (2006): change “takes place not through thinking ‘If I do this correctly, then that will happen’ but, rather, through an ineffable coming together of two minds, in an unpredictable way.”
- Schore (*Psychoanalytic Dialogues*, in press): “At the most essential level, the work of psychotherapy is not defined by what the therapist explicitly, objectively *does* for the patient, or *says* to the patient.
- Rather key mechanism is how to implicitly and subjectively *be* with the patient, especially during affectively stressful moments when ‘going-on-being’ of the patient’s implicit self is dis-integrating in real time.”

- Right brain affect regulation: an essential mechanism of development, trauma, dissociation, and psychotherapy. To be published in *The Healing Power of Emotion: Integrating Relationships, Body and Mind. A Dialogue Among Scientists and Clinicians*. Norton.
- Relational trauma and the developing right brain: An interface of psychoanalytic self psychology and neuroscience. To be published in the *Annals of the New York Academy of Sciences*.

- The right brain implicit self lies at the core of psychoanalysis. To be published in *Psychoanalytic Dialogues*.
- Attachment trauma and the developing right brain: origins of pathological dissociation. To be published in *Dissociation and Dissociative Disorders: DSM-V and Beyond*. Routledge.
- Modern attachment theory: the central role of regulation in development and treatment. *Clinical Social Work Journal*, 2008.