

# PSYCHOANALYTIC RESEARCH: PROGRESS AND PROCESS DEVELOPMENTAL AFFECTIVE NEUROSCIENCE AND CLINICAL PRACTICE

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Over a number of years members of my study groups and I have used this column to offer contributions to psychoanalytic research, especially as it relates to clinical practice. I have suggested that an integration of psychoanalytic information with observational studies and experimental data from the disciplines that border our field, especially neuroscience, can offer a deeper understanding of both the function and structure of the human unconscious. Psychoanalytic research informed by interdisciplinary knowledge can be not only experimental but theoretical, capable therefore of acting as a fertile source to both pragmatic clinical applications and to the generation of testable hypotheses. In this column I use a perspective from neuropsychology and affective neuroscience in order to offer a model of clinical expertise.

## CLINICAL EXPERTISE: INTRODUCTION—THE PRIMACY OF AFFECT

There is currently a palpable sense that psychoanalysis is undergoing a significant transformation, indeed a paradigm shift. A powerful engine for the increased energy and growth in the field is the ongoing dialogue it is having with neighboring disciplines, especially the developmental sciences and neuroscience. This mutually enriching communication is centered on common interests in the critical role of relational-emotional contact between humans, the impact of these processes on brain systems that regulate bodily-based survival functions, and the primacy of affect. In a recent editorial of the journal *Motivation and Emotion*, Richard Ryan asserts,

After three decades of the dominance of cognitive approaches, motivational and emotional processes have roared back into the limelight. Both researchers and practitioners have come to appreciate the limits of exclusively cognitive approaches for understanding the initiation and regulation of human behavior . . . More practically, cognitive interventions that do not address motivation and emotion are increasingly proving to be short-lived in their efficacy, and limited in the problems to which they can be applied. (2007, p. 1)

Although Freud argued that the work of psychotherapy is always concerned with affect, until recently psychoanalytic conceptualizations of the change process have been dominated by models of cognition, too frequently focused only on verbal, conscious cognition. During this period

of cognitive dominance, clinical applications of advances in theory mainly involved an attempt to construct more efficient interpretations, in order to more effectively make unconscious content conscious to the patient. This emphasis on verbal content and insight as the major change mechanism thereby focused on improving the analytic processing of the patient's (and therapist's) left hemisphere. In contrast to the prevailing privileged status of verbal, conscious cognition, in my first book I suggested that affects are at the psychobiological core of the therapist's empathic emotional communications, that the regulation of conscious and unconscious feelings is placed in the center of the clinical stage, and that right brain emotional processes are essential to development, psychopathology, and psychotherapy (Schore, 1994).

At this point in time all forms of psychotherapy are emphasizing the centrality of affect. Yet in contrast to other clinical approaches, psychoanalysis, the science of unconscious processes, places not just conscious but unconscious affect at the core of the therapeutic mechanism. If in the recent past psychology as a whole trivialized the concept of the unconscious, current neuroscience now is focusing on the critical role of affective processes that lie beneath levels of conscious awareness, an area of intense interest to Division 39.

Neurobiological studies are now reporting that only the right and not left hemisphere responds to preattentive negative emotional stimuli (Kimura, 2004), and are describing a "right hemispheric dominance in processing of *unconscious negative emotion*" (Sato & Aoki, 2006) and a "cortical response to *subjectively unconscious danger*" (Carretie, 2005). Indeed, even cognitive science is now asserting that "approaches to emotion require a theory of *unconscious subjectivity* to handle the case of unconscious emotion" (Neisser, 2006, p. 1). These data clearly imply that a patient's inability to consciously experience an ongoing state of unconscious danger and to regulate unconscious negative affect is a primary target of treatment.

An organizing principle of regulation theory is that attachment communications are implicit, affective and nonverbal, and that unconscious affect regulation plays a critical psychobiological role within mother-infant and patient-therapist dyads (Schore, 1994, 2003). A young infant functions in a fundamentally unconscious way, and unconscious processes in an older child or adult can be traced back to the primitive functioning of the infant. This neuropsychanalytic perspective argues that

both optimal development and effective psychotherapy promote an expansion of the complexity of the right brain implicit self, the psychobiological substrate of the human unconscious. This right lateralized system is dominant for the regulation of affect and bodily states, stress, empathy, pain, intersubjectivity, self-awareness, intuition, creativity, and humanness. As compared with classic cognitive and behavioral approaches, psychodynamic treatment is conceptualized to act as a growth-facilitating environment for not left brain conscious emotion regulation but right brain unconscious affect regulation.

Over the course of my writings I have integrated data from a number of sciences with the rich history of psychoanalytic clinical observations to suggest that the right hemisphere, “the locus of emotional brain,” represents the early developing unconscious system described by Freud. This model emphasizes not left hemisphere conscious verbal content, but right hemisphere nonconscious affective process, not mental states of mind but psychobiological states of mind–body. Recent studies of the early developing right brain demonstrate the unique capacities of right–lateralized cortical–subcortical systems in the processing and regulation of affects at all points of the lifespan and in all intimate contexts, including the therapeutic alliance.

This organizing principle of affective dynamics has direct implications for the treatment of all forms of psychopathology, especially early forming personality disorders. These more severely disturbed patients lack a reflective function, and are refractory to insight–driven cognitive interventions. The effective treatment of patients whose subjectivity is dominated by chronic dysregulated unconscious affects requires much more than clinical techniques that focus on “content analysis” and accurate interpretations in order to change self cognitions.

As Alvarez (2006) describes this shift in treatment approach, “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” (p. 171).

There is now extensive evidence to show that unconscious processing of emotional stimuli is specifically associated with activation of the right hemispheric implicit self (Schoore, 2005). Decety and Chaminade’s (2003) overview of the adaptive functions of this hemisphere also describe essential elements of the psychotherapy change process:

Mental states that are in essence private to the self may be shared between individuals . . . self-awareness, empathy, identification with others, and more generally intersubjective processes,

are largely dependent upon . . . right hemisphere resources, which are the first to develop. (p. 591)

The current paradigm shift into the nonconscious affective-relational functions of the right brain has direct bearing upon the underlying mechanisms of the change process as it is expressed in the intersubjective field. This perspective highlights the clinician’s role as a co-participant in the creation of the therapeutic alliance, and as a regulator of the patient’s dysregulated affective states. A just published study in the *American Journal of Psychiatry* reports that an affective treatment focus is critical to therapeutic effectiveness, and that “the more therapists facilitate the affective experience/expression of patients in psychodynamic therapy, the more patients exhibit positive changes” (Diener et al., 2007, p. 939). As a result of their analysis of a large body of psychotherapy process-outcome research they conclude, “research indicates that contemporary psychodynamic therapies place greater emphasis on encouraging experience and expression of feelings compared with cognitive behavior therapies” (2007, p. 936).

With this paradigm shift from cognition to affect and from left to right brain functions, the important question of what makes an effective therapist must now be reformulated. What types of therapist expertise allow for effective reception and expression of unconscious nonverbal affective communications? Why are certain therapists more capable of co-creating a therapeutic alliance with a broader array of different types of patients? Which therapeutic skills are required for clinical efficacy, especially in working with the deficits in affective processing that routinely accompanies the attachment pathologies of early onset severe personality disorders? How do we define clinical expertise that promotes this expansion of the right brain human unconscious?

In upcoming sections, I will discuss the implications of the paradigm shift for models of clinical expertise. I will provide recent interdisciplinary data which indicates that the therapist’s right (and not left) brain generates the essential components of this expertise. These right brain functions of the skilled therapist act on implicit levels: clinical sensitivity, defined as the ability to receive and express nonverbal affective communications; clinical empathy and the therapist’s right brain activity within the intersubjective field; clinical intuition, and the therapist’s capacity for interactive affect regulation. All technique sits atop the therapist’s ability to access the implicit realm. A developmental neuropsychanalytic perspective suggests that the art and science of psychotherapy are directly linked to the functioning of the clinician’s right brain, which deepens and expands with clinical experience.

**CLINICAL EXPERTISE: SENSITIVITY - THERAPIST'S ABILITY TO RECEIVE AND EXPRESS RIGHT BRAIN NONVERBAL AFFECTIVE COMMUNICATIONS**

It is now well established that the therapist's ability to form an alliance is possibly the most crucial determinant of her effectiveness. According to Safran and Muran (2000), "after approximately a half century of psychotherapy research, one of the most consistent findings is that the quality of the therapeutic alliance is the most robust predictor of treatment success" (p. 1). In this current period of increased emphasis on "evidence-based practice," Karver et al. (2006) performed a meta-analysis of therapeutic relationship variables and asserted:

The empirically supported treatment movement has largely ignored more universal aspects of the therapeutic process that may be of even greater importance to treatment outcomes. [C]ommon process factors reportedly account for 30% of the variance in adult treatment outcomes, above and beyond the 15% of variance accounted for by specific techniques. Furthermore, empirical research suggests that one common process factor, the therapeutic alliance, is among the most robust predictors of treatment outcomes for both adult and young clients. (pp. 50-51)

This research is mirrored in current relational and attachment models in psychoanalysis. It has also been incorporated into a recent APA Presidential Task Force on Evidence-Based Practice (2006), which concludes that "psychological practice is, at root, an interpersonal relationship between psychologist and patient" (p. 277). They note an essential task of the clinical expert is to monitor the therapeutic alliance:

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*. (p. 277, my italics)

In line with this description, I have demonstrated that implicit attachment communications are expressed within the therapeutic alliance, and that they are expressed in ultra-rapid transactions of nonverbal facial expressions, gestures, and prosody between the patient's and therapist's right brains (Schore, 2005). Furthermore, with intimations of failed manualized treatment attempts, the APA Task Force reports that "Research suggests that *sensitivity* and

flexibility in the administration of therapeutic interventions produces better outcomes than rigid application of . . . principles" (p. 278, my italics).

The concept of sensitivity is, of course, also important in the developmental attachment literature, where Ainsworth (1978) referred to the importance of the mother's "sensitive responsiveness to infant signals and communications." According to Van den Boom (1997) the sensitive caregiver packages her social interactive behavior in such a way in the interaction flow that it promotes rather than interrupts the exchange. These authors then expanded the concept, stating, "It would be more fruitful to think of sensitivity not as a parenting dimension that exists apart from other dimensions, but rather, as permeating all interactive behavior" (p. 593). This surely includes the sensitive clinician's interactive behavior within the attachment bond co-created within therapeutic alliance.

In more recent attachment research Schachner, Shaver, and Mikulincer (2005) propose that sensitivity to a relationship partner's nonverbal behavior directly influences the quality of interpersonal interactions and relationships, including all forms of attachment relationships. These authors point out that "adult attachment researchers have not paid much attention to *patterns of nonverbal behavior and sensitivity*" (pp. 147-147, my italics). Indeed, the findings of Roter et al. (2005) on the central role of the expression of emotion through nonverbal behavior in the physician-patient relationship applies directly to the therapist-patient relationship: "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" (p. S28).

In writings on "the art of psychotherapy" Bugental (1987) asserts,

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. 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. (p. 222)

The dictionary definition of sensitivity is "susceptible to the attitudes, feelings, or circumstances of others; *registering*

*very slight differences or changes of emotion*“ (American Heritage Dictionary, my italics). Bugental’s (1987, p. 267) proposal that the therapist’s sensitivity allows her to “learn to experience finer and finer distinctions or nuances” and to “pick up faint hints of emotions” reflects Reik’s (1948, p. 141) earlier suggestion that clinical skill requires that the clinician is ready to “trust tiny stimuli and register tiny impressions” that may be “hardly noticeable.” From a neuropsychanalytic perspective, I have described operations of the 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” (Schore, 2005, p. 845).

Neuropsychological studies of emotionally toned stimuli presented too rapidly for conscious identification indicate “greater sensitivity in the right than left hemisphere” (Snodgrass & Harring, 2004-2005, p. 318). Describing the unique operations of the right hemisphere in “preconscious processing” these authors note,

Evidence from a variety of sources indicates that certain aspects of stimuli can be processed preattentively, and that conscious awareness is not necessary for a stimulus to influence behavior. Moreover, in some situations stimuli presented below awareness are more influential than information that is presented at an individual’s level of awareness. One such factor that seems to have a reliable pre-attentive influence is the attitudinal or emotional quality of the stimulus. (p. 318)

Congruent with my model of a common neurobiological mechanism underlying maternal and clinical sensitivity to right brain-to-right brain implicit nonverbal communications of facial expressions, prosody and gesture, Jacobs (2005) details the 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 (p. 181) . . . They operated . . . as an early signal system for affects that were approaching, but had not yet reached consciousness. (p. 182)

Just as the left brain communicates its conscious states to other left brains via linguistic behaviors, so the right brain

communicates its unconscious states to other right brains *that are tuned to receive its communications*. Clinical sensitivity thus relates to the depth and breadth of the therapist’s capacity to psychobiologically attune to an array of conscious and especially unconscious affective states. This sensitivity to not only unconscious verbal content but unconscious psychobiological process directly relates to Freud’s assertion that the clinician must “turn his own unconscious like a receptive organ towards the transmitting unconscious of the patient . . . so the doctor’s unconscious is able . . . to reconstruct [the patient’s] unconscious” (1912, p. 115).

#### **CLINICAL EXPERTISE: EMPATHY AND THERAPIST’S RIGHT BRAIN ACTIVITY WITHIN THE INTERSUBJECTIVE FIELD**

Recall the APA Task (2006) assertion that the clinical expert is capable of “responding empathically to the patient’s explicit and implicit experiences and concerns.” Stimulated by the groundbreaking explorations of Kohut, a large body of observations within psychoanalysis now definitively indicates the central role of empathy in the change process. I refer the reader to my discussions of the critical role of psychobiological-affective (in contrast to purely cognitive) empathy in my books (Schore, 1994, 2003). Meares (2005) concludes that the therapist’s capacity for empathy is the principal agent of beneficial change in the patient. In summarizing the field, Watt (2005) now asserts that empathy has been long hypothesized as a critical, and possibly the most critical, outcome variable from the therapist’s side.

This well-established clinical principle is supported in current studies demonstrating that perceived clinician empathy is associated with decreased psychological problems and increased health-related behaviors (Cape, 2001), whereas an absence of perceived empathy is one of the best indicators of poor psychotherapy outcome (Mohr, 1995). Interestingly, clinical empathy is now being studied not only in psychoanalysis, clinical psychology, and psychiatry but also in internal medicine, where studies demonstrate the importance of nonverbal emotional transactions in the patient-physician relationship (Larson, 2005).

In line with the above-mentioned emphasis on psychobiological affective states, research is focusing on the physiological correlates of perceived therapist empathy and social-emotional process during psychotherapy (Marci et al., 2007). Adler (2002) links the therapist’s affect attunement, defined as the regulation of physiology, and clinical empathy. 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 understanding the direct physiologic consequences of caring in the doctor-patient relationship. (Adler, 2002, p. 182)

Even more specifically, Adler provides evidence to show that individuals in an empathic relationship co-regulate each other's autonomic nervous system activity. In this manner, empathic sociophysiological connections within the therapeutic relationship reduce the patient's stress-induced affective arousal.

Neuroscience is also contributing to a deeper understanding of affective empathy. In line with the accepted clinical principle that "the most striking evidence of successful empathy is the occurrence in our bodies of sensations that the patient has described in his or hers" (Havens, 1979, p.42), current models of somatic countertransference hold that the therapist decodes nonconscious communications of the patient's right-lateralized unconscious mind by actual felt (somatic) emotional reactions, by a form of empathic responding (Schore, 2003). Indeed a growing body of neurobiological research reveals that the right hemisphere is dominant for affective empathy (Schore, 1994; Leslie, Johnson-Frey, & Grafton, 2004; Shamay-Tsoory et al., 2005).

Recall that not only empathy but also intersubjectivity is dependent upon right hemisphere function (Decety & Chaminade, 2003). In light of the ongoing relational emphasis in psychoanalysis, there is an intense interest in the essential neuropsychanalytic processes that occur at the interface of two subjectivities. (Ginot, 2007). In my own work I have argued that the empathic therapist resonates with the patient's spontaneous implicit nonverbal expressions of engagement and disengagement within the co-constructed intersubjective field. More than explicit left brain-to-left brain verbal communications, implicit right brain-to-right brain intersubjective transactions lie at the psychobiological core of the intersubjective field.

Bugental (1987) describes the clinical expertise involved in such explorations of the "depths of the patient's subjectivity":

Concentrating work in this area distinguishes therapists more deeply engaged with their patients, just as it challenges them with the most difficult and personally confronting issues . . . much of this realm is implicit rather than explicit (p. ix) . . . This focus calls for continual attention to the patient's inner experiencing, and it recognizes that the prime instrument needed for that attention is the therapist's own subjectivity. (p. 3)

In a similar conception, Whitehead (2005) notes, "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." (p. 624, my italics)

During heightened affective moments these right brain intersubjective dialogues between the relational unconscious of both the patient and therapist (like the attachment communications of the infant and mother) are examples of "primary process communication" (Dorpat, 2001). According to Dorpat, "The primary process system analyzes, regulates, and communicates an individual's relations with the environment" (p. 449). Furthermore,

[A]ffective and object-relational information is transmitted predominantly by primary process communication. Nonverbal communication includes body movements (kinesics), posture, gesture, facial expression, voice inflection, and the sequence, rhythm, and pitch of the spoken words. (Dorpat, 2001, p. 451)

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Interestingly, in addition to psychoanalytic authors who have implicated the right brain in primary process functions (see Schore, 1994), neuroscience researchers now contend that “the right hemisphere operates in a more free-associative, primary process manner, typically observed in states such as dreaming or reverie” (Grabner et al., 2007, p. 228).

The capacity of the empathic clinician’s right brain primary process system to make not surface but deep contact of mind and body within the intersubjective field is critical to the depth of the change process activated in the therapeutic growth-facilitating environment.

#### **CLINICAL EXPERTISE: RIGHT BRAIN SOURCE OF CLINICAL INTUITION**

Developmental psychoanalysis and neuropsychology can also make important contributions to our understanding of the sources and mechanism of clinical intuition. With allusions to the right brain, Orlinsky and Howard (1986, p. 343) contend that 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.”

There are thus direct commonalities between spontaneous interactions of an intuitive psychobiologically attuned primary caregiver and an intuitive therapist’s sensitive responsiveness to the patient’s unconscious nonverbal affective bodily-based intersubjective communications.

In the cognitive sciences current models of intuition now include the concept of “embodied cognition.” Allman et al. (2005, p. 370) assert, “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.” In the cognitive neuroscience literature Volz and von Cramon (2006) conclude that intuition is related to the unconscious, and is “often reliably accurate.” It is 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 in an 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” (p. 2084).

Indeed, the definition of intuition, “the ability to understand or know something immediately, without conscious reasoning” (*Oxford English Dictionary*), clearly implies right and not left brain processing. In the clinical literature it is now thought that

to patient reports of subjective experience and actually coming into immediate intersubjective communication . . . [This means] being open to intuitive sensing of what is happening in the patient back of his words and, often, back of his conscious awareness. (Bugental, 1987, p. 11)

Marcus (1997, p. 238) observes, “The analyst, by means of reverie and intuition, listens with the right brain to the analysand’s right brain.” Supporting this proposal, research indicates that the right lateralized frontal-insula and anterior cingulate relay a fast intuitive assessment of complex social situations in order to allow the rapid adjustment of behavior in quickly changing social situations (Allman et al., 2005).

In his last work Bowlby (1991, p. 16) speculated, “Clearly the best therapy is done the by therapist who is naturally intuitive and also guided by the appropriate theory.” This theory should include neuropsychanalytic understandings of the therapist’s right brain, which are describing the underlying unconscious psychobiological mechanisms of clinical intuition itself.

#### **CLINICAL EXPERTISE: THERAPIST’S RIGHT BRAIN AFFECT REGULATION ESSENTIAL TO THE CHANGE PROCESS**

Throughout my writings I have provided a large body of clinical data and experimental evidence to show that implicit interactive affect regulation, the psychoneurobiological mechanism of attachment, is a central organizing principle of development at all points of lifespan, including the change process of therapy. The relevance of developmental attachment studies to psychotherapeutic process lies in the commonality of implicit intersubjective implicit right brain-to right brain affect communicating and regulating mechanisms in the caregiver–infant relationship and therapist–patient relationship. A good deal of this work has focused on the commonality of the unconscious affect dysregulating mechanisms in the stressed insecure infant and the symptomatic patient. In this contribution I have concentrated on common right brain mechanisms in the growth-facilitating environment created by the secure mother and the expert clinician. These neuropsychanalytic data are now being incorporated into clinical models (e.g., Siegel, 1999; Cozolino, 2002; Ragan, 2006; Wilkinson, 2006; Ginot, 2007).

At the psychobiological core of the therapeutic alliance is the attachment bond of emotional communication and affect regulation. The therapeutic alliance is now defined as the regulation of the collaborative relationship between patient and analyst. In this intersubjective right brain-to-right brain relationship, the psychobiologically attuned clinician’s implicit regulation of

There is a crucial difference between attending

a variety of negative and positive affective states allows the patient, at a nonconscious level, to experience an increasing level of trust and safety. Clinicians vary in this regulatory capacity, just as mothers do. A recent study of the NICHD Early Child Care Research Network (2004, p. 4) reports, "Some caregivers may be better able to help their young children learn to use and manage potent affects, whereas others may be less skilled."

This same principle applies to variations in affect regulatory skills amongst clinicians (of whatever form of psychotherapy). This skill is most highly cultivated in clinical experts, whose effectiveness in the short term effectively reduces a patient's traumatic affective symptomatology, or in the long term efficiently alters the developmental trajectory of an early forming personality disorder associated with a history of attachment trauma. Such clinical expertise is directly related to the therapist's right brain adaptive capacity to implicitly process and regulate the patient's dysregulated negative affect states. Recall that the APA definition of clinical expertise refers to an ability to form a therapeutic relationship, to encode and decode nonverbal responses, and to respond empathically to the patient's implicit experiences and concerns (APA Presidential Task Force on Evidence-Based Practice, 2006). It is well known that patients with borderline personality disorder (essentially a disorder of affect regulation) have the most difficulty engaging in a therapeutic alliance, and that more experienced therapists are better able to develop alliances with such patients.

A fundamental tenet of current clinical psychoanalytic models, especially with more disturbed patients is that in moments of "deep contact" the therapist's unconscious will (and should) have a significant impact on the patient's. At moments of deep contact within the intersubjective field, the resonance between the patient's relational unconscious and the clinician's relational unconscious produces an amplification of arousal and affect, and so unconscious affects are deepened in intensity and sustained in time. The increase in intensity (energetic arousal) thus allows bodily-based affects beneath levels of awareness to emerge into consciousness of both members of an intimate dyad. This right brain-to-right brain intersubjective psychobiological context thus generates heightened affective moments, (i.e., "moments of meeting"). A direct corollary of this neuropsychanalytic model is the complexity of the patient's right brain unconscious can only go as far as the therapist's unconscious. This joint exploration takes them out of the left and deeper into the right-lateralized cortical and subcortical realm of the biological substrate of the unconscious.

According to Van Lancker and Cummings (1999,

p. 96), "Simply stated, the left hemisphere specializes in analyzing sequences, while *the right hemisphere gives evidence of superiority in processing patterns.*" This brings up the question, beneath the patient's verbal sequences, what kinds of right brain patterns is the sensitive clinician implicitly attending to and regulating? Maroda (2005) notes Freud posited that transference represents an established *pattern* of relating and emotional responding that is cued by something in the present. Neuropsychanalytic models describe nonverbal emotional transference-countertransference transactions between the right brain implicit self of the patient and therapist. Recall, "adult attachment researchers have not paid much attention to *patterns* of nonverbal behavior and sensitivity" (Schachner et al., 2005). In my first book I concluded, "The core of the self lies in *patterns* of affect regulation that integrate a sense of self across state transitions, thereby allowing for a continuity of inner experience" (Schoore, 1994, p. 33). The therapist's preconscious tracking of right brain patterns thus represents a self monitoring of psychotherapy "process" (versus left brain verbal "content").

A dictionary definition of regulation describes its psychological function: "the action or process of regulating a thing or person; the state of being regulated" (*The New Shorter Oxford*). Interactive regulation consists of two separate processes: affect synchrony that establishes and maintains positive affective states, and interactive repair that minimizes negative affective states and allows recovery from affective ruptures of the attachment bond. Clinicians vary in not only an implicit capacity for negative and positive affect tolerance, but also in the ability to implicitly regulate negative and positive affect states. Bennett et al. (2006) observe, "Because clients are vulnerable to iatrogenic deterioration and intolerant of therapeutic errors, therapist skill is likely to be a major factor. Irrespective of therapy type, competence in the task of resolving alliance threats and ruptures is a key to helping these clients towards a successful therapeutic outcome" (p. 396).

In a similar vein Stark (1999) notes, "The therapist's handling of the feelings the patient projects requires considerable effort, skill, and strain on the therapist's part, because the feelings with which the patient struggles are highly charged, painful areas of human experience that are probably as conflictual for the therapist as they are for the patient." (p. 276). This clinical skill of "handling" the patient's feelings involves the therapist's capacity to autoregulate these painful affects. Like the securely attached mother, the empathic psychobiologically attuned clinician's regulation of the patient's affective-arousal states is critical to transforming the patient's insecure nonconscious internal working model that encodes strategies of affect regulation.

At the beginning of this column I proposed that the current paradigm shift into the nonconscious affective-relational functions of the right brain has important implications for models of the psychotherapy change process. Regulation theory clearly suggests that especially in cases of early forming severe psychopathologies, the therapist's role is much more than 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. Rather, we can directly engage and therefore regulate the patient's inefficient right brain processes with our own right brains.

Clinical sensitivity, empathy, intuition, and affect regulation are all manifestations of the therapist's emotional intelligence, the adaptive capacity by which emotions are perceived, understood and used to guide effective human behaviors. This function, which is distinct from cognitive intelligence, is mediated by the processing of the ventromedial prefrontal cortex, somatosensory cortex, amygdala and insular cortex, especially on the right side (Bar-On et al., 2003). According to these authors, emotional intelligence, equated with empathy, "emotional awareness," and "psychological mindedness," is expressed in the ability to "function interpersonally," to "control emotions," and to "cope flexibly with the immediate situation, make decisions and solve problems of a personal and interpersonal nature."

Within the therapeutic alliance the most difficult clinical decisions occur in the spontaneous moment-to-moment unconscious transactions in the co-created intersubjective field. During stressful heightened affective moments of enactments, the emotionally intelligent expert clinician can more sensitively detect even subtle transference communications from the patient, empathically resonate with an array of affective states ("take the transference"), flexibly cope with countertransference emotional stress, facilitate interactive repair of ruptures of the alliance, and interactively regulate an array of the patient's affective self states. The fact that the right brain functions of the skilled therapist act on implicit levels clearly suggests that individual differences in clinical expertise are expressed at not just conscious but primarily preconscious-unconscious levels. It is these aspects of the therapist's personality, more so than the ability to generate accurate interpretations that facilitate change in the patient's unconscious.

Neuroscience is now reporting, "[t]he left hemisphere is known to dominate in intraconceptual analysis of verbal stimuli, while the right hemisphere

is involved in the processes underlying more complex symbolic and metaphorical associations between stimuli." (Razumnikova & Bryzgalova, 2006, p. 650). Indeed, it is thought that right brain thinking "is the highest human mental function, responsible for creativity and integration of past, present, and future experience" (Rotenberg, 2004, p. 864). From the perspective of affective neuroscience Panksepp (2003, p. 11) warns that "Progress toward an understanding of affective processes may be slow and theoretically lopsided . . . if selectively pursued by individuals enriched in left hemisphere skills but impoverished in those of the right." The experience and knowledge we gain from working with patients over the course of our careers increases our clinical effectiveness. This expertise is more than left hemispheric technical skill—rather it fundamentally involves more complex learning of a number of nonconscious functions of our right brain, which is dominant for a sense of "humanness" (Mendez & Lim, 2004).

In closing, I'd like to announce an upcoming conference "Affect Regulation: Development, Trauma, and Treatment of the Brain-Mind-Body" to be held November 3-4 in New York. The presenters include Philip Bromberg, Joe Lichtenberg, Beatrice Beebe, Pat Ogden, Ed Tronick and myself. For further information go to PsyBC.com.

#### REFERENCES

- Adler, H.M. (2002). The sociophysiology of caring in the doctor-patient relationship. *Journal of General Internal Medicine*, 17, 883-890.
- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Allman, J.M., Watson, K.K., Tetreault, N.A., & Hakeem, A.Y. (2005). Intuition and autism: a possible role for Von Economo neurons. *Trends in Cognitive Sciences*, 9, 367-373.
- APA Presidential Task Force on Evidence-Based Practice, (2006). Evidence-based practice in psychology. *American Psychologist*, 61, 271-285.
- Alvarez, A. (2006). Some questions concerning states of fragmentation: unintegration, under-integration, disintegration, and the nature of early integrations. *Journal of Child Psychotherapy*, 32, 158-180.
- Bar-On, R., Tranel, D., Denburg, N.L., & Bechara, A. (2003). Exploring the neurological substrate of emotional and social intelligence. *Brain*, 126, 1790-1800.
- Bennett, D., Parry, G., & Ryle, A. (2006). Revolving threats to the therapeutic alliance in cognitive analytic therapy of borderline personality disorder: a task analysis. *Psychology and Psychotherapy: Theory, Research and Practice*, 79, 395-418.
- Bowlby, J. (1991a, Autumn). The role of the psychotherapist's personal resources in the therapeutic situation. In *Tavistock Gazette*.
- Bugental, J.F. (1987). *The art of the psychotherapist*. New York:



- W.W. Norton.
- Cape, J. (2001). Patient-related therapeutic relationship and outcome in general practitioner treatment of psychological problems. *British Journal of Clinical Psychology, 39*, 383-395.
- Carrette, L., Hinojosa, J.A., Mercado, F., & Tapia, M. (2005). Cortical response to subjectively unconscious danger. *NeuroImage, 24*, 615-623
- Cozolino, L. (2002). *The neuroscience of psychotherapy*. New York: WW Norton.
- Decety J., & Chaminade, T. (2003). When the self represents the other: A new cognitive neuroscience view on psychological identification. *Consciousness and Cognition, 12*, 577-596.
- Diener, M.J., Hilsenroth, M.J., & Weinberger, J. (2007). Therapist affect focus and patient outcomes in psychodynamic psychotherapy: a meta-analysis. *American Journal of Psychiatry, 164*, 936-941.
- Dorpat, T.L. (2001). Primary process communication. *Psychoanalytic Inquiry, 3*, 448-463.
- Freud, S. (1912). Recommendations to physicians practicing psycho-analysis. In J. Strachey (Ed. & Trans.), *The standard edition of the complete psychological works of Sigmund Freud* (Vol. 12). London: Hogarth Press.
- Ginot, E. (2007). Intersubjectivity and neuroscience. Understanding enactments and their therapeutic significance within emerging paradigms. *Psychoanalytic Psychology, 24*, 317-332.
- Grabner, R.H., Fink, A., & Neubauer, A.C. (2007). Brain correlates of self-related originality of ideas: Evidence from event-related power and phase-locking changes in the EEG. *Behavioral Neuroscience, 121*, 224-230.
- Havens, L. (1979). Explorations in the uses of language in psychotherapy: complex empathic statements. *Psychiatry, 42*, 40-48.
- Jacobs, T.J. (2005). Discussion. B. Beebe, S. Knoblauch, J. Rustin, & D. Sorter (Eds.), *Forms of intersubjectivity in infant research and adult treatment* (pp. 165-189). New York: Other Press.
- Karver, M.C., Handelsman, J.B., Fields, S., & Bickman, L. (2006). Meta-analysis of therapeutic relationship variables in youth and family therapy: The evidence for different relationship variables in the child and adolescent treatment outcome literature. *Clinical Psychology Reviews, 26*, 50-65.
- Kimura, Y., Yoshino, A., Takahashi, Y., & Nomura, S. (2004). Interhemispheric difference in emotional response without awareness. *Physiology & Behavior, 82*, 727-731.
- Larson, E.B., & Yao, X. (2005). Clinical empathy as emotional labor in the patient-physician relationship. *Journal of the American Medical Association, 293*, 1100-1106.
- Leslie, K.R., Johnson-Frey, S.H., & Grafton, S.T. (2004). Functional imaging of face and hand imitation: towards a motor theory of empathy. *NeuroImage, 21*, 601-607.
- Marci, C.D., Ham, J., Moran, E., & Orr, S.P. (2007). Physiologic correlates of perceived therapist empathy and social-emotional process during psychotherapy. *Journal of Nervous and Mental Disease, 195*, 103-111.
- Marcus D.M. (1997). On knowing what one knows. *Psychoanalytic Quarterly, 66*, 219-241.
- Maroda, K.J. (2005). Show some emotion: Completing the cycle of affective communication. In L. Aron & A. Harris (Eds.), *Relational psychoanalysis. Volume 2: Innovation and expansion* (pp. 121-142). New York: Analytic Press.
- Meares, R. (2005). *The metaphor of play. Origin and breakdown of personal being* (3<sup>rd</sup> ed.). London: Routledge.
- Mendez, M.F. (2004). Alterations of the sense of "humanness" in right hemisphere predominant frontotemporal dementia patients. *Cognitive and Behavioral Neurology, 17*, 133-138.
- Mohr, D. (1995). Negative outcome in psychotherapy: A critical review. *Clinical Psychology: Science and Practice, 2*, 1-27.
- Neisser, J.U. (2006). Unconscious subjectivity. *Psyche, 12*.
- NICHD Early Child Care Research Network (2004). Affect dysregulation in the mother-child relationship in the toddler years: Antecedents and consequences. *Development and Psychopathology, 16*, 43-68.
- Orlinsky, D.E., & Howard, K.I. (1986). Process and outcome in psychotherapy. In S.L. Garfield & A.E. Bergin (Eds.), *Handbook of Psychotherapy and Behavior Change* (3rd ed., pp. 311-381). New York: Wiley.
- Panksepp, J. (2003). At the interface of the affective, behavioral, and cognitive neurosciences: Decoding the emotional feelings of the brain. *Brain & Cognition, 52*, 4-14.
- Ragan, C.L. (2006). Comparing apples and oranges and making a fruit salad (mixing psychodynamic science and neuroscience): A review of Clay C. Whitehead's "Neo-psychoanalysis: A paradigm for the 21<sup>st</sup> century." *Journal of the American Academy of Psychoanalysis and Dynamic Psychiatry, 34*, 629-649.
- Razunmikova, O.M., & Bryzgalov, A.O. (2006). Frequency-spatial organization of brain electrical activity in creative verbal thought: the role of the gender factor. *Neuroscience and*

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- Reik, T. (1948). *Listening with the third ear: The inner experience of a psychoanalyst*. New York: Grove Press.
- Rotenberg, V.S. (2004). The ontogeny and asymmetry of the highest brain skills and the pathogenesis of schizophrenia. *Behavioral and Brain Sciences*, 27, 864-865.
- Roter, D.L., Frankel, R.M., Hall, J.A., & Sluyter, D. (2006). The expression of emotion through nonverbal behavior in medical visits. Mechanisms and outcomes. *Journal of General Internal Medicine*, 21, S28-34.
- Ryan, R. (2007). *Motivation and Emotion: A new look and approach for two reemerging fields*. *Motivation and Emotion*, 31, 1-3.
- Safran, J.D., & Muran, J.C. (2000). *Negotiating the therapeutic alliance: A relational treatment guide*. New York: Guilford Press.
- Sato, W., & Aoki, S. (2006). Right hemisphere dominance in processing unconscious emotion. *Brain and Cognition*, 62, 261-266.
- Schachner, D.A., Shaver, P.R., & Mikulincer, M. (2005). Patterns of nonverbal behavior and sensitivity in the context of attachment relationships. *Journal of Nonverbal Behavior*, 29, 141-169.
- Schore, A.N. (1994). *Affect regulation and the origin of the self*. Mahwah, NJ: Erlbaum.
- Schore, A.N. (2003). *Affect regulation and the repair of the self*. New York: W.W. Norton.
- Schore, A.N. (2005). A neuropsychanalytic viewpoint. Commentary on paper by Steven H. Knoblauch. *Psychoanalytic Dialogues*, 15, 829-854.
- Shamay-Tsoory, S.G., Tomer, R., Berger, B.D., & Aharon-Peretz, J. (2003). Characterization of empathy deficits following prefrontal brain damage: The role of the right ventromedial prefrontal cortex. *Journal of Cognitive Neuroscience*, 15, 324-337.
- Siegel, D.J. (1999). *Developing mind: toward a neurobiology of interpersonal experience*. New York: Guilford Press.
- Snodgrass, L.L., & Harring, K.E. (2004-2005). Right hemisphere positivity bias in preconscious processing: data from five experiments. *Current Psychology: Development, Learning, Personality, Social*, 23, 318-335.
- Stark, M. (1999). *Modes of therapeutic action: enhancement of knowledge, provision of experience, and engagement in relationship*. New York: Jason Aronson.
- Van den Boom, D. (1997). Sensitivity and attachment: next steps for developmentalists. *Child Development*, 64, 592-594.
- van Lancker, D., & Cummings, J.L. (1999). Expletives: neurolinguistic and neurobehavioral perspectives on swearing. *Brain Research Reviews*, 31, 83-104.
- Volz, K.G., & von Cramon, D.Y. (2006). What neuroscience can tell about intuitive processes in the context of perceptual discovery. *Journal of Cognitive Neuroscience*, 18, 2077-2087.
- Watt, D.F. (2003). Psychotherapy in an age of neuroscience: bridges to affective neuroscience. In J. Corrigan & H. Wilkinson (Eds.), *Revolutionary connections. psychotherapy and neuroscience*, (pp. 79-115). London: Karnac.
- Whitehead, C.C. (2006). Neo-psychoanalysis: A paradigm for the 21<sup>st</sup> century. *Journal of the Academy of Psychoanalysis and Dynamic Psychiatry*, 34, 603-627.
- Wilkinson, M. (2006). *Coming into mind: the mind-brain relationship. A Jungian clinical perspective*. London: Routledge.



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