THE ATTUNED BRAIN: Crossings In Focusing-oriented Therapy and Neuroscience

Leslie Ellis, M.A.

ABSTRACT

Current findings in interpersonal neurobiology are providing scientific support for more emphasis on whole-brain approaches in clinical practice that use empathy, emotion, attachment theory and other relational approaches to psychotherapy. These ‘softer’ approaches have previously been largely ignored as brain researchers favored study of the more cognitive aspects of the brain functioning in isolation. In this paper, I will provide an overview of current affective neuroscientific research with an emphasis on how it supports the use of Focusing-Oriented Therapy. I will explain how some aspects of interpersonal neurobiology provide evidence about why Focusing works. I will include relevant ideas from Eugene Gendlin's philosophy, and ground these ideas with clinical examples.

Keywords: Interpersonal Neurobiology, Affective Neuroscience, Focusing-Oriented Therapy

If the 90's were widely referred to as the decade of the brain, the first decade of the new millennium could well be called the decade of the social brain. Over the last ten years, research into the inner workings of the human brain has shifted from its century-long emphasis on the brain in isolation, with its “almost restrictive focus on cognition,” (Schore, 2003a, p. 212) to the study of the brain in interaction, with a resulting greater emphasis on mutual emotional regulation and empathy. Many of these new discoveries offer strong support for the practice of Focusing-Oriented Therapy (FOT). In fact, the insights and discoveries from the field of affective neuroscience are bringing general psychological theories closer to what Gendlin (1997) has been saying all along: that human beings (indeed all living organisms) are processes that cannot be understood as discrete, static units, nor apart from each other or their environment. This paper will examine what we now know about the brain, with a particular focus on current neuroscientific research related to affect regulation and attachment, and will describe several specific examples demonstrating how FOT processes can facilitate emotional healing.

According to Schore (2003a), “The newer fields of affective neuroscience and especially social neuroscience are exploring inter-brain interactions” (p. 214). What he and other researchers in this field are finding is that the human brain cannot develop in isolation. The brains of newborns, for example, are not fully developed and will continue to grow and change throughout the lifespan, with a concentrated period of brain development within the first three years of life. According to Cozolino (2010), “Neuroscientists already possess the
perfect model for understanding interdependency—the individual neuron. We know that neither the individual neuron nor the single human being exist in nature. Without mutually stimulating interactions, people and neurons wither and die” (p. 179). And elsewhere, Cozolino (2006) states that we should view the brain “not as a fully formed structure, but as a dynamic process undergoing constant development and reconstruction” (p. 50). Gendlin’s own philosophical works suggest similar conclusions (Gendlin, 1997).

In an exacting survey of the current research, Schore (2003a) has concluded that the mother-infant dyad is characterized by right-brain-to-right-brain communication, and that this unconscious, automatic interaction through gesture, facial expression and tone of voice is what enables the infant’s right brain to develop and lays the groundwork for how the baby will process socio-emotional information throughout life. In addition, Schore stated that because of the right hemisphere’s deep connections with the limbic system and the autonomic nervous system, “it is centrally involved in controlling vital functions supporting survival, and enabling the individual to cope with stress and challenges” (p. 75). This new research is representative of a huge volume of new discoveries about the human brain that is leading to a model of psychotherapy that supports much of what happens in FOT.

Schore (2003a) offers several examples from FOT of empathic, two-way unconscious communication between therapist and client, and refers to the reciprocal effect of this relationship. “A successful therapeutic relationship can act as an interactive affect-regulating context that optimizes the growth of “two minds in the making”; that is, increases in complexity in both the patient’s and the therapist’s continually developing unconscious right minds” (p. 57). Even as researchers continue to study parts of the brain in isolation, they are finding a high degree of interconnection, not just within the brain, but also in brain-body communication, and in the brain-body’s relationship to others and its environment.

If ever there was a case for a process-model approach it is in the realm of affective neuroscience. Just because we can reduce something to its constituent parts does not mean we can understand ourselves that way, or that this provides a true picture of what is really happening in any living process. Gendlin likens the current trend of viewing human behavior in terms of neurology as similar to the previous trend that viewed our human behavior and pathology as a function of chemistry. Both are reductionistic and accurate as far as they go, but limited.

Don’t assume it’s all neurology. There’s a lot to be understood that way, but it would be a mistake to say we can understand things only that way . . . Living is the basic model through which I understand everything. It’s clearly superior to the dead unit model. Let’s model it at least on the living process where these separated things are not separate. The universe is at least this felt-sense living, implicit precise order (2011).

This sentiment is becoming increasingly accepted among those who are currently studying brain development.
APPLICATIONS TO PSYCHOThERAPY

Schore (2003a, 2003b, 2008) has devoted much of his recent study to the development of a new attachment theory that is based on the discovery that the infant brain is not fully developed at birth, and that the right hemisphere is the focus of development and growth for the first three years of life. In that time, the baby uses the mother’s (or primary caregiver’s) right brain for emotional regulation and gradually internalizes what it picks up in this interaction. Of special interest to psychotherapists is the fact that where the maternal environment does not meet the development needs of the infant, that part of the baby’s development stalls. It becomes what Gendlin would refer to as a “stopped process” (1997, p. 12) which can change the trajectory of the infant's brain development and potentially lead to psychopathology. Schore (2003b) cites a large body of evidence to suggest “self-organization in the developing brain occurs in the context of a relationship with another self, another brain. This primordial relational context can be growth-facilitating or growth-inhibiting, and so it imprints into the early-developing right brain either a resilience against or a vulnerability to later forming psychiatric disorders” (p. xv).

Gendlin’s process model (1997) suggests that there continues to be opportunity for the body to make up for what it has missed in early development. In Implicit Precision (Gendlin, in press) stated that when the environment does not cooperate with what the body is implying, “the body keeps implying the part of the process that did not occur. What is not carried forward becomes a reiterative implying” (p. 12). If the body can carry on, it will do so, in a different way than it would have, but always in a life-forward direction by whatever means available. “A reiterated implying is always new and regenerating. And it is always open to whatever will carry it forward” (p. 13).

This explains why geese can imprint on human beings if other geese are not present, or why an orphan kitten can attach to a crow, two real-life examples of life carrying forward with whatever is available. In the absence of a perfect maternal figure, infants of any species will attach to another living being that provides at least some of what it needs to move forward. Of course, for the brain to develop optimally, it needs to interact with the attuned brain of another member of its own species. One of the main findings, replicated over and over in recent neuroscientific research, is that we are deeply social beings, that our brains will not develop in isolation and that this need for interaction never stops.

In psychotherapy, it is the relationship that heals. This is not a new idea. What is novel, though, is that current brain research not only supports this idea but also offers insight into the internal mechanisms that allow human interaction to foster neural growth. This means we can begin to tailor our interventions more closely to what we know will foster neural integration, and I would argue that the Focusing approach is one that does this. Schore (2003a) suggests that the crossing of psychology and neurobiology has obviated the development of therapeutic practices that focus on the empathic connection between therapist and client, particularly their implicit, unconscious communication. Such practices, which are an intrinsic part of FOT, include mutual attunement and co-creation of an inter-subjective field that is spacious and allows mutual regulation in the dyad to move the process forward from
what the client’s body is implying. Gendlin (2011) recently said that what makes Focusing work is this unconscious communication between two bodies:

Focusing is a way to access your bodily knowing. Your body picks up more of the other person than you consciously can. Your body also puts out more of yourself than you intend or than you know is visible. Others often react to that rather than to your conscious message. With a little training you can get a feel for your bodily knowing of what is going on.

This new definition of Focusing supports what brain researchers are discovering about how psychotherapy facilitates the healing process: that what effectively happens in a therapy session is more than what one can consciously articulate. However, with Focusing training, therapists can become more aware, through their bodies, of what is happening in the dyad so that they, at least, can be more conscious and in tune with the interactive process. And even where the therapist is not conscious of the interactive flow, I suggest that Focusing training will have enlarged their capacity to self regulate and tolerate intense affect, and the experience of this successful mutual affect regulation will be internalized by the client.

Therapy changes the brains of our clients because they are in the presence of an attuned brain (Schore, 2008; Cozolino, 2010). Our clients’ nervous systems become more regulated in the presence of a calm, regulated nervous system (Levine, 2010). We can theorize all we want to about what we are doing as psychotherapists in session, and say insightful things, but so much of what happens is simply a lived human experience. So much of what is healing in psychotherapy (and in any interaction between human beings) is the implicit wisdom of two bodies together bringing forward life’s next step. This comes as a result of our clients’ communication with and reaction to that greater knowing in themselves and in us, and in our body’s concurrent, implicitly-wise responses to them. In addition, FOT encourages the articulation of what is implicit in the client through the steps of finding a felt sense, and then putting into words what is at first experienced as complex and ineffable (Gendlin, 1978/1981). This key aspect of the Focusing process is echoed in Schore’s (2003a) description of how the attuned therapist encourages neural integration across hemispheres.

This interactive regulation of the patient’s state enables him/her to verbally label the affective experience. In a “genuine dialogue” with the therapist, the patient raises to an inner word and then into a spoken word what he/she needs to say at a particular moment but does not yet possess as speech. But the patient must experience this verbal description of an internal state as heard by an empathic other . . . . The patient’s affectively charged but now-regulated right brain experience can then be communicated to the left brain for further processing . . . . this allows for a linkage of the non-verbal and verbal representational domains (p. 268).
CLINICAL EXAMPLES

Schore (2003) has deeply investigated right-brain to right-brain communication between the primary caregiver (mother) and baby in the first two to three years of the baby’s life, and has emphasized the importance of an attuned relationship to the baby’s brain development, as it lays down the blueprint for how the baby will regulate emotions and navigate relationships for a lifetime. Where this process is mis-attuned or traumatic, part of the implicit developmental process does not continue, and we have instead a ‘stopped process.’ As we have stated, the body goes on implying this unmet need while other lines of development continue. As clinicians, many of the presenting issues that our clients bring to us are the result of these developmental arrests.

What I have discovered through my therapy practice is that once trust and connection have been established, these stalled processes will show up in the intersubjective field, and that there is a sense in the client’s body that some part of the stalled process has met what it needs to resume. This likely happens all the time in a variety of relationships, but in the therapy setting, it is my job to notice and meet these unmet needs to the extent this is possible. Although by definition, much of this mutual right-brain interaction happens below the level of consciousness, Focusing does facilitate some awareness and deliberation, even in this realm. Schore (2003a, p. 77) suggests that the therapist engage in a kind of “reverie” or “free-floating attentiveness” which facilitates communication from the therapist’s to the client’s right brain.

In my clinical experience as a Focusing-Oriented therapist, I find that tuning into my own felt sense via my empathic connection with my client (switching to a right-brain-dominant mode), enables me to pick up on various and changing self states within my client, whether they speak about them or not. Sometimes, for example, I feel as though I am in the unmistakable presence of a baby. When this happens, my communication style spontaneously changes to match what is needed. I often become more emphatic, tend to smile more, and to concentrate on my client’s facial expression. In one specific example, I watched as a client’s facial expression moved through a study of changes over a very short space of time. I felt I was in the presence of a very young part of her. She stopped talking and her face and body began to move, twist and contort. All of this was clearly out of her awareness, yet she looked at me intently all the while, as though searching. I calmly held her gaze for as long as she did this, maybe half a minute, and then the spell was broken, and we moved on. It felt as though her body received what it needed in that moment, and could move forward. When she resumed talking (it was about her early relationship with her mother), her outlook shifted to a more optimistic one.

Something I have noticed that might warrant further study is that the clients who most often give me the felt sense of “baby” during our work together all appear to have early attachment issues. I base this observation on both their life history and on the dynamics of their current relationships, including the therapy relationship. Early attachment wounds tend to be enacted in therapy when the client who feels safe enough is able to sense into their bodies and allow the next step to emerge. But it is impossible to generalize further. “Psychotherapy, like parenting, is neither mechanical nor generic. Each therapist-client pair creates
a unique relationship” (Cozolino, 2010, p. 30). With one client, their deep attachment need brings a felt sense of intense longing and pulls from me strong emotion and focused attention. With another, the attachment wound has led to a more parasympathetic response, a sense of hopelessness and withdrawal, and in this case, too much attention causes further withdrawal. As with parenting, in therapy there are times to be present with rapt attention, and times to blend into the background—to be available, but not intrusive. The key is to sense into one’s own bodily reactions, as we do in Focusing, and respond to moment-by-moment cues from the client. It is important not to operate from any preconceived notions or theories, no matter how tempting this may be.

**IMPLICIT COMPLEXITY**

Every dyad is different and evokes a unique set of interactions. My work with a client may allow for some carrying forward in some respects, and in other ways, the client may continue implying, but in a new and different way. Gendlin (in press) discusses this increasing complexity as ‘implying-into-occurring,’ and he points out that once something has occurred, it changes all future implying. This has many implications for psychotherapy. One important implication is that while a specific attachment need that was a stalled process was going on implying throughout a client’s life, the rest of them continued to grow and develop. So in the therapy room, we are not sitting with a baby, even though there may be an infantile sequence that is implying. In adulthood, we have so many more cognitive, expressive and emotional resources to draw upon that were not available to the baby. We can articulate the process as we experience it, integrating all parts of the brain, and potentially accelerating the stalled developmental process.

I have the sense in this work that one instance of profound meeting can make up for many missed by the client early in their life. It is as though the stopped process formed a kind of dam, and once it breaks, all kinds of things are possible that were not before; there is a kind of domino effect. Gendlin (1997) would say that because there is a stopped process, the missing part of the client’s environment has “attained a startling power,” because when this missing aspect occurs, “all of that process which was stopped by the absence will occur” (p. 12). Schore (2003a) supports the idea of iterative implying and its power to evoke change; he refers back to Freud’s theory of the self as a “dynamic conception of forces in the mind that work together or against one another to strive toward a goal. A cardinal tenet of dynamic theory is that the nonlinear self acts iteratively [emphasis added], so that minor changes, occurring at the right moment, can be amplified in the system, launching it into a qualitatively different state” (p. 267).

Gendlin’s is an optimistic philosophy: he purports that it is never too late to carry forward places in us that are stuck. Brain research backs this up. According to Schore (2003a):

A large body of studies in the neurosciences indicate that although the effects of environmental experiences develop more rapidly and extensively in the developing than the adult brain, the capacity for experience-dependent plastic
changes in the nervous system remains throughout the lifespan . . . . In fact, there is evidence that the prefrontal limbic cortex, more than any other part of the cerebral cortex, retains the plastic capacities of early development (p. 31-32).

In particular, the areas of our brain responsible for interpersonal communication—empathy, affect and bodily awareness and regulation (all skills used in Focusing)—have the potential for change throughout our lifetime. The right hemisphere is where emotional responses and regulation, autobiographical memory, interoception, emotional communication of all kinds, and interpersonal nonverbal communication all are processed. According to Damasio (1994), the right hemisphere also contains “the most comprehensive and integrated map of the body state available to the brain” (p. 66). This detailed internal map is the starting point for the Focusing process. Although this way of dividing up brain functions into constituent parts comes from the old unit model paradigm, it is useful to have a map of the brain functions that wire together, and to identify the functions that are amenable to change throughout life. The right orbital prefrontal cortex is the focal area for both early brain development, and ongoing growth and change in the context of facilitative relationship. Schore (2003a) said this part of the brain is:

the only cortical structure with direct connections to the hypothalamus, the amygdala, and the reticular formation in the brain stem that regulates arousal, and through these connections it can modulate instinctual behavior and internal drives. But because it contains neurons that process face and voice information, this system is also capable of appraising changes in the external environment, especially the social, object-related environment. Due to its unique connections, at the orbitofrontal level cortically processed information concerning the external environment (e.g. visual and auditory stimuli emanating from the emotional face of the object) is integrated with subcortically processed information regarding the internal visceral environment (e.g. concurrent changes in the emotional or bodily self state) p. 42.

This is the part of our brain that is the interface between inner and outer realms, and thus is critical to our sense of self. Neuroscientists have discovered that it is through our body that we understand how we feel (Iacoboni, 2008). Empathy is a right-hemispheric process that leads to internalization of the emotion of others, and ultimately, a separate sense of self. According to Schore, (2003a), “the right hemisphere is critically involved in the maintenance of a coherent, continuous, and unified implicit sense of self,” (p. xv). As such, this area must be both a critical tool for and target of psychotherapeutic intervention.

**MUTUAL REGULATION AND MOMENTS OF MEETING**

Every encounter in the therapy room is new and different, and Focusing invites the client to allow their bodies to express specifically what is needed next. For example, if the client intuitively feels that their early attachment needs can be met in the clinical setting, they will use the therapy for this purpose. But, as stated earlier, what happens in therapy is
not just like a caregiver-baby dyad. It is an element of a process that is so much more intricate, as complex as two human beings interacting can be, where the behavior possibilities are vast. One of the possibilities we are most interested in here is that the therapy will allow for the continuation of stalled early developmental processes. Much of what happens in the mother-infant dyad is a process of unconscious regulation of the baby’s developing nervous system by the mother’s more capacious one. The infant gradually internalizes her ability to tolerate distress (Cozolino, 2010; Schore, 2003a; Kohut, 1984). Later in life, we continue to co-regulate each other (Cozolino, 2010). Missed parts go on implying and implying until something in the environment matches the unmet need or is close enough to allow forward motion (Gendlin, 1997). It is the therapist’s calm, regulated unconscious response, similar to the dynamic of the infant-caregiver dyad, that allows the client’s body to pick up what it needs and move in a life-forward direction.

An important question to consider here is: if dyadic interaction is unconscious and reciprocal, how do we ensure that we as therapists set the tone? How do we prevent the dyad from becoming dysregulated by a client’s intense emotional response? Schore (2003a) suggests that therapists need to do enough of their own therapy to be stable, reliable regulators of intense affect—their own and others. But he does not tell us specifically how to make sure that the regulated nervous system maintains the stronger frequency so that both bodies will eventually resonate with this calm state. This is where Focusing offers a specific map. Engendering and maintaining a “friendly attitude” towards the felt sense (Gendlin, 1996, p. 55) helps to ensure that the interaction ultimately helps the client settle and move forward. This outcome is not a given! As Schore repeatedly states, mutual regulation happens automatically and unconsciously. So how can we direct our unconscious to be helpful, when, by definition, we don’t control it? I would suggest that through Focusing we can enlarge our capacity for holding and processing whatever comes up in a given session. Focusing teaches resilience, an open attitude, and the ability to stay with difficult emotion until there is a felt shift. The Focusing-Oriented therapist both models this and participates, enlarging the capacity of both therapist and client to regulate increasingly intense experiences. I would offer this analogy: not all of us are gifted with the ability to sing on key. But if there is a clear, strong voice that can hold the note steadily and consistently, other singers will pick up on it. With time, even a group of unskilled singers will resonate harmoniously. The key is for the therapist to be that clear, steady signal, consistently, over time, and under varying, and stressful conditions. This can’t be taught. It must be practiced, like any skill or discipline.

As Focusing-Oriented therapists, our intention is to co-create harmony, but not to take the lead. We want to have a positive effect on our clients by offering them our own physical/emotional selves to assist in mutual regulation. It would be a mistake to assume that our clients do not and should not also affect us deeply. In fact, in many cases, it is critical that the client visibly affect the therapist so that the client has the direct experience that their difficult feelings are not disavowed and in fact are manageable by another human being. According to Knox (2011), in early developmental stages, it would be catastrophic for the infant to be disillusioned about his role in creating the maternal response. In creating the mirroring response in a par-
ent, the child discovers that he actually exists as a person with a mind and desires . . . . It is as though the infant's experience is, “if I can’t affect you, then I don’t exist” (p. 113).

We must not make this mistake with our clients. The goal is not to experience them from a comfortable distance and allow their intense experiences to pass over us without a ripple. Instead we must have the courage to be affected by them, to engage at an authentic emotional level. It is also hubris to suggest that we will never be pulled off balance by our interactions with clients. The key, as was found in infant research (Schore 2003b), is to be able to notice and repair the dysregulation when it happens. The concept of the therapists’ unconscious, deep emotional involvement as an intrinsic part of the healing process was first discussed by Jung in *The Psychology of the Transference* (1954), a comparison of therapist-client relationship processes as analogous to those described in sixteenth-century alchemical texts. One image, for example, depicts the pair sitting at the edge of a bath, their feet in the same water, an apt symbol of meeting at the unconscious level. However, the detached, interpretive approach of traditional Freudian psychoanalysis had greater influence on the practice of psychotherapy in its early decades (Knox, 2011). Current findings from affective neuroscientific research are now moving the practice of psychoanalysis in a more process-oriented and relational direction, supporting the theories of those who have adopted an intersubjective approach (Bion, Kohut and others). Knox (2011) discusses her own changes as an analyst looking back at a case she would now have handled differently:

My focus at that time on interpretation as the main tool for change made me less open to the possibility of alternative ways of responding . . . . In contrast I would now focus on creating the conditions that allow the patient’s own sense of agency to be mobilized, initially through the implicit relational exchanges between us, the “moments of meeting” (p. 161).

**RECOMMENDATIONS AND CONCLUSION**

In light of current brain research and trends toward supporting affect regulation and the depth and quality of the therapeutic relationship as essential aspects of psychotherapy, FOT offers many specific and well-developed practices that could be more universally applied. From the study of affective neuroscience, Schore (2003a) has suggested there is a need for new therapeutic practices to address early developmental issues because they affect brain development throughout the lifespan. In the appendix to his book, *Affect Regulation & the Repair of the Self*, Schore (2003a) outlines 20 principles of psychotherapeutic treatment of early-forming right hemispheric self-pathologies. There are three areas in particular that could be addressed using Focusing techniques. Schore recommends there be an emphasis on process rather than interpretation; that the interactive therapeutic environment should facilitate “an implicit self system capable of modulating a broader range of affects” (p. 281); and that the therapist’s tolerance for affect “is a critical factor determining the range, types, and intensities of emotions that are explored or disavowed” (p. 281). FOT addresses all of these because it is based on a process model that is inherently relational, and because much
of the Focusing process has the effect of expanding affect tolerance in both therapist and client. In addition, FOT facilitates the process of neural integration with its practice of inviting clients to sense inside and to articulate what is implicit. Current neuroscientific research affirms and supports the current practice of Focusing-Oriented Therapy, offering concrete information about why focusing works. The crossing of FOT and current research in affective neuroscience is a promising area rich with possibilities for future study and refinement of psychotherapy practices.

REFERENCES


---

*Leslie Ellis, MA, RCC, is a Vancouver-based focusing-oriented psychotherapist and a Ph.D. student in Somatic Psychology at The Chicago School of Professional Psychology, Los Angeles, CA campus. Correspondence should be addressed to Leslie Ellis, email: lae@telus.net*