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40th Anniversary Party Friday, October 21, 2011 7pm-10pm

You're invited to Living Systems 40th anniversary party at West Van United Church. Ronald Richardson will be giving a presentation and it will be a time to network and or meet up with alumni, friends and colleagues. You'll hear about some future plans for Living Systems as well! Please let us know if you'd like to attend by e-mailing livingsystems@telus.net.

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Neurofeedback: Bringing you back in to Balance....

BY LOIS WALKER B.N., M. DIV

When Norman Doidge's book came out, *The Brain that Changes Itself* (2007), the general public was greatly interested in and excited about what he was describing. Seldom does a day go by where we aren't hearing about or learning something more about the intricacies and complexities of the human brain/mind. As Doidge and others so convincingly explain, neuroscience has begun to appreciate and describe the potential of plasticity and malleability in the organization and wiring of the brain. Joseph Le Doux stated years ago in his book, *The Synaptic Self* (2002) "experience shapes the design of circuits. Synaptic strength can change throughout the life span in some neural circuits. Circuits are receptive to the results of first experience but repeatedly pliable and modifiable with continued experience." The organization of the brain/mind is a reflection of one's adaptation to life. The early history of the person sets the template for perception and responding to life. Neurofeedback gives information to the individual about a level of responsiveness not typically grasped through typical human awareness.

I became interested in Neurofeedback as a post graduate student while studying at the Georgetown Family Center (now The Bowen Center for the Study of the Family) in Washington D.C. I was interested in the potential of Neurofeedback to support individuals in their effort to become more of a self. I have appreciated and respected the obstacles within the human and within the human family system to both make and sustain a change in chronic patterns that constrain and impinge on oneself and the other members of one's family.

What struck me in my work as a therapist was the rigidity both within myself and among my client population in the way one's nervous system had been organized or "wired" together throughout one's life, shaped by experience and the environment in which one developed. While clients are seeking and desiring change, they are more or less up against the harder wiring of their physiology and the automatic processing in the brain. One of the foundational concepts in Bowen family systems theory is the effort to "differentiate a self" in the important relationships in one's life. However, we are challenged or thwarted in this effort by our sensitivity and reactivity toward each other. Dr. Bowen proposed and encouraged his clients and trainees' to repeatedly return to the emotional system of the family; to observe oneself in it, to develop ability to regulate one's reactivity and to define a self on important issues within the family. This can be a tall order depending on the level of intensity or chronic anxiety transmitted down through the generations and embedded in one's family of origin. Very rigid patterns of behaviour and reactivity can thwart or stymie even the most diligent effort to be more of a self in one's family and the other important relationships in one's life.

Neurofeedback seemed to me to have the potential to give people a "hand up" in what they were already trying to tackle in their daily life and work. Neurofeedback (or EEG biofeedback or brain training) is a process by which the brain returns to more efficient patterns, allowing individuals to function more optimally. It is a non-invasive way to address a multitude of symptoms and teaches the brain to better self-regulate at the level of the central nervous system. Since 2007, I have been using the Zengar NeuroOptimal Neurofeedback system in my practice. For the ten years prior to that I used Neuropathways designed by Dr. Margaret Ayers. There are a number of Neurofeedback systems to choose from. [Space does not allow for an elaboration on the variation among Neurofeedback systems]

Neurofeedback allows the individual to experience their own brain's functioning as it interrupts inefficient patterns. These inefficient patterns correspond to chronic anxiety in the thinking, emotional and physical states as described by Bowen theory. Neurofeedback decreases reactivity and increases self-regulation thereby allowing individuals to experience and act in less anxious ways and with more flexibility in solving relationship problems and facilitating greater agility and ability to engage in life's challenges and opportunities.

NeuroOptimal can increase flexibility in the brain by giving the brain accurate feedback about itself, interrupting inefficient patterns, and thereby reorganizing itself toward more efficiency. NeuroOptimal reads the electrical activity of the brain from the surface of the scalp and detects moment to moment changes, including those times when the nervous system begins to display turbulence. This might be evidenced with a loss of focus, worry about the past or future, depression, or hyper vigilance. The NeuroOptimal system flags those moments for the brain by a brief pause in music. The brain alerts to that pause, comes back to the present moment, away from the turbulence, and learns over time – often very quickly – to run itself in this new, more efficient and flexible and resilient way.

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**Conference
Announcement:
Feb. 24 & 25, 2012
From Generation
to Generation:
The interplay of genes
and family process**

SFU Harbour Centre,
Vancouver, BC.

Dr. Michael Meaney and Dr. Daniel Papero will explore how family emotional process in one generation can influence levels of functioning - including genetic expression - in the next generation.

Details to be posted on
website as they are confirmed.
www.livingsystems.ca.

State of the art equipment takes advantage of the powerful ability of the central nervous system (the brain and spinal cord) to take in information and uses that ability to feed back information to regulate itself. Each of us have learned and adapted to stressors in particular ways. Some of these adaptations may be very problematic. Neurofeedback is a useful way to change or interrupt some of these maladaptive patterns in reacting, thinking or in one's behaviour. The Neurofeedback training interrupts the maladaptive responses to stress and brings the brain back to the present moment. The brain assesses the "real" current circumstances and relaxes - instead of going in to the old learned stress response. Over time, this new way of operating becomes the new default way of being.

Dr. Valdeane Brown, a long time Neurofeedback developer and practitioner has described his system through what he has termed the **CARE** Model [Comprehensive, Adaptive, Renormalization of EEG] suggesting the NeuroOptimal Neurofeedback system allows the CNS to return to its own intrinsic flexibility. It is **Comprehensive** in that it is training more than one frequency at a time; brain training simultaneously occurs across the range of frequencies thereby allowing the CNS of the individual to decide what to respond to. **Adaptive** in that the feedback is not forcing the system to respond to one constraint; the Neurofeedback software adapts to the inputs from the clients CNS and the client adapts to the inputs from the software. **Renormalization** of the **EEG** in that it helps the CNS return to its own intrinsic self organizing wisdom. Dr. Brown emphasizes that the Neurofeedback system is not teaching self regulation but rather restoring access to intrinsic capabilities. Brain training increases access to that capacity. Neurofeedback training is not teaching the CNS to relax, be less vigilant or less reactive; rather the brain training is helping the CNS remember what it already knows. Microsecond by microsecond the brain is receiving information about its activity and adjusting based on that; it is an interactive, non-linear, dynamic, adaptive activity.

When clients begin Neurofeedback training they complete a very thorough assessment and checklist of symptoms. This is done because there is an almost seamless dropping away of symptoms so much so that from time to time, clients will forget they had certain symptoms when they began brain training. I heard one colleague describe "once something becomes re-integrated in to the brain, it is like it was always there." An example of this was a 12 year old child who was very appended to his mother. He was described as being very socially anxious and had been home schooled for many years. After one session he described, "My brain is racing around looking for something to worry about and can't find anything." After about six sessions he reported that he had walked the six blocks to the mall and was able to now commute to sessions on the bus by himself. As training progressed he had much more independent exploratory behaviour, returned to public school and integrated in to the classroom without major difficulty. A client who struggled with chronic over use of alcohol had a very difficult time reflecting on his functioning or his interaction with his wife or family. He would frequently say, "I don't know" in response to any question that would invite self observation. After some time of training, he went on a golf weekend with his buddies and reported in elaborate detail his successful effort to not drink, how he felt about that, how he managed the situation with others and how much more relaxed he was when in the company of others.

A population that this therapist would like to do research with is the Canadian veterans returning from the war in Afghanistan experiencing what many describe as PTSD. While the research is sparse, there is an encouraging body of data to suggest that Neurofeedback is a very worthwhile means for these veterans to overcome the deeper trauma of war memories or injuries. One veteran described changes as substantial as "improved sleep, fewer nightmares and much less restlessness, a reduction in sensitivity to sounds, feeling less angry with a greater ability to calm myself down before it gets out of hand." "No further feelings of "persecution;" "less irritability, a reduction in need to watch graphically violent videos, a reduction in eating "junk food." "More patience with people's "faults." "General anxiety less, a dropping away of "survivor's guilt. Almost complete dropping away of intrusive thoughts. Fewer physical tics like sniffing, fidgeting, clearing my throat and reduction in hypersensitivity to loud noises."

Neurofeedback has added an interesting dimension to my practice. There is no limit to the learning, development and deeper integration that accompanies this process for oneself and for our clients. As Jill Bolte Taylor Ph.D. stated in her book, *My Stroke of Insight* (2006), "as a trained neuroanatomist, I believe(d) in the plasticity of the brain—its ability to repair, replace, and retrain its neural circuitry."