Five Myths that Block Clinicians from Brain-Training

By Peter Van Deusen, Brain-Trainer Founder

Clinicians in therapeutic practice increasingly struggle with the fact that many of their clients come to them with problems for which they have no effective response: ADHD, learning disabilities, head injuries, conduct disorders and more are not effectively changed by psychotherapeutic techniques.

Many others, like anxiety, depression, anger management and PTSD are primarily medicated—which many clients prefer to avoid—and at best can be ameliorated, but not resolved in a lasting way.

Therapists can help a client learn to live more effectively with a problem, but they can't in most cases help them to live without it.

The sad fact is that there is a tested approach which fits ideally with the developed skills of the helping professional and which has demonstrated over half a century the ability to produce lasting changes in all these problems in a matter of months.

Unfortunately, this technique lacks the massive marketing budgets of the medical/ pharmaceutical industry, so it remains largely unknown and misunderstood by the very clinicians who could use it in their own work with clients.

But ignorance of the approach is not the greatest barrier. A series of myths have been propagated around brain-training by the very physicians and drug companies who benefit most from failure of front-line clinicians to adopt or even consider it.

If you are interested in expanding your therapeutic options—as have thousands of professionals around the world, keep reading to take a look at those myths and the realities behind them.

Myth 1: Brain-Training is a New and Untested Technology

Let's start with the facts first.

- Results from studies of neurofeedback have been published since the late 1960's—half a century ago! UCLA Psychologist Barry Sterman, Ph.D. worked with a group of women college students who had refractory epilepsy so severe that they were in line to receive split-brain surgery, severing the corpus collosum so the two sides of the brain could no longer communicate directly. That didn't stop the seizures, but it reduced their severity, though with some pretty major side-effects.

- Sterman did a simple neurofeedback protocol in which he trained to reduce slow brain activity and increase a frequency he called sensory-motor rhythm (SMR) in the sensory-motor cortex. After a number of sessions, seizure activity had dramatically reduced. Several participants ended the study completely seizure free. Most reduced and some stopped medications.

- In the ensuing period, at least 47 studies and chapters have demonstrated the efficacy of EEG training in reducing or ending seizures. But among neurologists neurofeedback for seizures is unknown: Medication and surgery are still the primary options.

- Around that same time, Ritalin and Dexedrine were being tested on children with the (at that time rare) "hyperkinetic impulse disorder". The name was changed to ADD, then ADHD, as the diagnosis skyrocketed—and with it the use of Ritalin.

- A post-doc psychology student of Sterman's named Joel Lubar was doing follow-up studies on some of Sterman's epilepsy patients and discovered that all of them reported improved ability to sit still and maintain focus. Lubar

decided to do some case studies with hyperactive children, training Sterman's "epilepsy protocol" and demonstrated its effectiveness and lasting nature.

- In the early 70's he did a large study in the Knox County school system with 40 children which showed the same results: training those with ADD/ADHD to change their EEG patterns resulted in lasting changes in behavior in a great majority.

- Try to find these studies today. Or try to find clinicians working with the population who ever heard of them. Instead you'll find dozens of articles on the use of stimulant, anti-anxiety, anti-convulsant and even anti-psychotic medications.

- Brain-training is older than the use of psycho-active medications for working with a wide variety of so-called "mental-health issues". It's not new. Is it untested? Check out the bibliography included with this article demonstrating the efficacy of brain-training.

- The source of this myth is primarily the physicians and academic psychologists who form the upper echelons of the medical/pharmacological complex. But what is the really "experimental/untested" approach to treating patients?

- The pharmaceutical industry, with worldwide sales nearing $1-trillion annually, spends 19 times more on marketing than on research and development. The fact is that use of multiple psycho-active medications with people who fall into the ever-expanding net of DSM mental health diagnoses—especially young children and adolescents—is totally untested and completely experimental.

- Intermediate and long-term effects of the standard "cocktail" of stimulant/anti-depressant/anti-convulsant/anti-psychotic drugs given to patients of all ages are unstudied. The decisions of what drugs and what dosages to prescribe is almost entirely a matter of trial-and-error. Despite

their significant and common side-effects, often ineffective resolution of client concerns and serious potential health issues related to their use, this pharmacological approach is the accepted standard by all but a few physicians, insurers, big media and the general public.

- Although brain-training is a demonstrated alternative completed by professionals in 20-40 hours over several months which results in lasting and stable changes without side-effects, is non-invasive and builds the client's independence, the entire medical/pharmaceutical/insurance complex has lined up against it.

A remarkable recent series of events demonstrates the commitment of the medical community to the pharmacological approach:

- A number of years ago, the American Academy of Pediatrics established a Blue-Ribbon Panel to review the literature and make recommendations regarding what should be the initial intervention by pediatricians treating children and adolescents with issues of attention, learning, impulse-control, etc. The result was a clear recommendation that neurofeedback be the treatment of first choice.

- The Academy simply received the report, disbanded the panel and buried the findings. Only several years later, when members of the panel leaked the results, did the Academy have to admit them. In 2010, "biofeedback" (muscle relaxation) was added to its list as a 2nd-level intervention (based on research from the early 1980's).

- When that didn't satisfy the forces pushing for adoption of the panel's recommendations, the Academy finally admitted neurofeedback brain-training as a first-level intervention—along with medication management.

- 20 years ago, in 2000, Dr. Frank Duffy, then head of Neurology at Harvard Medical School, performed an independent survey of the literature on neurofeedback, for the journal Clinical Encephalography. His findings?

- " *The literature, which lacks any negative study of substance, suggests that EEG biofeedback therapy should play a major therapeutic role in many difficult areas….*

  In my opinion, if any medication had demonstrated such a wide spectrum of efficacy (as neurofeedback has), it would be universally accepted and widely used."

- So, unlike the current accepted pharmacological therapy for a broad spectrum of mental and emotional issues, brain-training is neither new nor untested. It has been tested and is widely used around the world with issues as diverse and complex as autism, reactive attachment disorder, PTSD (see Bessel van der Kolk's book "The Body Keeps Score"), ADHD, mood disorders, obsessive and compulsive problems, sleep/appetite/blood-pressure and other autonomic issues, seizures, head injuries, aging and even peak performance.

- Therefore, it (neurofeedback) should be a foundational tool in the armamentarium of any professional working with problems related to brain and mental function.

  So why isn't it?

Myth 2: The brain is primarily driven by chemistry and genetics

Anyone who has studied the field of health should be aware of the strong difference in approaches between eastern and western view of healthcare.

Eastern wholistic medicine focuses on supporting the body's natural capacity for healing itself. It uses natural substances and energy-based approaches to avoid disease processes. Ayurveda, yoga, tai chi, acupuncture and other such approaches focus on guiding the individual to healing herself.

Western medicine, since the formation of the AMA in 1847 and its funding by pharmaceutical firms, focuses on "defeating" disease. This interventionist approach, it has resulted in almost complete divergence from its wholistic

Hippocratic tradition (first, do no harm). Instead it adopts a top-down, corporate approach to defining/"treating" disorders, generally through the use of patentable substances to disrupt body chemistry, which can only be prescribed by physicians.

So, which of these approaches makes most sense—scientifically—or, more importantly, in terms of outcomes?

- Western medicine—especially in the area of so-called "mental health"—has focused on the pathologizing of experience. The growth of the DSM listing of "disorders" now makes it possible to diagnose a large percentage of the population with essentially incurable syndromes that require ongoing "therapy."

- A huge amount of money has been spent advertising these new "disorders"—not to physicians, but directly to the consumer. The great majority of these "diagnoses" are simply descriptions of symptoms. A person with difficulty paying attention has "attention-deficit disorder". The "diagnosis" doesn't carry any definition of causes or how it can be "cured". Psychiatry offers only palliatives.

- Such western "healthcare" systems, which do not focus on health but rather disease, have grown to the extent that they make up a major element of national expenditures in most "developed" western countries. As a result, more westerners are sick and being medicated for some disorder than ever before—and this is considered a sign of progress.

- Psychiatry and psychopharmacology have, over the past decades, heavily sold the shibboleth of "chemical imbalance in the brain." There has never been any explanation of what these might be or, if they exist, why psychiatrists can't test for them rather than the traditional trial-and-error approach to medication. However, because of the endless drumbeat of advertising—and despite the fact that drug companies and physicians were ordered to stop promoting the lie years ago—it is still widely believed by a majority of consumers.

- Despite all the money selling this approaches, "alternative" options like brain-training are growing without the benefit of massive advertising

campaigns and in spite of the negative responses of physicians when their patients ask about them. The use of natural supplements designed to improve the body's natural system for dealing with actual diseases has become a major industry in many western countries.

- Brain-training has demonstrated major success in resolving longstanding issues with mood, cognition, control, inflammatory processes, autonomic issues, injuries and performance. It works by providing the brain information about what it is doing and thus allowing it to adjust its own processes. The professional guides the process, but the client is the person who actually does the work.

- The science on the question of whether chemistry or genes drive energy or energy drives chemistry is pretty clear. When a brain produces significant alpha rhythm with eyes closed, the resonating networks release Serotonin. If alpha levels are too low, serotonin levels are low and the individual is likely to be anxious, have difficulty sleeping, etc.

- When a physician prescribes a serotonin reuptake inhibitor, the drug does not increase the level of serotonin in the brain. It simply slows down the process of clearing serotonin from the synapse between messages. However, despite temporary dulling of symptoms, the brain has been shown to react to this "excess" of Serotonin by shutting down receptors for it. As a result, dosages must be changed upward from time to time. Worse, when a user tries to stop taking the drug, the reaction is very negative. The patient must continue taking it over an extended period, trying to reduce dosages slowly (under the supervision of the physician) and suffer intense effects of withdrawal.

- Training the brain correctly in such cases, eases the detoxification process, because it builds the brain's natural release of the neurotransmitter, so the artificial boosting produced by the medication is not needed.

- In short, energy drives chemistry, chemistry does not drive energy. Changing stable brain energy patterns results in lasting change; artificially invading the brain's chemical system has temporary effects.

Myth 3: The mind controls the brain

Since the inception of western psychology around 1900, well before there was knowledge of the brain as a living energy organism, there has been a focus on our experience of ourselves and the world around us: the "mind". Countless hours have been spent debating the "mind/body" problem (the brain being part of the body) and the "nature/nurture" question.

The difficulty faced by psychotherapy in producing lasting changes is based on the fact that it seeks to change the brain by changing the mind. Research since the early 1990's has shown in multiple areas that most issues of cognition, mood, control, performance and behavior correlate with specific patterns of energy in the brain—they are encoded based on initial resources and experience of the brain into a set of response habits (e.g. anxiety, impulsiveness, etc.)

Brain-training offers the ability to identify and release these energy habits.

- As an example: research comparing brain patterns found in a sub-population of anxious people with a "normative" population identified multiple patterns that appeared frequently in the anxious group and rarely in the general population. One of those is that the brains of anxious people often show more fast activity over the right hemisphere than the left. This is rarely true in the general population.

- In fact, it is often possible to look at EEG data and predict with near certainty if a person experiences anxiety. By training to reduce the right-sided fast activity relative to left, the anxiety experienced by the client is reduced and ceases to occur. Changing the brain's habits, changes our minds in a lasting way.

- Because neurofeedback trains the brain, not the mind, it does not use language and, as a result, avoids the resistance which is a major issue in

psychotherapy. And because the feedback used for training does not contain emotional valences, brain-training is able to make these changes with much less complexity.

Myth 4: Neurofeedback is complex and technical

Although there are certainly brain training systems that make this appear true, systems like Brain-Trainer International (BTI) literally focus on getting new trainers working with clients in a matter of a month or so.

- Our system is sophisticated, in that it maps 20 different sites on the brain in multiple dimensions. Because BTI's system is oriented toward providing practical information to trainers, the output is a specific training plan which states exactly where to place the sensors and which protocols to use for each session.

- BTI's TQ7, our Brain Mapping & Assessment Software (Aka Trainer's QEEG) provides a customized written description of every pattern found in each client's brain and what symptoms to which they are likely to correlate. And it does this with the click of a button.

- The assessment is recorded on the same system you use for training. No need to pay and send off your brain mapping data for processing; you process the data on your own computer, again with the click of a few buttons. No need to find someone to translate the brain assessment into a training plan; the TQ7 provides a customized plan for each client. All in a matter of 10 minutes!

- How about the need for learning how to find sites on the client's head, how to place electrodes and evaluate signal quality and clean up afterward? BTI's cap system allows brand-new trainers to find sites and place electrodes in a matter of minutes without any special training. The cap

provides stable, quality signals and requires no clean-up of the client or the electrodes.

- BTI sees brain-training as a tool which is best applied by a professional skilled in establishing rapport, providing motivation and support, helping to integrate the change process into the homeostasis of the client and support system. The expertise in the BTI System is built-in, so the trainer can focus on the client—not on the computer.

- Unlike many one-size-fits-all neurofeedback systems, BTI's package allows even new trainers to work with "whatever walks in the door." From children to older adults, from problems of cognition to emotional drive issues, to addictions, trauma, and physical concerns like pain, sleep, head injuries, seizures, etc. The trainer chooses what population he or she is comfortable with, and the system guides the process.

- Perhaps most important of all, BTI is not only a seller of hardware and software like most in the field. It is a school that develops & certifies trainers. Training begins with a series of video workshops that teach the basics in your own place and your own time. A 2-day practicum workshop allows new trainers to use their own new neurofeedback system to assess and train hands-on with their chosen brain training supervisor.

- Supervision continues for 5 more months with live one on one video conference calls as the trainer begins working with clients. During this 5 month period students have access to the support of their supervisor to learn the ins and outs of how to get the best results for their clients. Successful completion of the supervision process results in certification as a brain-trainer based on demonstrated competency with clients.

Myth 5: Brain-Training Systems are very expensive

- Certainly, one can look at neurofeedback systems costing $8,000-12,000, but Brain-Trainer International's Professional Package includes the hardware, software, training protocols, assessment file and cap—everything trainers need and nothing they don't—for less than $4,500. Also our training/supervision package, which includes videos, hands on practicum and supervision, costs $2,600. The total package which includes hardware, software and the training/supervision needed to take a professional from newbie to a competent, confident trainer is just $7,000.

- Also, BTI's payment plans spread the cost over months. New trainers can be working with clients early in the process and can "earn while they learn". Many of our new trainers have recouped their investment in a few short months.

- Operating costs for the system—sending off your data for processing, paying consultants to produce training plans—don't exist with the Brain-Trainer system. You can do it all using your own computer hardware and software in minutes instead of days.

It's not hard to understand why the Brain-Trainer system is growing so quickly around the world. Ease of use, supported learning, lowest costs, most focus on the practical needs of the trainer, all combined into a single purchase. Add to that a network of hundreds of trainers to support and assist each other and amazing technical support. The question is, now you know the truth about brain-training/neurofeedback, why would you not want to add it to your practice.

For more information about becoming a brain trainer contact us today at:

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