

# Brainwave Connections

*Dedicated to communication and education in the emerging fields of neurofeedback, mental fitness, neuromeditation, and brain modification*

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## THE AMISH CONNECTION

We live in Northeast Ohio. In addition to plenty of lakes and streams, horse farms, llama and alpaca farms, apple orchards, metroparks and industrial centers, we also share our area with a considerable number of Amish, Mennonites, and other like-minded religious communities. The sight of horse-drawn carriages, small farms, and rolling hills dotted with curtainless white houses is common.

I recently interacted with a family counselor who also practices therapy within

the Amish community.

When the topic turned to neurofeedback therapy, I commented that it is likely a shame that the Amish, who eschew technology and modernization, do not benefit from this practice.

"Actually, they love it," he responded. "Many of my clients are Amish, they respond very well to trainings, for everything from ADD to depression."

"But I thought they did not approve of computers," I said. "Well, not exactly," was the reply. "They will

not embrace any technology that does not enhance the quality of life. But that is not the same as wholesale rejection of all technology.

When they see that technology can enhance the quality of their life, they embrace and endorse it. In fact, neurofeedback is one of very few applications of computers that they will endorse and allow, including a blessing from their own elders.

"We must be doing something right," I mused.

## WHEN IS FULL?

As a child, I once sat in the kitchen and pondered a large bag of sugar on the table. I pictured the millions of grains in the bag, and wondered how it might be filled, one grain at a time. Starting with an empty bag, adding one grain at a time, when would the bag be full? The first grain certainly would not fill it. Not the second grain. We could continue in this manner until the bag was, say, half full. Then the

next grain would not make it full. Nonetheless, the time would surely come when the bag would be "mostly" full. But then the next grain would not fill it. When exactly would it be full? This did not seem trivial to me, but was something worth thinking about. As it turns out, it has taken me 50 years to reach some kind of an answer. The key lies in habit, in intention, and in continuity of process. The bag

would be "as good as" full when the decision was made that each grain would be there in turn, without fail. No particular one of these miniscule grains could fill a bag. But the once the process was in place, and the habit, the intention, were established, the eventual filling of the bag would become a certainty. The bag would then at least be "virtually" full. So now, I wonder, when will I be "full?"

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## BUT WHAT DO I DO?



Neurofeedback is more a process of learning to allow what happens automatically, rather than one of “trying” to do something under our own will.



Life is not supposed to be a continual process of striving. Learning is supposed to be natural, to be fun. It's all about one step at a time.

Article by:

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In the practice of neurofeedback, it is not uncommon for a trainee to ask, “what am I supposed to do?” And during our training workshops, we often get this question from practitioners, as well: “What do I tell the trainee to do?”

One paradoxical answer is that there is in fact nothing to “do”. “Doing” is not what feedback training is about. It is more about learning to “be” in one state or another.

Neurofeedback systems provide an artificial environment that engages in an electronic dance with the trainee's brain. And, believe it or not, we are not in control of our brains, any more than we are in control of our hearts, for example.

Try not to think of chocolate cake. Did that work? Or did the mere mention of chocolate cake elicit images of a dark, moist, soft, sweet bread with rich frosting? In the same way, neurofeedback operates by mere suggestion, by exposure to the information, and the brain takes over from there.

The visual images prime the brain with the belief that this is about “me”. Seeing the bars, graphs, games, and other displays inform the trainee that their brainwave state is relevant. Then the sounds come in to finalize the conditioning function. Each beep, tone, or sound provides a fast cue that tells the brain “yes, this is the moment”. It does not matter if the trainee tries or not, understands or not, believes or not. What

matters is that the brain spontaneously seeks novelty, reward, and the suggestion of success.

Sue Othmer says that all we need is the trainee's attention, engagement, and a simple reward, to get the job done.

Well, that's all fine, but, again, “what do I do?”

The simplest of instructions should be sufficient to let the feedback take its course. “Allow the sounds to come”. “Allow yourself to learn what it feels like: [when the sounds come] or [when the animation moves] or [when you get a point].

Neurofeedback is more a process of learning what happens automatically, rather than one of “trying” to do something under our own will. Indeed, the more one “tries”, the more we see anxiety, stress, frustration, and anything but relaxation, reward, and learning.

Part of the lesson is to learn to do what is automatic, effortless, and easy.

Surely, it is important to at least attend to the feedback, and to have the intention to do well. But whereas we can certainly apply effort to subverting or resisting the learning, the application of effort will not really accelerate the learning process.

Life is not supposed to be a continual process of striving. Learning is supposed to be natural, to be fun. It's all about one step at a time.

We have heard horror stories of practitioners (or parents) ordering the child, “You pay attention to that screen and you make it go!” “But I'm bored,” says the child. “I hate this.” A pity. How can someone hate a simple, pleasant situation that seeks nothing more than to provide some information regarding brain state? Are we really that jaded, that spoiled, that impatient?

As long as the sounds are coming, and the trainee is at least moderately attentive, the goals can be reached. If they become bored, the answer is not necessarily to provide exciting video games that pander to a short attention span and an addictive state of mind.

First, tell them to breathe. It is amazing the progress that can be made, when the trainee simply breathes, and allows nature to take over.

Then, in the sense of “doing”, almost anything will do.

Let the trainee look at a picture book. Let them do a crossword puzzle, or play Tetris. Let them play with Legos. Let them do some homework problems, even. Not to put them under task, but to allow them to learn to remain relaxed, focused, and attentive, in the absence of stimulating input.

Regardless of what the trainee is doing, allowing the sounds to come, and allowing oneself to learn, will do the work.

Overall, it is more a matter of allowing, rather than doing.

## INVITED BOOK REVIEW

In the very early days of neurotherapy becoming a way of treating various problems, it was tough sledding. The cost of getting just the hardware and software was in the fifteen thousand dollar range if you bought a new Lexicor. If you wanted a training system, other than Lexicor, it meant a few more thousand dollars. Pile on top of that the cost of conferences and supervision to learn how to practice neurotherapy and you could well be facing somewhere around thirty thousand dollars.

Fortunately, the cost of quality training systems, such as BrainMaster and less expensive acquisition systems has helped some interested people to not be knocked out by cost alone. However, there has been a nagging problem continuing over from the early days. Namely, how and where do you get information that ties together the many concepts, terms, approaches and products that are currently a part of the field?

A growing segment of those persons using neurotherapy are people who wish to train in their own homes. Often a child with a problem or an adult, who has limiting factors that rule out going to a neurotherapy professional on a satisfying schedule, wants to train within their own home or office. Further, how does such a person gain knowledge to go about doing things well?

John Demos understands the plight of the person trying to

get into neurotherapy, as well as the intermediate who has bits and pieces but no good overview. From the confusion of the early days when there was no unifying text or materials, Mr. Demos has not only patched up the nicks his psyche took early on, he has done something about it. Now, rather than go to a meeting and getting a piece of a larger picture, but a picture unclear, we have the first legitimate primer for the neurotherapy field.

This 281-page book is written in a clear and understandable style that can help a person get to a point where they don't have to feel like a dummy when they hear someone talk about some aspect of neurotherapy. On a personal note, I can well recall the first meeting where I heard someone talk about neurotherapy. I thought to myself, "What's all this talk of CZ, FZ, PZ?" I might as well have been in a country where they spoke a language I didn't understand. I should mention, though, that even though there were unfamiliar terms, I sensed that this was about something that had real promise as a treatment modality for certain problems. I was hooked.

The person reading this book is going to get information on the history of EEG and early clinicians in neurotherapy. The formal part of the book ends a nice journey with tips on setting up your own practice if you are a professional and wish to go that route.

Hitting the high points of neurophysiology is clear and uncomplicated. Telling what part of the brain is often involved in various cognitive operations and mood states will help formulate thoughts about where to look for certain problems.

There is a good progression of information on interviewing, various assessment instruments (including check lists) and a nice section with colored plates showing tables and graphics from most of the major qEEG database scoring programs. While the qEEG information is not extensive (qEEG is not a simple subject) at least the reader will have speaking familiarity with some of the main terminology.

Case studies and the formulation of treatment plans should be comforting to the reader and he or she will be able to approach their patients/clients with some confidence that stems from decisions having a base in knowledge in the field. There are also tips on monitoring treatment progress so ideas about modifying treatment protocols can be generated.

For the person desiring knowledge on how the hardware and software end of things works, Mr. Demos gives the essentials. He also explains how there is an international nomenclature identifying scalp location and explains how to locate them.

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*Getting Started With  
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Demos, John N.  
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## Getting Started With Neurofeedback

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Different ways of hooking up someone for training are covered and the mystery of one and/or two channel training can be grasped. Alpha/theta and deep state training are mentioned. Treatment approaches where the brain is driven by visual and/or auditory stimulation (AVE) are covered. So is regional cerebral blood flow (HEG) so the reader gets a good sense of some of the other treatments that exist under the big umbrella of neurotherapy.

For the person who wants to earnestly get into the field, Mr. Demos covers such things as cost of equipment, supervision and training, choosing an office and gives some tips about marketing. In sum, Mr. Demos has done a commendable job of putting together a book that grounds a person in the essentials of neurotherapy. This book has a lot of breadth and clarity to it. If you read and reread this book you are well on your way to having a solid foundation from which to proceed in your work.

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## BROWNBACK, MASON AND ASSOCIATES, P.C.

Brownback, Mason and Associates have been in practice in Allentown, PA for over 20 years. Thomas S. Brownback, M.Ed. And Linda Brownback, M.A. are licensed psychologists offering a range of compassionate and responsive services to a variety of clients. Their services include individual psychotherapy, marriage counseling, family therapy, biofeedback therapy, and testing. Their specialties include EEG biofeedback, EMDR, general biofeedback, quantitative EEG (QEEG), heart rate variability, psychological testing, prepare/enrich/mate, reality therapy, and developmental needs meeting strategy.

They work with almost all types of psychological problems and disorders including addictions, anxiety and panic disorders, attention deficit disorder, fatigue syndrome, fibromyalgia, closed

head injury/head trauma, depression, dissociative disorders, autism, Asperger's syndrome, impulse control disorders, insomnia, and obsessive compulsive disorder.

They also offer workshops and training, and are regular attendees at meetings including ISNR, AAPB, and Futurehealth. Tom and Linda have a unique approach to EEG, and incorporate a very original and comprehensive view of EEG and brain function in their teaching, as well as their practice.

Tom and Linda teach a method that uses a total assessment based upon a combination of EEG indicators and personal profiles. This assessment produces a total picture of the client's brain, mind, and spirit, and motivates a broad-based, long-term plan of treatment and intervention.

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