

Acronyms, Complexity, and TruValue Hardware: The Sequel

In my last article we explored the tangential linkage between acronyms, complexity, Fetal Alcohol Spectrum Disorder (FASD), and my old hometown job at TruValue Hardware where the motto was, “If it can’t be fixed with PVC pipe and duct tape, it can’t be fixed...”

Oh, as an aside, it really does seem to make a difference in clarity of thought when I remember to take my meds on the day I try to write something professionally. In my days at TruValue, the most complex thing my boss, the gruff/basso profundo Harold Benson, ever had me do was sort mass quantities of nuts and bolts in the back room of the store, well obscured from the public. Thus, I could function pretty darn well back then, even without psychotropics.

But I don’t like to brag...

In the here and now, however, I find that writing a quasi-coherent scholarly piece, I need to be, well, quasi-coherent.

Anyway, last we spoke, I promised to follow up the article on FASD with some treatment options for this often misunderstood condition. Well, unlike 10-15 years ago, our field has developed the means to habilitate young brains who have been assaulted in utero by drugs and alcohol. This is of course huge. And I’m not just talking about better psychotropics being available nowadays, to neutralize FASD symptoms. (More on meds later.)

No, I’m talking about—primarily—neurofeedback (NF). Sometimes referred to as EEG Biofeedback, NF is brain training. Brain training that targets wayward electrical activity in the most complex organ of the body. Brain cells communicate one with another in two ways, via: 1) tiny squirts of chemicals (neurotransmitters); and 2) tiny electrical bursts. Squirts and sparks, if you will. Medications work on the former; NF works on the latter.

In the case of NF the brain is actually taught how to produce, permanently in most cases, optimal electrical activity. In turn, many children have learned how to normalize abnormal electrical activity corresponding with FASD. How many of us, for example, have lived with and/or worked with a child who just didn’t grasp cause-and-effect thinking? No matter how many times Johnny steals—and receives a consequence for it—he just never seems to learn that: A) stealing; causes B) no dessert for a week, as well as having to provide restitution. It’s similar to Bill Murray in the movie, *Groundhog Day*. Except that the end result never changes. Johnny keeps on stealing.

So how does NF work? Think of two computers linked together. One computer houses the EEG (measuring brain electrical activity, picked up by small sensors attached to the scalp with conductive paste). The other computer houses a series of computer games (e.g., Pac Man). In order for Pac Man to keep moving around the maze eating dots, the child's brain electrical firing must achieve a healthy mode. When the electrical activity lapses back into its old dysfunctional ways, Pac Man stops. Thus the youngster receives real time feedback as to how to optimize his own brain function. With repetition, the brain clings for dear life onto healthy brain electrical states—thus “working the kiddo out of” impaired neurological function that underlies FASD.

Wait. Hold on to your pea-picking parietal lobes. It gets better. NF is incredibly easy to do. Most persons learn how to make the video game “go” in a matter of a couple of minutes. It's the repetition over time that allows the brain's newfound electrical signatures to, “Lock-on phasers, Mr. Spock!” Thus, NF is not something the child must engage in, or practice, over the lifespan in order to reap the benefits. Also, most children enjoy the video games, there is no pain involved, and the EEG is not putting any sort of electrical activity into the child's brain—as is true of electroconvulsive treatment (ECT). And for those of you keeping score, NF is a non-medicinal intervention.

Moreover with NF, the technology is constantly getting better, with more and more research published virtually every month. The field has advanced light years since I first was exposed to the procedure back in years ago. A wonderful and informative website to learn more about NF is hosted by EEG Spectrum International (www.eegspectrum.com). They have a booth each year at the ATTACH conference. Or, feel free to purchase from ATTACH the audio seminar on “NF for Beginners” that I did at the 2007 meeting in Providence, Rhode Island. And, I will be doing a repeat on this topic in Charlotte at the 2008 conference.

Quick vignette for you. About 18 months ago I began doing NF training with a 9 year-old girl (“Sara”) who had undergone all manner of early maltreatment. You name it; it happened to her. Plus, there was documented in utero drug/alcohol exposure. Sara had been adopted at around age 3 by two wonderful parents. They had heard about NF and wanted it for Sara. When I first began seeing the child, she was on five different psychotropics. Shotgun psychiatry.

Long story short, after about 50 NF sessions, Sara began to function better at home and school (much less lying, stealing, aggression). And all the while, her medications were gradually being weaned down. Sara went from 90% Special Ed at school, to no Special Ed intervention, by session 75. When she first began in NF, it required a minor New Testament miracle just to keep the EEG wires connected to the scalp, due to constant monkey-motion on her part. Now, she sits as still and attentive as any well-functioning 35 year-old. Oh, and she is down to only two medicines, both at very low dosages. I have no doubt she will wean off completely in time. Needless to say, her parents are delighted and extremely proud of their daughter. Also, Sara's self-esteem has skyrocketed.

Oh, I promised above to weigh in on medications for FASD. Although there is obviously no “FASD pill”, several excellent classes of psychotropics are available to treat many FASD-related symptoms. These include everything from psychostimulants (Adderall, Concerta), to anti-hypertensives (Tenex, Clonidine), to atypical anti-psychotics (Risperdal, Abilify), to anti-convulsants (Depakote, Trileptal).

Moreover, I have found that more often than not, a marvelous Vulcan mind-meld occurs between NF and medications. A decided synergy takes place between the two, such that $1 + 1$ doesn't equal 2; it equals 4. Moreover, a widely observed occurrence is that children who receive NF training are frequently able to reduce and/or eliminate some or all of their medicines. Sara is an object lesson on this.

Well, time on this article is up. My internal clock is telling me that some of you are drifting into spontaneous coma right about now.

Bottom line is that a great deal of hope exists for many youngsters suffering with FASD. And there is much more we could talk about in this regard: parent education, discipline options, school interventions, sensory integration training, speech/language therapy, sibling issues, and how to most effectively deal with the ever-irascible Harold Benson.

So enough with the acronyms, complexity, and domestic hardware for this edition.

Plus, I'm pretty sure my medications are wearing off...