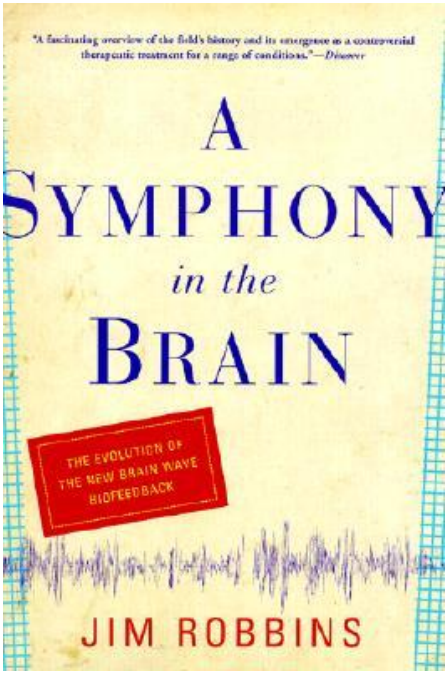

A Symphony in the Brain: The Evolution of the New Brain Wave Biofeedback

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Imagine a procedure versatile enough to treat epilepsy, autism, attention deficit disorder, addictions, and depression with no drugs or side effects; to bring patients out of vegetative states; and to improve everything from golf scores to opera singers' voices. These are only some of the claims made for neurofeedback, a controversial but effective treatment that is revolutionizing the way an incredibly diverse range of medical and psychological conditions are treated. In A Symphony in the Brain, Jim Robbins traces the fascinating, untold story of the development of neurofeedback, from its discovery by a small corps of research psychologists, to its growing application across the country and around the world, to present battles for acceptance in the conservative medical world. Offering a wealth of powerful case studies, accessible scientific explanations, and dramatic personal accounts, Robbins journeys through a remarkable field, which he brings to the public eye for the first time.

A Symphony in the Brain: The Evolution of the New Brain Wave Biofeedback Details

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From Reader Review A Symphony in the Brain: The Evolution of the New Brain Wave Biofeedback for online ebook

Keith Akers says

This book starts strong but ends weakly. It is really about neurofeedback, not biofeedback, so the explanatory subtitle is actually quite misleading. But it's a good book overall. Even its weakness is helpful, in a way; it is weak because it tries to cover everything and everybody connected with neurofeedback. Robbins does this in a chronological way, even though this means splattering various personalities and scientific ideas across the intellectual canvas which appear, disappear, and then reappear later.

Outsiders would benefit the most from the first half of the book, insiders from the second half. It starts at the beginning, with the accidental discovery that certain cats with "brain wave" training were resistant to seizures.

The discussion of all the internal politics of the neurofeedback movement was informative but confusing. Why were these people fighting? For money, recognition, or what? I think the author thinks that some of these legal fights were pointless in the extreme, but is hesitant to say so. I wish he would just come out and say it; it would lend more overall coherence to the narrative.

It would also lend a partial explanation to the obvious question -- why hasn't this revolutionary technique, which evidently has been demonstrated as an effective treatment at least for seizures for decades, not become accepted practice? Some readers will suspect that the real reason is that neurofeedback is a flaky discipline; and obviously, historically this suspicion played a role in the failure of neurofeedback to establish itself.

So this book could have been better organized. Robbins has mixed the politics and the science indiscriminately together. I would separate them out. I would have a "Part 1" explaining the current state of the science of neurofeedback: what is firmly established, what is likely but not fully established, what is controversial even among practitioners, what is possible and needing further research, and what is just flat out unknown. For example, I'd say that the use of neurofeedback to treat seizures and attention deficit/hyperactive disorder (ADHD) is fairly well established. But some of the most innovative researchers, even when they clearly obtain results, have failed to leave protocols allowing others to duplicate their results. They can do it, but they can't show others how. This bothers me. Robbins alludes to this problem, but I suspect he's trying to be nice to his sources by not harping on it.

Then I'd have a "Part 2" in which I describe the politics, both internal and external, relating to neurofeedback. Robbins alludes to one of the key reasons that neurofeedback failed to take off in the early days (1970's and later) as being that outlandish claims were made on behalf of neurofeedback therapy. Well, what were these claims? And who made them? And why did they make them? Inquiring minds want to know. This is a critical piece of the political story. After all, if the neurofeedback was unable to police itself in the early days, why should we assume they can do so now? For an outsider with no scientific expertise, if you hear someone concede that some of the claims on behalf of neurofeedback turned out to be false, why should they believe later claims made on behalf of neurofeedback? Or do we all have to be experts on the entire subject in order to evaluate any claim about neurofeedback?

And at this stage in "Part 2," Robbins could have brought in a second key factor that neurofeedback failed to take off -- the internal squabbling and legal fights over a technique and a process that, basically, could not make anyone that much money. So I wish that Robbins had written a book which included all the material that he did include, but that he explained it somewhat better and organized it differently.

And since I have gotten this far, I will now get on my soap box and raise the whole question of regulation. To me this is the scary thing about neurofeedback. There IS something to neurofeedback. But that not only means that you can heal people; it also means that you could, with suitably bad (or evil) technique, use the technique to cause seizures in people. In fact, Robbins shows that some experimenters did exactly that in the early days, in order to prove a point. These researchers immediately reversed their results by training their subjects not to have seizures; and this way of doing things would be considered unethical today, as Robbins points out. And yet today anyone could claim to be a neurofeedback therapist and administer such therapy, with no training whatsoever. We could of course limit it to medical doctors, but they probably know less about neurofeedback than anyone. There would need to be some sort of general acceptance of the idea, followed by a general understanding of what is acceptable and what is not acceptable for a practitioner claiming to be a neurofeedback expert of some sort.

In short, this book is both flawed and indispensable. People new to the subject, I think, will get bogged down in the book about halfway through in the details of the history of neurofeedback. Veterans of the subject, on the other hand, may find it a useful summary of contemporary personalities and trends in neurofeedback.

Laura says

Accessible for the non-scientific without being condescending, Robbins does an amazing job of explaining the roots and developments of neurofeedback in a variety of forms. It holds great promise for a variety of aliments, whether ADD/ADHD, fibromyalgia, depression, and the list goes on. Definitely worth the time to read and consider what our brains are capable of.

Jen Cordin says

This book gives a well-researched history of neurofeedback and how it has developed as a niche business industry for a very small group of therapists and wellness professionals. Most chapters start with a case study of a person who has been helped by neurofeedback, typically "after traditional medicine failed to improve his/her condition." As the author states, clinicians are far more likely to brag about their outstanding results rather than those cases where treatment was ineffective, but the case studies are fascinating.

Julie says

As someone who suffers from migraine and cluster headaches, I know that the pain associated with them can sometimes be eased by slowing down my thoughts or clearing out my brain, so to speak. I've talked with people who, even standing still, give off an energy of racing like a rat in a wheel. So when a friend lent this book to me, I was intrigued. In the past, I looked into biofeedback, when I just could not find any relief from my headaches and they were impeding my ability to function from day to day. Unfortunately, it was too expensive for my meager budget, and not covered by insurance. In the beginning, A Symphony in the Brain was very captivating. It is written for the lay person to understand, giving a history of biofeedback, the various conditions that have been treated by biofeedback, and some of the people who have been instrumental in furthering the science. Near the end, however, it got a little tedious for me. As a baby shower gift several years ago, a coworker gave me a cd of music that claimed to be able to calm any baby. She mentioned she purchased it from her hypnotist (!), and that if I liked it, there were more titles to try. This made me a little uncomfortable -- what kind of crazy thoughts were they going to put in my baby's tiny

newborn brain? In the same way, I am a little leery of some of the biofeedback techniques -- what thoughts could a kooky technician put in our heads? Still if you are searching for an alternative to drugs for a major health concern, this book might give you some good info on an alternative. Feel free to skim parts, as I ended up doing.

Mary Ann says

Good information. Journalist author explains history of biofeedback and neurofeedback. Good explanation of the politics of this innovative technology shown to work for so many intractable problems including epilepsy, addictions, ADHD, sleep disorders, eating disorders, sports and business performance, and so on. It hasn't caught on as well as it should have because the medical establishment has discredited it and yanked research funding. Yet if 80% of illness is caused by stress, and you can use this to destress people (instead of wait and give them drugs or surgery), you can understand how threatening it is. It was fascinating to me to learn about the various types of brain waves and the evolutions from "seeing God" in the 1960s to the effective alpha-theta crossover for addictions. This is truly the healing science of the future, in my opinion. I'm giving it 3 stars because the book seems poorly edited. The author is too circuitous and wordy at times, and the index could have been a lot better. Ditto the bibliography.

Kelly N. S. says

A very informative read about the incredible strides taking place in the world of brain connectivity and healing that is happening with neorofeedback.. Pioneering work is being done in this arena that could vastly alter, for the better, the lives of many affected by addiction, head trauma (both injury and stroke) learning disabilities and beyond. It was updated in 2008, but the science is growing so fast, I want something even more current. Good read for a basic understanding of the neurofeedback process and it's potential.

Jessie says

I was very fasinated by the history of neurofeedback. This book was well written. It contains a lot of history and research examples. It was laid out in an easy way to understand and follow. I have already recommended it to those whom are interested in learning more about this hidden alternative treatment for self-improvement. We have seen it work in our child and hope to observe more positive changes.

Carroll Straus says

Everyone should read this book

Plebeian says

I was actually handed a copy of A Symphony in the Brain yesterday by a Neurofeedback technichian that I have been consulting with.

The Author provides a history of Biofeedback and Neurofeedback as it has been studied both inside and outside of mainstream science. I am currently receiving neurofeedback treatment, and started my first training yesterday.

Much of the skepticism I and others have about Neurofeedback is addressed in the book. If anyone is suffering from anxiety disorders, bi polar disorder, ADHD, or Epilispy, I would consider reading this book for a start.

The brain is both a biochemical and electrochemical organ. Neurofeedback is largely based upon research of electrical frequencies measured in hertz waves produced in the brain. The goal is to adjust the frequencies in the brain to help boost optimum communication between neurons through a technique knows as "brain training".

Through a series of sessions of brain training, the brain learns to train itself to enter the proper phases of hertz frequencies: Alpha, Beta, Theta, Delta. Each phase represents a state of consciousness humans experience throughout waking consciousness, to physical activity, right down to sleep. The brain's hertz levels change throughout these states of consciousness throughout the day.

The problem is that some people do not operate on an adequate frequency, and gets 'stuck' in one area. People who are stuck in high levels of anxiety (fight or flight), lost the ability to enter the other states, preventing them from experiencing rested states.

Neurofeedback still isn't widely known, and many illnesses are still being treated with drugs. For those who want to look into an alternative to drugs, this is it.

Julie says

Biofeedback is an exceptional kind of neuroplasticity on which people with disabilities our mental issues can change their brains by practicing keeping their brains in certain theta wave hzs. This book is thorough and makes a strong case for the incredible science of biofeedback as a viable and strong healing technique.

Keith Swenson says

Do you want to know about neurofeedback? Where it came from? Is it s a fad? Or is it medical science? Jim Robbins gives us the story of brainwave biofeedback from the early pioneers in the 1970's to the blossoming in the 1990's. It is written in the style of an in-depth journalist: interviews and history of the key players, how the stories unfold, and how these players interacted. The book gives a good, not-too-technical understanding of how the techniques are performed.

The stories are rather amazing and in some cases incredible. Story after story of people with problems that are solved by a brainwave scanner and a rather simple user interface that simply lets the patient know the mode that the brain is performing in. Patients can modify their brain state, and it is the precise knowledge of brain state that allows patients to control the mode. For the most part the equipment is measuring and sensitive to the dominant global operating frequency of brain waves, but in some cases particular techniques are tuned to look at frequencies in particular parts of the brain.

The approach seems to applicable to a wide range of problems: ADHD, PTSD, anxiety attacks, substance abuse, epilepsy, shyness, and even plain old 'sports performance'. It is easy to believe that these kinds of things are affected by the brain entering into a "bad" mode of operation. Who of us has never been paralyzed by the fear of a looming deadline, unable to get past the writers-block, even though you know you *should* be moving forward? The brain is clearly letting fears (some modes of thinking) get in the way of work (other modes of thinking). Wouldn't it be great if you could be aware of these "bad" modes, and switch to good modes of thinking. Awareness is power. Interesting parallels are made between meditation and controlling the same rhythms inthe brain.

Should we be skeptical? I am both intrigued as well as cautious. The success rate seems (in a very non-rigorous way) to be around 90%. There are so many stories of people with debilitating problems who are effectively cured with a few treatments. Robbins points out that there is a dearth of controlled. double-blind scientific studies of the effects of the treatments. He covers some of the reasons for this: because it is just feedback, and the patient is in control, it does not fall under traditional 'treatments', it is not clear whether the FDA is responsible for this area or not, and widespread misunderstanding of consciousness and whether we should be meddling in it. The traditional medicine community shunned the approach most likely because some of the early work was done by people investigating mystical effects, yogis, and other new-age approaches from people who rejected the establishment in the first place. Many of the best cases are from parents of ADHD kids who rebelled against the mainstream and refused to dope their kids with Ritalin. You can't expect the AMA to look lightly at that. In one documented case funding was suddenly pulled from a study that would have lent a lot of credibility to the field: did the pharma industry pull the plug? Robbins does not stoop to such conspiracy theories, but the possibility is always there.

There has also been some drama. The pioneers in the field had to make their own equipment, and there was at least one major patent dispute lawsuit. There have been some patient problems: With a broken leg is it visible whether it is healed or not, but how do you objectively measure whether the brain is healed? For now, most people equate neurofeedback with pyramid power and fad diets.

This book will give you the history of the field. It is not guide for hopeful practitioners to use to learn how to do it. But I would think anyone wanting to experiment in the space should start with this book to get the background.

We live in a fascinating time. More has been discovered about the brain in the last 10 years than in all of history before that. The hardware necessary to monitor, record, and analyze the brain waves gets dramatically cheaper every year, and it is now possible to get serious equipment for this purpose for mere hundreds of dollars. It makes sense to me that the approach is a serious direction for healing the abnormal mods of brain behavior. These initial steps are no more than poking in the dark with blunt instruments, but I believe we will see a blossoming of the field in the coming years as enthusiasts help build credibility, and the mainstream medical community learns the benefit of this symphony of the brain.

Dedrick says

I really enjoyed the very detailed and in depth exploration of how neurofeedback has been developing. I feel like some facts are arranged to augment the story rather than simply deliver information. However, there is a lot to cover, and I found the writing to be engaging.

Amy says

This is the book that I recommend to all clients and interested parties in neurofeedback. It's an engaging read, that helps explain all the history, practitioners, types of practice, benefits and criticisms of this form of therapy.

Sam Bronstein says

A great history of the evolution of biofeedback. Well written describing both the good and bad of the system. Hopefully it has evolved in the past 17 years since the book was published.

Breena says

I really enjoy reading about anything to do with the brain. Did you know that we have the technology to acturally retrain weak or non-existant brain waves? We can actually strengthen the mind to overcome some depression and other disorders that are primarily take place in the neurons. So facinating!
