Shrink Rap radio #55, October 18, 2006, Psychopathology and The Brain with Daniel Amen

David Van Nuys, Ph.D., aka "Dr. Dave" interviews Daniel G. Amen, M.D.
(Transcribed from www. ShrinkRapRadio.com by Amy Wang)

Excerpt: ***Psychiatry today is the only specialty that never looks at the organ that it treats and it's just flat out stupid. It should be considered a sin almost that you could try and kill yourself today in Sonoma and virtually no one will look at your brain. How crazy is that? Because aberrant behavior, difficult behavior, abnormal behavior often comes from abnormal brain function. Shouldn't we be getting more information on how your specific brain works? I mean, what if you had a brain injury and hurt the left front side of your brain, which we know is involved in happiness and you try to hurt yourself or you try to hurt someone else. Shouldn't we know that so that we can go after targeting helping that part of the brain? And the cool thing, the reason I called this book "Change your Brain, Change Your Life" was because if I make an intervention, make the right intervention, I can actually make your brain better.***

Introduction: **That was the voice of Daniel G. Amen, M.D. who's the author of a somewhat controversial book, which came out in 1998 with the title, *Change your Brain, Change your life: A breakthrough program for conquering anxiety, depression, obsessiveness, anger and impulsiveness.* According to the book's fly leaf, Dr. Amen is a clinical neuroscientist, a child and adolescent psychiatrist, and the director of behavior medicine clinics in four cities. Dr. Amen is a nationally recognized expert on the relationship between brain and behavior, and on attention deficit disorder, and he's the author of several books including *Windows into the ADD Mind* and *Firestorms in the Brain*. Now, on to the interview.**

Dr. Dave: **Dr. Daniel Amen, thanks so much for agreeing to be my guest today on Shrink Rap Radio. I've been reading…**

Daniel G. Amen: **Yeah, thanks for having me.**

Dr. Dave: **Yeah, I'm really glad that you're able to take time out of what I'm sure is a really busy schedule to be with us. And I've been reading your very provocative and somewhat controversial book, *Change Your Brain, Change Your Life,* the subtitle is *A breakthrough program for conquering anxiety, depression, obsessiveness, anger and impulsiveness.* And your book seems quite revolutionary, even eight years later given the degree to which you integrate brain scan technology into your diagnostic understanding of these disorders. So, how did you first get into making the connection between the brain and these psychological conditions of anxiety, depression, obsessiveness, anger, and impulsiveness?**

Daniel G. Amen: Well, I'm a classically psychiatrist that trained at Walter Reed Army Medical Center in Washington D.C. and also child psychiatrist. I did a child psychiatry fellowship, and it's been really amazing that my training in the early 1980s really had very little neuroscience or brain science to it. We talked about neurotransmitters and then we talked about how your childhood affected your behavior and your feelings.

Dr. Dave: Right.

Daniel G. Amen: And in—what is—1988 that I first became very interested in neurofeedback, which is measuring electrical activity on your scalp and correlating that with certain learning problems, behavior problems, like ADD. And it got me very excited to think about the brain and how the brain is related to what we do. And it was 1991 where I went to my first lecture on brain SPECT imaging. That's the study that we do at our clinics. And that revolutionized the way I think about my patients.s

Dr. Dave: Ok, and people have probably have heard of CAT scans and some of the other scan approaches. A SPECT might be new for people. What does SPECT stand for?

Daniel G. Amen: SPECT is a nuclear medicine study. It actually looks at living tissue. So a CAT scan or an MRI, those are anatomy studies. They show what the brain actually physically looks like. SPECT looks at blood flow and activity patterns. So if you have a car engine analogy, if you pop the hood and just look at the engine, that's what an MRI or a CAT scan will do. SPECT is telling you what's going on when you actually turn the engine on. So an MRI of a dead person of the brain looks like a brain. SPECT scan of a dead person looks empty because nothing's going on, so it looks at the activity patterns. And I always say it's really easy to understand a SPECT scan because basically we look for three things, areas of the brain that work well. Areas of the brain that are low in activity, areas in the brain that are high in activity. And that gives us a guideline to then treat somebody if they have too much activity in a certain part of the brain. We want to calm that down. If they have too little activity in certain parts of the brain, we want to stimulate that. So we're all about using the scans to help us understand people and then to balance their brain.

Dr. Dave: Okay, now this particular approach, is it examining blood flow in the brain as opposed to electrolyte activity?

Daniel G. Amen: We look at blood flow and activity patterns and blood flow are coupled in the brain, which means if you have increased activity, you have

increased blood flow; you have decreased activity, you have decreased blood flow. Because the brain has no fat stores in it, so if it needs immediate increased energy, it gets increased blood flow.

Dr. Dave: Mmmhmmm. Now in your book, you identify 5 key systems in the brain and the conditions that tend to be associated with those systems, so I wonder if you could take us through those since they're so fundamental to your approach.

Daniel G. Amen: The five systems I talk about in *Change Your Brain, Change Your Life* are the prefrontal cortex, that's the front third of your brain, largest in humans than in any other animal. What we call the executive brain—very important—the part of your brain that talks to you, that tells you not to say certain things or not to do certain things. I think of it as like the brakes in your brain, so it's a very important system that I talk about in the book. Then there's a very interesting system called the anterior. Anterior just means toward the front, cingulate gyrus, which is the brain's gear shifter, allowing you to shift your attention from things to things. Talk about the basal ganglia, which are involved with motivation, pleasure and anxiety. The limbic brain, which are involved with emotions and the temporal lobes, which are involved with mood stability, memory, temper control, learning and so on. And there are many more systems in the brain and I really simplify things but the cool thing is that it works when people read the book, take the checklist to see what might be going on with them and do the interventions that are helpful for them. It literally can change their whole life. So even though admittedly, my approach in the book was very simple, the cool thing is that it really does work.

Dr. Dave: Mmhm. And yeah, you even say in the book that people can do the interventions that you recommend even without having had a brain scan that you have interventions that could be useful.

Daniel G. Amen: Well, and that's one of the mythologies about my work is that oh, you have to have a scan in order to benefit from my work. And in all of my books, I have these cool checklists that help you predict what your scan might look like if you would never get one because my books are published on all five continents. And we've seen people in our clinics from 51 countries, so I mean, a lot of people read my books that never have the opportunity to get scanned and I want them to benefit from the work that we do.

Dr. Dave: Yeah. Well, have you ever had the experience of somebody coming in and they present symptoms and you do the brains can but you don't find evidence of malfunction, as it were, in the scan?

Daniel G. Amen: I mean the scans are not a perfect test. The scan and some of

the controversy about my work really comes from misunderstanding my work. People say we use scans to make a diagnosis. We never use scans to make a diagnosis. We use scans as part of the diagnostic process to give us more information. So I don't look at a scan and go "You need Ritalin." I look at a scan, I talk to somebody, I think about it, I put it all together with the information that I have, and then I decide if you need Ritalin or you need another medicine or you need a natural approach to getting your brain better. So part of the controversy is really about misunderstanding what I say, rather than … you know, I think when people really come to the clinic, when they get it, they get excited about it because in fact we give people more information. So, psychiatry today is the only medical specialty that never looks at the organ that it treats and it's just flat out stupid. It should be considered a sin almost that you can try and kill yourself today in Sonoma and virtually no one will look at your brain. How crazy is that? Because aberrant behavior, difficult behavior, abnormal behavior often comes from abnormal brain function. Shouldn't we be getting more information on how your specific brain works? I mean, what if you had a brain injury and it hurt the left front side of your brain, which we know is involved in happiness and you try to hurt yourself or you try to hurt someone else. Shouldn't we know that so that we can go after targeting helping that part of the brain? And the cool thing, the reason I called this book *Change Your Brain, Change Your Life* was because if I make an intervention, make the right intervention, I can actually make your brain better. I give you the wrong medicine, I do the wrong treatment for you, I'll make your brain worse. But because psychiatrists don't look before and after…we really don't have the kind of accountability that we need to have as a profession because I can hurt you. I can make you more suicidal by giving you the wrong medicine. But if I don't look before and after, I can say, "oh well, it really wasn't the medicine. You have a bad personality." And there's something just that strikes me about that as being blatantly unfair.

Dr. Dave: Mmhmm. Yeah, you know, one of those things I think you're touching on here is that I'm under the impression that in recent years, there's been a fair amount of research showing that not only does the brain shape our thoughts, but that our thoughts can shape the brain. I got the impression that maybe your brain scan studies support that idea as well.

Daniel G. Amen: Well, actually, I published a study last year. You know part of the controversy around my work, people say, you know, I don't publish my research, which is so irritating to me because I've published a number of papers over the last ten years. And last year I published one psychotherapy called EMDR. EMDR is a specific type of psychotherapy that helps people deal with emotional trauma. And what we found is that EMDR in fact changes brain function. And changed it in a very cool way that makes great sense on why people feel better afterwards. So, yes, abnormal brain function can lead to abnormal behavior but

changing your behavior can actually improve brain function. So it works like this very cool feedback loop, where you and your brain work together to have either the best or worst brain possible.

Dr. Dave: Right, so things like meditation or thinking positive thoughts or listening to classical music or learning to play a musical instrument, all of which are things that you recommended at a very holistic approach, those can actually have an effect on the brain.

Daniel G. Amen: Absolutely.

Dr. Dave: Yeah. Yeah, that's a very exciting frontier that's beginning to open up to us here. You know, I've had the benefit of looking at your book where you've got lots of pictures of brain scans and a number of stories about patients who've came in with a presenting set of symptoms, and you were able to correlate it with a scan and then able to develop a treatment program. In fact, you start the book off telling a story that got you into all of this. I think it was a family member, a little boy. Maybe you can tell us a story, maybe that one or some other one that gives people more of a feel for how all of this works.

Daniel G. Amen: When I first started doing this work, I was so excited. And I was excited mostly because it made me a better doctor and I got all these cool results from my patients. The thing that brings me the most joy in life is helping people get well and I felt like I really became much better at doing what I do. But the controversy around the psychiatrist looking at the brain—now this was in the early 90s—was just overwhelming for me. I just couldn't believe that there would be controversy about me ordering brain scans for my patients. And so for the first 5 years, I had no financial interest and I just ordered them as a practitioner who was excited about it. But given the level of controversy I actually stopped talking about it with my colleagues. I kept doing it but stopped talking about it. And then one night in 1995, I got a call from my sister-in-law who said my 9 year-old nephew had attacked a little girl on the baseball field that day for no particular reason, out of the blue, not understandable. I went, "wow." I said, "What else is happening with Andrew?" And she said, "Danny, he's different. He's mean, he's surly, he's angry. He's got this terrible temper and I don't know what's going and I went in his room today and found that he has drawn two pictures; one of him hanging from a tree and another one of him shooting other children." And I'm like wow. Immediately, my mind went, "Andrew has a left temporal lobe problem because I'd already had four years of experience with people who were violent and we found there was just a huge correlation between violence and left temporal lobe. And they brought him to my clinic in Fairfield and when we scanned him, we found he had a cyst the size of a golf ball occupying the space of his left temporal lobe.

Dr. Dave: My goodness.

Daniel G. Amen: And when I convinced a neurosurgeon to take it out, the violence completely went away and it was that case of somebody I loved dearly that got me really talking about this again and it's like, this is important. How many kids are in residential treatment facilities and juvenile hall? How many people are in jail? When they have brain problems and it's not just because they wanted to do bad things. And so from that moment, if you think that I'm crazy for doing this, I don't care. I think you're an idiot if you don't. I mean I'm dead serious when I say that to practice psychiatric medicine without looking is going to be considered malpractice in ten years. And it will be considered Dark Age medicine 50 years from now.

Dr. Dave: I have no doubt that somewhere down the line, and I don't know how long it will be that what you are saying is true. I know initially you were a bit of a lone voice in the wilderness. It's been, what, about eight years since you wrote this book that we're discussing now. What kind of professional reception has your approach been getting these days? Has it spread to people, to practitioners, for example, beyond those who work in your own three clinics?

Daniel G. Amen: I have four clinics.

Dr. Dave: (laughs) Ok, four clinics.

Daniel G. Amen: One in Fairfield, one in Newport Beach, one in Tacoma, WA, and one in Reston, VA. And one in Washington D.C. It had, three years ago, we had a conference here in Southern California called Opening the Mind, about using imaging in clinical practice. We had 300 professionals from around the world who came. We have about 1,000 psychiatrists and mental health professionals who refer patients to our clinics. There are other companies sprouting up, to do brain imaging and clinical practice. UCLA actually advertises on television here in Southern California about doing SPECT scans for psychiatric medicine.

Dr. Dave: Really?

Daniel G. Amen: Last year the American Psychiatric Association gave me the Distinguished Fellow Award, which is the highest award they give to members.

Dr. Dave: Oh, that must've felt good after all of the criticism.

Daniel G. Amen: Yeah, it did feel really good, but still…I wrote a book once, called *Healing the Hardware of the Soul* and one of my psychiatric colleagues from

Berkeley sent me a letter and on the back of the letter, he wrote "All truth goes through three stages. First, it is ridicule, and I've been there. Second, it is vehemently denied, and I've been there too. And third, it is accepted as self-evident." And right now we're between two and three. In fact, Tom Insel, who is the director of the National Institute of Mental Health, said last year that brain imaging in clinical practice is the next major advance in psychiatry. And he's right. And he's the big boss when it comes to psychiatric medicine in the United States, and he's saying this is coming. I say, well, it's about time. I mean, we've had this technology available to us since the late 1980s. And too often people have said, "No, not ready. Not ready. Not ready." And I go, "Well, what the heck is the alternative?" The alternative is to practice with complicated patients without looking. And people go, "Well, there's not enough research" and I'm scratching my head because on our website today—you can go to amenclinic.com—on our website today, there's 2,020 scientific articles relating brain imaging to psychiatric medicine. It's like, give me a break. Plus, what's the standard in psychiatry? We see patients from all over the world. We see patients who have on average, three and a half different diagnoses per patient, who have failed four other treatment providers before they come to the amen clinic. The standard is giving people two, three, four, five different psychiatric medications without ever looking. Show me one research article that says it's effective to give somebody four different psychiatric medications. Heck, show me one research article that says it's effective to give them three or two different psychiatric medicines. There's not one, but I get criticized for looking. But I'm sorry; I wouldn't do this if I couldn't look. I would just think it's too backwards of a field.

Dr. Dave: Yeah. Well, since we're talking about the….

Daniel G. Amen: I'm sorry to sound preachy, but with my last name, I can do it. (laughs)

Dr. Dave: Yeah. (laughs) That's okay. Amen, Ah-men.

Daniel G. Amen: Imagine growing up with a name like this, being Catholic… (laughs)

Dr. Dave: Yeah, I can only imagine. No wonder you became a psychiatrist, huh? So, since we opened up this can of worms here…I find your writing in your book very compelling, and so I always have to check against my own enthusiasm since I recognize that, wait a second, this sounds distinctly different from what most psychiatrists are doing so I went on the web and found that in fact that there's a website called Quack Watch and there was another psychiatrist who had criticized your work there.

Daniel G. Amen: Actually, that person's not a psychiatrist. She's a family practice doctor.

Dr. Dave: Ah, okay, I think you're right.

Daniel G. Amen: Yeah, when you look at it, it's like, come on, you can do better…I can do better than that criticizing me.

Dr. Dave: (laughs) Okay.

Daniel G. Amen: I mean, there's just like, I mean maybe you can bring up what you actually read that you thought was of substance. But when I read it, I thought "Come on! You gotta have better substance than this."

Dr. Dave: Well, there were two points that stand out to me. One was the claim that your work is based on anecdotal case studies and not on double-blind studies. I'll give you a chance to respond to that.

Daniel G. Amen: Well, at this point, we've done 35,000 scans; maybe the world's largest database. We actually have a prospective study that we did on normals to understand what normal is. We have consistently studied and reported our research when we thought it would be helpful on aggression, on attention deficit disorder, on oppositional defiant disorder, on post-traumatic stress disorder, we have a very active imaging study that has looked at …I'm sorry, a very active research department that has looked at many of these psychiatric issues, so you know, to say that it's just based on anecdotal…I mean absolutely. I mean, initially, it was based on our clinical experience and then it was added to, by the research that we did, and the other thing that is really important, 'cause I don't think I'd invented all that much; what we do is we summarize the research. And it would've been nice if the family practice doctor who criticized my work would actually have got on our website and said, "you know, well, heck. There are thousands of imaging articles as it relates to brain SPECT and psychiatric medicine." So the idea that it's based just on anecdotal experience; well in part, that's true but if you add in the 2,000 articles we put on our website and read and try to integrate into our clinical practice…I mean you would be stunned to know that with dementia alone, there are 210 studies involving 13,000 patients. And like, hm, maybe there's some consistency to this research, as opposed to what she would imply that I basically made this up after looking at five patients. And I'm like, interesting.

Dr. Dave: She also said that SPECT scans are invasive and potentially harmful.

Daniel G. Amen: Yeah, you know the problem with that argument is there is no evidence for that. Last year in the United States, there were—see if I can get this

right—I think it was 17 million nuclear medicine procedures and many of them done on children. It's fascinating to me that you can have constipation and go get a CT scan of your abdomen. You get actually more radiation than from a SPECT scan. And nobody thinks twice about the CT scan. Give a SPECT scan…and the issue I think is this; the radiation is not harmful to people. You get the radiation of about being outside living in the United States for about a year. That's the level of radiation you get from a SPECT scan. So radiation is really not the issue. The issue is, mental health professionals are not used to ordering lab tests, and so if we order a test that has a regular amount of medical radiation…we flip out about it, as opposed to if a cardiologist ordered a series of X-rays that gave you eight times the level of radiation of a SPECT scan, no one would even think about it because, "Oh, this is a medical test, and the risks of the radiation are far outweighed by the potential benefit of the test." And we don't think about that in psychiatry because we're not used to ordering tests like "[Gasp!] Radiation! Oh my God! The sky is falling!" When in fact there is no evidence that the level of radiation from a SPECT scan would ever hurt anybody.

Dr. Dave: Ok. Well, let me change direction just a little bit. Recently, I've been reading that cancer chemotherapy may have lasting deleterious effects on the brain. In your own work, have you seen any evidence of what might be called chemo-brain?

Daniel G. Amen: Absolutely, these brains look toxic. Again, you know, how would you know really unless you look. But what we find is it looks like people who have chemotherapy have developed a toxic look to their brain, like they were doing drugs or they had a brain infection or they had a lack of oxygen to the brain.

Dr. Dave: What about down the line?

Daniel G. Amen: Now, that doesn't happen with everybody. And what's really important—I've been thinking over the last couple years, a lot about this idea of brain reserve—your brain has a lot of reserve to it, so not every head injury is going to change your life. Not everybody who gets chemotherapy has cognitive problems afterwards. It depends, in part, on the level of reserve your brain has. Now, genetics are involved in that, no question. But also, have you had a head injury that took away some of your reserve? Have you been abusing alcohol or nicotine that has taken away your reserve? Do you eat lousy? Are you overweight? All of those things take away your reserve so that when you have chemotherapy, you're much more likely to have cognitive problems than someone who's not had a head injury, who's not been a substance abuser, who's not had diabetes, who's not had all of those things that take away brain reserve. So chemo-brain, absolutely, it exists more commonly in people who aren't doing a good job in taking care of their brain and my later book that I wrote, *Making a Good Brain Great* is all about how

can you have the best brain possible, and how you live your life, day in and day out. We implied that earlier when we were talking about the impact of thoughts on the brain. How you live your life, moment-by-moment, day-to-day is either helping or hurting your brain.

Dr. Dave: Okay. What do you see on the horizon in terms of promising research or potential breakthroughs in this interface between neuroscience and psychiatry?

Daniel G. Amen: I think psychiatrists are going to become more like cardiologists. Most people who go to cardiologists don't go because they've had a heart attack. They're there to prevent a heart attack and I see a day when people are going to be coming to mental health professionals like me to be keeping their brain healthy and getting checkups ahead of time before they go through a major depressive episode or a bipolar episode. I think that is going to be a part of the Holy Grail, if you will, of psychiatric medicine. I also see that brain imaging in clinical practice is going to be standard; using genetic testing will become standard; and we're going to get to a point of personalized medicine, where I'm going to be optimizing your brain, rather than treating an illness like depression because even now, depression is thought of as a unitary concept, when there's gotta be 20 different kinds of depression. So we're going to be much better at targeting and tailoring treatments in individuals as opposed to broad diagnostic categories.

Dr. Dave: Very interesting. Are there any last points you'd like to make before we wrap this up?

Daniel G. Amen: Well, you know, a lot of people don't get it but your brain's involved in everything you do. How you think, how you feel, how you act, how well you get along with other people. And honoring it, taking care of it are very important. We talked earlier, I live in Newport Beach, which is a cool place to live but it's often considered a plastic society because we have more plastic walking around the streets here than anywhere in the world. And I often say, we care more about our faces, our boobs, our bellies, and our butts, than we do our brains and that's just crazy because if we really want to be the most attractive that we can be, we have to have a brain that works right.

Dr. Dave: Great. Hey Dr. Amen, I want to thank you for taking time out of your busy schedule to be our guest today on Shrink Rap Radio.

Daniel G. Amen: Great, thanks for having me.