

**#369 – A Biopsychological Model to Guide Psychotherapy  
with Robert Moss**

*A psychology podcast by David Van Nuys, Ph.D.*

Dr. Dave: Shrink Rap Radio Number 369, *A Biopsychological Model to Guide Psychotherapy* with Robert Moss.

Announcer: It's Shrink Rap Radio, all the psychology you need to know, and just enough to make you dangerous—it's all in your head. And now, here's your host Dr. Dave.

Dr. Dave: My guest today is Dr. Bob Moss, and we'll be discussing his theory of cortical columns and the clinical biopsychological approach to therapy that he's developed.

Robert A. Moss, Ph.D., ABN, ABPP, is a clinical psychologist who works with Bon Secours St. Francis Hospital in Greenville, SC. While teaching neuropsychology in 1984, he developed a theory that the cortical column is the binary unit (bit) involved in all cortical processing and memory storage. Based on this theory, the Clinical Biopsychological approach to therapy was developed and continued to guide his work while in full-time private practice for over 20 years.

As of 2006, the neuroscience field provided sufficient evidence to make the brain model publishable in a referred journal, with a detailed description of its application to psychotherapy being published this year. One aspect of treatment, Emotional Restructuring, is a single session approach to address influential relationship negative emotional memories.

Bob is board certified in clinical psychology and neuropsychology, and is a former associate professor in clinical psychology. He has authored 43 professional articles and has presented at a number of professional meetings.

Now, here's the interview.

Dr. Dave: Dr. Robert Moss, welcome to Shrink Rap Radio.

Dr. Moss: Thanks for having me. I really appreciate it.

Dr. Dave: I'm really happy to have you on this show. We are going to be talking about some neuroscience theories that you've developed, but I believe your background is that of a clinical psychologist, so when and how did you become so interested in neuroscience, and how did you get up to speed on it?

Dr. Moss: I've always had an interest. As an undergraduate I actually had more interest in biopsychology than I did in clinical, but I made the decision to go into clinical. I actually had a co-major in biopsychology when I was in graduate school, and I've always just been drawn to understanding the brain. It's just one of those things that felt right to me.

Dr. Dave: Yes, I'm surprised they even had a biopsychology emphasis. Where was that?

Dr. Moss: The University of Georgia.

Dr. Dave: Well, they were probably ahead of their time.

Dr. Moss: Actually, they had the biopsych program. It was neuropsychology that was just coming online at that point in time, so I had a neuropsych course while I was there, but again, there was no formal neuropsych program.

Dr. Dave: What year was that?

Dr. Moss: 1981 is when I finished.

Dr. Dave: Yes, well I guess that's the right timeframe for all of this new brain science information to be coming online. I first came across your name in something you submitted to the online journal, *The Neuropsychologist*, and you made a reference to cortical columns, and I went, "What?" I've never heard of cortical columns, and probably to have you explain cortical columns at this point might be too early, so let's postpone that until some point in our discussion where it fits in naturally. In fact, I believe your cortical columns hypothesis is part of your larger clinical biopsychological model. So take us through that model, if you will.

Dr. Moss: Actually, the model itself is based upon that brain model. It's called dimensional systems mode. It was published—the first paperback in 2006. I actually developed this back in 1984, when I was teaching a neuropsychology course at the University of Mississippi. When I first actually wrote up the paper and submitted it, it was very soundly rejected for being way too speculative and untestable. So it took 22 years for the first paper to actually be published, when the field had actually progressed enough to provide enough supporting data.

Dr. Dave: Good for you! You get high marks for being very persistent and for vision—a 22-year in-the-future vision.

Dr. Moss: Of course, I was in practice for years, and I was using this as the guidance in terms of all the things I was working with in therapy with patients, so the end result is that it is a well-developed theory over the years. The first clinical paper was published back in 2007, tied to negative emotional memories, in *The Journal of Psychotherapy Integration*, talking about theoretically where these come from, but particularly talking about—and we'll do that in the course of the program I'm sure—talking about the emotional restructuring procedure that is designed to actually address and neutralize, if we can, past negative emotional memories tied to relationships. And then, basically continued to publish several other papers clinically. We did an update with three graduate students at the end of last year on the basic brain model, adding in new dimensions—and we'll get into more of those things.

But then the first comprehensive theoretical paper, going from the brain model to the clinical biopsychological applied model, was just published about two months ago, and I went through in great detail, step-by-step, how it all translates, and as we'll talk today, talking about the fact of this whole concept of consciousness as people typically use it, and unconsciousness and so forth, actually explaining how these things can occur—and also the upcoming paper talking about this as it's related to personality aspects and interpersonal behavior patterns, if you will.

Dr. Dave: Now, I read this paper that I guess is about to come out. You sent me a copy so that's really going to be the basis of our discussion here, although you can certainly go outside it.

So, you say all human behavior is motivated by a prime directive to maximize positive and minimize negative emotional experiences. And that almost seems too simple. I seem to recall some debate about that in the literature. Am I correct that there's been some controversy around that idea?

Dr. Moss: Oh, sure. This dates back many, many years, obviously. But, if you go into psychodynamic theory—pleasure principle concepts and so forth—and, of course, I came from a behavioral background myself, and, of course, we didn't want to talk about what was in the black box, but we'd talk about positive and negative reinforcement, punishment, and so forth.

So the end result was, even though we did not want to infer what was going on internally, conceptually it's the same kind of thing, and I think most people would have a real hard time debating the fact do you actually not experience positive emotions when you actually are increasing your behavior on the basis of positive reinforcement. It's the same kind of thing if you apply negative stimulus—punishment kinds of things that decrease behavior. I think few people would have difficulty accepting the fact that, with negative emotion being experienced, you're going to try to avoid or escape those kinds of things. But you're correct. There has been controversy about these things.

Dr. Dave: I seem to recall people bringing up the example of somebody deciding to sacrifice their life to save their child, for example, or their spouse or a good friend, and that there's no immediate positive reinforcement for that decision.

Dr. Moss: Correct. There's not immediate, but if you look at it—and this goes back to the whole thing that we'll talk about today in relation to personality or interpersonal relationship behaviors. We actually see that, of course, like with anything else, we're going to have a long history in terms of developing what turns on positive emotions for us tied to relationships, turns on negative emotions, and we develop certain rules many times, which will actually be more—We'll talk left hemisphere—verbal interpreter kinds of things. But in essence here, I have that rule that says that I need to protect my child, and so then end result is that the logic overrides the immediate emotions, and puts myself in harm's way as a result.

Dr. Dave: You just made reference to the hemispheres, and that's an important part of your theory. You say that memory is stored differently and processed differently in the left and right hemispheres. What can you tell us about that?

Dr. Moss: Actually, the whole basis of the theory—and this goes back to the concept of the cortical column being the binary unit—is that all memory processing in the cortex—this is where you're going to see a higher level of memories being stored there—right and left, we're going to see the same patterns in terms of how memories are actually formed and stored cortically. But based upon the processing style of each hemisphere, that determines what each one—the functions that will be controlled by each. But the bottom line comes down to it, the cortical hemispheres themselves interplay with all the subcortical areas in terms of creating emotions, physiological reactions like sympathetic nervous system activation, and so forth. So you see an interplay between

the two, but the key difference in terms of what I'm talking about—and this is getting more and more press; I just saw something in the past week about this—is that memories are actually stored cortically, and not in the hippocampus, not sub-cortically in areas, not in the body—so again it's very exact in suggesting this is where they are.

Dr. Dave: I had not heard that latest development about them not being stored in the hippocampus because it seems to me that I've been reading a lot about the role of the hippocampus.

Dr. Moss: There was just a tweet that came out in the past couple of weeks and is actually on there right now. I think it's *Science Digest*, out of Max Planck Institute. It's the second paper. It was a press release that came out, and basically the study is talking about tickling the motor cortex suggesting here—and that's the line on it is the memories are being stored cortically, and not in the hippocampus. And, so again, that's right now in this past week. In fact, I just commented on it about two days ago on one of the posts that were out there.

Dr. Dave: So you refer to the different quality associated with each hemisphere. Take us through that, if you will.

Dr. Moss: I guess the easiest way to put it to you is the left side is going to process information in a very detailed, analytical manner, therefore, being slower processed in speed. The right side is processing much faster, so, therefore, the memories that are stored there, and the processing that occurs is not going to be as detailed. It's going to be much more global.

If you think about developing our native, spoken language, people are going to acknowledge that, for most people, that is a function of the left hemisphere. It's very detailed, very analytical. It takes a great deal of memory storage to do. And, so, therefore, we have our verbal language. For me, being reared in this country, English basically will be my native verbal language and it will be for the remainder of my life, barring damage to the left hemisphere.

However, very importantly, in the right hemisphere, since it processes much faster, and the memories are less detailed, actually the memories are being formed earlier and developed much quicker compared to the verbal memories, and so our non-verbal emotional memories based upon like intonations in the voice, based upon touch, based upon visual, facial expression kinds of things, and so forth. We're going to be forming those memories very early on during the first year of life, and theoretically-- this is what I've suggested—we now form our native emotional language based upon what feels positive to us, what feels negative to us, based upon the memories that are stored. And we also then learn our behavioral expression in terms of my facial expressions, my body position, my body gestures—those kinds of things—and those are right hemisphere. So our native verbal language being left hemisphere, native emotional language being right hemisphere.

Dr. Dave: The part about the right hemisphere being faster was new to me, and I'm wondering if that plays a role in our emotional reactivity. If you're married you know emotions can flare up really quickly.

Dr. Moss: Of course they can. And actually, we're just talking about the right and the left here. Actually, within each hemisphere you're going to have different processing modes, as

well. We won't go into that, but basically in terms of the right side you're exactly right. It processes information much faster so, therefore, it is actually best designed to ensure survival, for example, if there's an outside danger. So in essence, it's designed to be our fast, complex behavior reaction compared to the left.

And so, basically, when you start to look at it, the understanding that is processes faster has been around for quite some time, and global processing is a concept that's been around for many years, as well. But we do basically use that right hemisphere. And like you say, if you lose your cool with somebody the right frontal area that's involved with the expression is what assumes control and actually can suppress my ability to verbally talk-think. That's the reason if you try to talk to somebody and try to reason with them when they're angry, they tend to just get angrier. The right hemisphere maintains more control.

Dr. Dave: I was surprised to hear that the hemisphere would be involved, because I thought that all of that sort of extreme fight-or-flight stuff was sub-cortical.

Dr. Moss: The answer is the physiological reactions are sub-cortical. The easiest way I can give that to you is most people are familiar with hearing the term 'amygdala.' I had a standing joke when I taught biopsych, and I taught the students this, is that for clinicians, he who invokes the word "amygdala" first, wins. Because everybody gets intimidated right away when you hear that term. Like, somebody knows more than I do.

The reality is that you have a fast track in the amygdala that LeDoux has done all kinds of work with that goes from the thalamus to the amygdala. But then you have, also, going to the cortex—particularly in this case we talk about the parietal cortex that, basically, when you go to there, it's going to project from the cortex right back down to the same location in the amygdala, and so, therefore, you have a cortical input to it, as well as a sub-cortical.

Well, the memories, then, as I'm theorizing here, are stored cortically, so whenever, say for example, you have a negative emotional memory activated, whether it's traumatic or not, that is occurring in the right parietal area, or the right hemisphere, which, in turn, can activate the amygdala, which in turn then activates all the physiological responses through the lateral hypothalamus on to the sympathetic system and to the paraventricular hypothalamus that actually activates the HPA axis and so forth.

I don't want to get too detailed where we're talking about this, but the bottom line is the cortical memories, then, are what actually activates the physiological things sub-cortically, in that situation, if it's based upon memory.

Dr. Dave: Speaking of the two hemispheres, I had a chance to interview Iain McGilchrist about his book, *The Master and His Emissary*. Are you familiar with that work?

Dr. Moss: Actually, I'm not.

Dr. Dave: Oh, you'll definitely want to take a look at it, because he develops a whole cultural view, based on how the two hemispheres interact and their role. To really kind of oversimplify his position, his contention is that culturally, we're too left-hemispheric

dominant. We need more of the right hemisphere. It's a long book, and it's wide-ranging, but you'll definitely want to take a look at that.

I was going to ask you about points of agreement and disagreement. We'll have to table that for now.

Dr. Moss: Well, I will go on one point that you brought up there. That is that, based upon a theory with which I'm working, is that the left ventral frontal area—in and around Broca's area in the frontal lobe on the left side there—is what I've suggested here, and in consensus with some other people, I refer to it as the verbal interpreter. This is where we interpret things verbally when we talk to ourselves in our head. This is part of the thesis in terms of the publication that was there this year. I explained it in more detail, but more or less, when we talk to ourselves in our head, it's in that left frontal area, and the bottom line is, if that area is not connected to the area that is processing—for example, the right posterior (the right back) side of the brain, it's not directly connected in any shape, form, for fashion, so therefore, if I have emotional memories being activated in the right back side of the brain, the left front side is completely unaware of exactly what's causing those memories and those feelings to be activated. And so, this is your unconsciousness, if you will, as we typically use the term, we think about consciousness being that verbal interpreter, which is a very restricted small area in the left frontal area, and so the bottom line is, yeah, it tries to explain everything, but may not be aware of what's going on.

Dr. Dave: You know, earlier you mentioned your behavioral background, your early training there, but you also used the work "psychodynamic" at one point. So, it seems like you're familiar with that viewpoint as well. Do you sort of integrate both in your work?

Dr. Moss: Well, the way that I kind of put it is that, if you look at humanistic, experiential procedures, you look at psychodynamic theory, you look at cognitive behavioral kinds of things, to a large extent, they are each describing things quite accurately based upon what they perceive and what they see, none of which come from a brain model.

If you kind of think about the three blind men and the elephant, one touching the trunk, one touching the body, one touching the tail, they all basically describe accurately what is going on, but if you then have a model and you get a complete picture of what's going on, then you see exactly why they're saying what they're saying. And so, they all are right, but only so because of what areas, or what specific things they're describing. So a comprehensive brain model should be able to incorporate and explain the observations from all the major areas.

Dr. Dave: Yeah, good point.

Now, from your study of the brain, you somehow get to, what seems to me like a personality theory, in which you posit two types of relationship patterns, and you describe those two patterns as "givers" and "takers."

Now, on the face of it, this seems a bit too simple to boil the world down to just two kinds of people, givers and takers. So, you'd better take us through your reasoning here.

Dr. Moss: Okay. Let's take it from two angles. One is how it could actually happen. Just in terms of a lot of people are familiar with the "Big Five"—five factors—theory, in terms of

personality. And actually, when you start looking, they thought originally these five factors were all independent, but later it was found what it boils down to, they actually have what they refer to as two meta-traits. It comes down to two major factors that kind of incorporate the five.

Dr. Dave: What were the five? Not everybody that's listening is going to be familiar with that.

Dr. Moss: Extraversion, openness, agreeableness, conscientiousness, and neuroticism. So those are the five factors. Meta-traits are actually plasticity and stability. And the stability things correspond with what they describe very much with the "giver" type I'll be talking about, and the plasticity actually corresponds very nicely in terms of what's described there with the "taker" type. I'll refer to these as Type T and Type G, because when talking with patients, as when I'm talking to other people, I use Giver/Taker. I just flows very easily. People have the concepts quickly. But, unfortunately, when they actually say it, they are actually many times describing the opposite. Many times, Givers are those that are seen by society as being Takers, and Takers are many times perceived as being Givers, based upon the motivational stuff that I describe.

Dr. Dave: Say a little bit more about that. Maybe you could give an example of what you've just said.

Dr. Moss: Okay, an example would be the fact that Takers, in terms of the basic rule that I talk about with Takers, when you kind of boil it all down to the simplest is "I want to get my way." And so, basically, Takers in relationships are trying to take power, control, attention, or things for themselves. Well, if indeed, I can do a high visibility kind of good act for someone, then I'm actually giving behaviorally, but it's designed to get more power, control, or attention for myself. So there's a payoff for the good acts that I'm doing.

Givers, on the other hand, feel many times uncomfortable being in the limelight. They are the ones who basically many times, the rule they're going to play by is "I want to be the good guy. I can't stand to feel like the bad guy, no matter what." So they feel guilty so easily. They more or less try to avoid feeling like the bad person. In essence, with their behavior, then, they're going to be giving power, control, attention, or things in relationships much more so. So for a Giver, the major positive thing is, "If I can do something for you that was my idea, and I feel like I did a very good job at it, and you appreciate it, that's a major positive feeling."

Basically, with Givers, however, they give how they know to based on their own learning history. So, if you have a Giver you're married to, for example, who came from a background where there was no hugging, kissing, but you kind of showed that kind of thing by doing for others behaviorally, or by being a good provider, then if you're in that relationship with that person, many times, you're wanting that physical affection and you just can't get it. And you get frustrated. You bring it up to them. You tell them that, and you more or less make them feel like the bad guy for not doing it. So they'll give you that little hug, but it doesn't feel quite like what you're looking for. So they're only doing it to avoid being the bad guy there. "I'm giving you what you're looking for, but it's not the way I want to give." And, so, in essence then, many times, the Giver begins to avoid those kinds of situations. Therefore, they kind of get labeled as "Well, you're just looking out for yourself. You're not thinking about anybody else here." So again, it's an interesting pattern when we start talking about these things.

Dr. Dave: Yeah, That's a great example. Now, how does one assess whether another, or even himself, is a Giver or a Taker?

Dr. Moss: Well, in therapy, I kind of emphasize to the class—They will always ask me, "Do you think I'm a Giver or a Taker?", and I say, you'll figure it out along the way. It's more important for you to be focusing on understanding the behavior of those with whom you have a close relationship, because if I can now understand why you are doing what you're doing, it basically gets me out of the concept of "What is it about me that is causing you to be this way?" I start asking the question, "What is it about you that causes you to be this way?" And, if I can understand why you're doing what you're doing, I can then take that one step further and I can modify my behavior knowing how you operate and can actually improve the relationship interactions over time, because I'm now responding to understanding how you are.

So, in essence, if I focus it outside of myself, this goes back to the whole thing in terms of relationship negative emotional memories. The negative emotional memories we form that have the most actual effect on us are those where we felt a lack of control during the time, or we felt somehow personally inadequate or personally responsible. Again, if we have time, we'll talk about that. That's one of the aspects in terms of treating past negative emotional relationship memories that we have to take into consideration. But, if you kind of think about it, if I am now basically thinking "What is it about you that is causing you to be this way?", I'm now externalizing this, and so, therefore, I'm not going to feel out of control. I'm not going to feel like it's me. So, it actually insulates me from forming new negative emotional memories that would be further detrimental down the road as well.

Dr. Dave: Okay, that's kind of how it ties back into our earlier discussion about the brain, the hemispheres, and the storage of emotional memories. Right?

Dr. Moss: Right.

Dr. Dave: So, at a later point in your theory, you tie all of this into family systems. How so?

Dr. Moss: Well, obviously, when I started talking about forming emotional memories—Let's take, for example, from the very earliest memories, I'm going to start to store. I'm an infant. I'm wet. I start to cry. I have a parent who comes and responds to me, who picks me up, changes my diaper. What I'm learning is—particularly as they're holding me, talking to me in a soft, soothing tone of voice, that sort of thing—the world is a very safe place. But I'm forming the emotional memories in the right hemisphere. Tied to that, what I'm learning is that, hey, I can be held, I can be cuddled, those kinds of things that feel very positive to me, the attachment memories that form early on. And behaviorally then, I'm also learning the world will respond to me based upon me giving the world information. I'm crying. You respond to me. You give me a smile. I smile back. You smile even more at me. I'm interacting. I'm forming these emotional memories in the right hemisphere during this time. It's determining what the cause is.

The flip side would be if, indeed, you respond to me when I'm crying, either ignoring me or getting angry, raising your voice, shaking me, whatever kinds of things. Well, now I'm learning the world's a pretty dangerous place, if you're doing these things. Or, if I get ignored, that the world doesn't really care. Now, I'm starting early on to form

the lack of emotional attachment memories. Therefore, later in my life, I would not have formed the basic memories, because there are critical periods in the brain, for humans as well as for other mammals and so forth, and if we don't develop these things early on, we're not going to later develop them.

You've got to have the basic building blocks to build upon then, to actually get more complex memories, and so forth. And if you don't have the basic building blocks emotionally, then, at age five, six, or seven, whatever, I might get put into a loving family, but what the family finds is I'm not responding to their touches. I'm not responding to their niceness and spontaneously showing my own reactions. So the idea is that we start forming these emotional images very early on, and we continue doing so.

And, if you think about it, within our family system, the family system, parents as well as the other siblings that are there, determine, if you will, what's going to get rewarded and what's not going to get rewarded in relationship behaviors. So I start to develop my own kind of idiosyncratic patterns. My brother, sister, whatever, might be whiny/complaineey while I can't maximum getting the most positive or the least negative kinds of things in that family environment doing the same thing. So I might develop then into a pattern of being much more achievement oriented, much more intellectual, or doing deed kinds of things, accomplishing things.

So our family environment determines, basically, what is going to be rewarded and what is not going to be rewarded, and those are the emotional memories in our later relationships that will be activated to determine what will be positive or negative to us. We learn to behaviorally interact in those kinds of patterns. So, it's a developmental pattern from the time of being born right up into, typically, your late childhood or early adolescent years, and so forth, that, I would say, is going to basically determine then what pattern you're going to find throughout your relationships in your life that's going to activate the positive, deactivate the negative and so forth.

Dr. Dave: Well, it's fascinating to hear you integrate the brain science information with the behavioral, with the psychodynamic, and particularly with attachment theory, because attachment theory really seems to be in ascendance right now with a lot of evidence supporting it, and basically, originally, I think coming from more of a psychodynamic view, and now people are relating that to what's going on in the brain. It seems like you've got a very integrative theory going.

Dr. Moss: Well, I would think so. And, again, if indeed what I'm describing is accurate tied to the process within the brain itself, then it should be able to explain all these different aspects of things and pull it all together, a truly integrative psychotherapy approach, in terms of not only understanding why things develop, but also then based upon that targeting the areas in treatment that you're choosing to pursue.

Dr. Dave: Well, let's talk about psychotherapy some more. You say the goal of therapy is not to change one from a Taker into a Giver or vice versa. In fact, you say that would be maladaptive. How so?

Dr. Moss: Well, if you think about it, both patterns can be maladaptive. I've already touched upon that. The adaptive pattern would be an individual who can give and take equally well in the relationship, but not forcing the world to give to them or take from them. In other

words, they would be very, very giving. I'm not talking intellectual kinds of things. They would be fully aware of all their emotional function and things, but, in essence here, it would be the ability to give and take equally well in a relationship.

A maladaptive example, in terms of a Giver type, that I've used—let's say we have an individual who's been hard working, doing manual labor kinds of things, always achieved well, been respected by people because of the work ethic and so forth. This individual now gets injured and has a chronic pain problem. Well, now they're presented with a situation where the very things they used to do to actually feel positive about themselves—being busy, being active—are the very things that now create negative emotions because of the increase in pain that they have. So now, basically, they cannot continue in that pattern. But, obviously, they want to be self-sufficient.

Well, this kind of individual may decide I don't want to be on disability. I don't want to apply for this kind of thing, even though they may have to sell off all the stuff they have, and so forth. They may be seeing relationships deteriorate because of these things. But, because they have the belief that "I need to be self-sufficient; I don't want to be the bad guy in anybody's eyes here," then they may actually put off applying, and actually end up bankrupt or losing things, and so forth, before they make the step to do it. And if you're aware of the disability system, the first time you apply, and so forth, many times there's going to be a denial. And, now, it's almost like they've been told, "You are the bad guy. You really are not disabled," and that actually makes them feel even worse and more guilty. They may actually discontinue the process.

So this is just an example of how a Giver pattern many times prevents the person from comfortably being able to accept from the world around them. They're the kind, if you give them a cake, they want to give you back two pies. It's not easy for them to be obligated to someone.

Dr. Dave: Yeah.

Dr. Moss: Takers, on the other hand, we hear these things all the time. You have an individual in a very abusive relationship. The individual—this Taker—is, if you will, undersocialized, very domineering, and so forth, and they, more or less, basically are verbally abusive and things like that. The other spouse, basically, starts, if they're quiet, they don't want to rock the boat. They don't draw limits with them. And we begin to see a steady escalation in terms of the negative, the violence kinds of things. Then the spouse leaves once because they can't take it anymore. But then, the Taker spouse many times comes back in there. They apologize. They can sound like things are going to change and everything will be hunky-dory and so forth. And this whole pattern sometimes can culminate to the point where the Taker feels they cannot take any more power and control, depending upon how far they've gone, and it may actually go on into that fit of rage where they actually take that person's life.

We see these extreme patterns, and that's the reason if somebody's in a relationship, for example, with a Taker who's domineering and undersocialized like that, this is actual danger kinds of things. You don't sit there. If you're going to more or less draw limits, you're going to have to draw limits with them and stick to your guns. Sometimes it necessitates actually leaving a relationship. But again, you're talking about actual kinds of patterns with Takers, and, if you can see this at global levels, a great example, in terms of an unrestrained Taker would be Adolf Hitler. Basically, he's got all the control

in his country, and he goes into the next, he takes the next one, and so forth. It's never enough. But then again, at the very end, that type of individual, if I see that I'm losing and I have access to things like nuclear weapons, they would actually destroy the world and themselves in the process. So again, when you start taking this to its extremes, you can start seeing how these patterns start to sit with the behaviors that we see. Fortunately, society and people tend to constrain one another, so that those patterns don't get so extreme.

Dr. Dave: Yeah. You brought up Adolf Hitler. I was tempted earlier to ask you for some political examples of these different types.

Dr. Moss: The standard theory is that Givers really cannot survive very long with our current political climate, and the reason being is that everything is under mass media, everybody watches everything. Takers are those—the plasticity concept is they can talk a good game. They can land on their feet every time. You catch them doing something, they can be so apologetic and things, but they can shift so quickly, and that's their adaptive functioning. When you start looking at it, they're going to win. If you get into a disagreement say with a Taker at home, they can be yelling at you, screaming at you, things like that. Let the phone ring. They can pick it up, and they sound sweet when they pick up the phone.

A Giver, on the other hand, once they get going with something, everybody's going to see the same thing across the board. They don't just shift like that because somebody walks into the room. They're still angry. Givers, they're rule-governed, typically, because they develop rules to say what's good-guy, what's bad-guy. And so, in our political climate, they would have a very difficult time sticking to their rules because they're going to, if you will, disenfranchise certain groups, and they're not going to change what they're saying because they're following the rules that they believe are accurate.

Dr. Dave: Okay, coming back to psychotherapy. So the goal of therapy, from your point of view, is what?

Dr. Moss: Actually, it depends upon what the person presents with and what the goal of the client or the patient is that actually determine those kinds of things. And that's the reason, obviously, that we have to be sensitive to whatever the person is looking for. But then it becomes one of how do I help that person achieve what their goal is. The vast majority of people I have seen in therapy have been wanting to turn off negative emotional states. That's the reason that they are typically presenting, and so, therefore, it's a matter of how do we go about doing that. And then allowing you to have the healthiest, best quality of life that you possibly can. So it's not really a preconceived notion. The client is the one that determines that exactly what we're shooting for.

Dr. Dave: I'm wondering if you're familiar with the work of Bruce Ecker? You mentioned Joseph LeDoux earlier, and Ecker's writings seem that there's some similarities between the two of you.

Dr. Moss: I have read some of the things through *The Psychotherapist*. This is where the—I've been involved with them, and this is *The International Journal of Neuropsychotherapies*, where the paper's about to be published and so, therefore, since he was associated with them as well, in terms of their panel of experts, then I've kind of

familiarized myself, since I'm there as well, with some of the thinking and some of the articles that they have written. But I have reviewed the things that I had access to.

Dr. Dave: Yeah, you'll definitely want to look at his book unlocking the emotional brain. I think you'll find that you two are on the same page in some ways, because you emphasized earlier, I think, the importance of—you didn't use the word "reprogramming," but his work, drawing again on Joseph LeDoux, suggests that there's a critical period during which an intensely experienced negative emotional memory, that there's a brief period in which the gate is open, so to speak, to implant a different orientation toward that memory.

Dr. Moss: I will go one step further, and this has to do with the fact that the frontal lobes control all actions that we do, both right and left.

We are accustomed to the fact that the left side is doing this what they refer to as this memory reconsolidation all the time. An example would be is we basically have information that we've been presented before, but we now incorporate new verbal information that presents a different whole schema change. So basically, I have a new model being presented to me that makes sense and better explains something than the old model did. Now, all of a sudden, because I'm using the frontal lobe—the verbal interpreter, as I mentioned earlier—basically, now, I can take these new concepts, and I can start working with those new concepts. People don't recognize the fact that I have just reconsolidated all these kinds of things in the left side of my brain. Now, I'm actually thinking differently about this thing. Because I was presented this new information, I begin to work with it in terms of the action the frontal lobe is actively controlling or working with. We have seen throughout our entire history as we're coming up through school, learning new things, learning new concepts, we do this.

Well, people are, all of a sudden, surprised when we say you can do the same thing with the right hemisphere. But the same basic design is there that allows it as in the left. You just have to access it in a different way in the right, and the way that's typically done is the use of things such as experiential techniques, things such as visual imagery and so forth. Therefore, you can actually use that to actually add a new ending to a memory that's an old memory, and so now, all of a sudden, I begin to find when that memory gets reactivated, it now reactivates new frontal columns from memory kinds of things, and I feel differently as a result. It's not that I'm thinking differently as much as I'm feeling differently in reaction. And that's memory reconsolidation based on my theory. But we've been doing it, and observing it, and accepting it in the left hemisphere for as long as we can remember.

Dr. Dave: The way you describe it in the left hemisphere sounds like logic can prevail, but what we know from the years and years of psychotherapy is that logical arguments don't seem to prevail in many situations.

Dr. Moss: Exactly. And the reason is you actually are addressing the left frontal area trying to reconsolidate, if you will, the memories in the right hemisphere. The left frontal area that we're talking about—the verbal interpreter—in terms of the Broca's area and so forth, it actually interconnects back to the right hemisphere in the same frontal region. It does not have any effect in terms of—or any connections to—the right posterior cortex, where we talk about these non-verbal emotional memories being reactivated, and those actually activate then in the right frontal the typical behavior pattern that I've

usually shown in reaction to those memories being reactivated, and, therefore, I continue to show the same patterns. Well, if you just logically present to the left side this is not reasonable, you gave the left side a great explanation. But the problem is, it didn't change anything on the right side. The right frontal columns were not being addressed, the right frontal memory, to bring on new memories.

The reason experiential techniques—you're actually engaged in something—As a quick note, if you look at all the things, whether they're cathartic or not, depending on which theory you want to use, but experiential techniques—eye movement desensitization reprocessing kinds of things included—if you look at the cases that are described as actually being effectively treated, they go through a very distinct pattern.

The first thing is the person will begin to have some high anxiety. You are accessing those negative emotional memories, which then activate, if you will, the physiological and the psychological things tied to that. The next step, though, is you engage the anger system—this is what you're talking about. Anger is an expressive emotion. Anger involves the right frontal area. If you engage that effectively, the person now feels in control. If you go back to what I was talking about earlier, with the negative emotional memories that affect us, we felt out of control. We now feel in control, and so, now, when I feel that kind of thing, that gives me an expression to it. For the first time, I feel like I win. The next step in that process is that you kind of see the person now starts to feel some sadness. It's almost like a self-nurturing. I can kind of see a different perspective. And the highest level that a person can reach is actually attaining forgiveness of the individual, recognizing that they don't know what they were capable of doing based on where they came from.

So, if this is actually what occurs—you'll see it in a lot of Greenberg's stuff. In *Handbook of Emotions*, he talks about these same kinds of patterns, and so forth. But you'll see consistently in the descriptions—this is what I see written.

Well the emotional restructuring procedure that I've described back in my 2007 paper—I've been working with a treatment manual for many, many years, since the early '90s—basically, we can program that in in a single session. If we can actually take the person through, using given verbal information, we can actually take them through the experiential techniques, we use the visual imagery kinds of things, we can usually many times find that we can neutralize in a single session many of these negative emotional memories that were there. Or feel differently in response to that.

And so that's one of the things, the hallmark of what I've talked about, is if this is what's going on, we can actually pick out what are the problem relationships that existed—mother, father, peers, siblings, teachers, bosses, past relationships. You go through and figure out which one of these memories were detrimental based on that loss of control, feeling personally inadequate, and you can programmatically go through step by step addressing each in this same emotional restructuring fashion. Within five sessions you could actually, theoretically, address five separate past issues, as opposed to trying to resolve it slowly and, perhaps, address in that fifth or sixth treatment session one issue. So, again, I think we can accelerate it based on this.

Dr. Dave: Yeah. That certainly ties in with a number of people that I've interviewed. It ties in with what Bruce Ecker is saying. The EMDR people, Emotional Freedom technique people. You know, another thing that's very, very popular, reference to consciousness

and unconsciousness, and right now, it seems like a lot of people are talking about mindfulness, and I'm wondering how that might interface with your theory.

Dr. Moss: Actually, I addressed that also in the paper earlier this year where I talked about these things.

Mindfulness techniques are a nonjudgmental experiencing in the moment kind of thing. If you kind of think about it, if you're nonjudgmental, you're bringing them the verbal interpreter offline. You're basically giving the interpreter a new rule: Don't judge. So, therefore, if I don't judge, then I'm going to decrease the inter-hemispheric conflict, if you will. I haven't mentioned the fact that the frontal lobes have the capability, probably through the basal ganglia as I mentioned in my paper, of inhibiting the other side. A good example that I've used before is that whenever you see basically the test anxiety or test phobic individuals, they form negative emotional memories tied with taking tests. The right hemisphere is designed to assume control if there's any kind of danger because it's the one that can best allow us to fight or run. Well, if I now basically go into the testing situation, even though in the left hemisphere, I logically know all the information, when I go in, actually the right hemisphere gets activated and the right frontal area then has an ability to deactivate some of the activity in the left, so, therefore, my verbal thinking goes offline. So my mind goes blank. Well, it's gearing up as though there's a danger. And that's the reason. It's kind of like the right front side can inhibit the left. I leave the testing situation. It deactivates the negative emotional memories in the right hemisphere tied to the testing situation, and all of a sudden, I have all that verbal information available once again. Well, the frontal lobes can inhibit one another. In depression cases, you kind of see that. They talk about the right hemisphere being relatively higher in activity compared to the left, but both actually being lower in activity on EEGs and so forth. So, again, we start looking at the fact of one side inhibiting the other. Well, in mindfulness kinds of things, if you take the left hemisphere offline, in terms of non judging anything going on on the right side, then you're decreasing that conflict between the hemispheres. A person's going to have more feelings of peace. They, more or less, then, are going to be, if you will, focusing. Many times you give them a focus point, such as, you know, focus on the sensation of breathing. And so now I have another focal point, which further takes the verbal interpreter offline. And so the person then can more or less just experience in the now what's going on, nonjudgmentally, and they find it's a very peaceful, refreshing, disengaging kind of aspect. Does that make sense?

Dr. Dan: Yeah. It does. It does. You've covered a lot of ground. You know, we probably should wrap it up here. Do you have any final thought you'd like to leave our listeners with?

Dr. Moss: Well, I guess the major thing is that, indeed, this Giver/Taker concept has a pop psychology feel, even though there's a pretty good brain model behind it, and you can't just behaviorally kind of take it. But this is one aspect, also, of the emotional restructuring process, explaining why the people you've had the problems with did the things the way they did. So it's actually the Giver/Taker stuff' is incorporated into the emotional restructuring process as well. And, in the article that is about to come out, actually by the time you have the program here, it will be out, in *The International Journal of Neuropsychotherapy*. At the end of that I actually have information in terms of how do you actually most effectively deal with people. I've obviously written books, my website [emotionalrestructuring.com](http://emotionalrestructuring.com), both for lay individuals. I have a professional treatment manual as well. So I'll give myself a little plug in terms of the things

that are going well, if you don't mind. Some training, hopefully very soon. We've already got things arranged. Both webinar and some other professional training, education kinds of things for professionals, as well. We'll try to have a spot for people to sign up. It's probably about three months down the road before we have that online.

Dr. Dan: Well, excellent. We do have a lot of psychotherapists and psychotherapists in training who listen. So, I'm sure they will be very interested to follow up on that.

Dr. Robert Moss, I want to thank you for being my guest today on ShrinkRap Radio.

Dr. Moss: I appreciate the opportunity to be here.