Shrink Rap Radio #147, April 11, 2008. Nirvana and the Brain
(transcribed by Susan Argyelan)

Excerpt: *You have this ongoing brain chatter in the left hemisphere, in the language centers that is designed to have communication, and it helps you retain information about the external world. So, I know where I work, because my brain tells me where I work. And I know which car is mine, because my brain tells me which car is mine. So it's always relating me to the information in the external world, and when that circuitry went off – turned off - I found myself flushed in silence, and an unusual silence. But in the silence there's so much! I'm no longer distracted by the details of the external world, and I was captivated by the magnificence of the present moment. And since I could no longer identify the boundaries of where I began and where I ended, I was no longer this confined little entity. Instead, I was at one with all the energy that was around me, and it was beautiful there. It was peaceful, it was quiet, it was enormous – it was that all-knowing space where you know absolutely everything, and you don't know a single detail that has to do with the external world. And it doesn't matter, because you have this sense of peacefulness and beauty…and euphoria.*

Introduction: That was the voice of my guest, Dr. Jill Bolte Taylor, describing her experience of a stroke in the left hemisphere of her brain. Jill Bolte Taylor, Ph.D, is a Harvard-trained and published neuroanatomist who teaches at the Indiana University School of Medicine in Bloomington, Indiana. She's the author of the extraordinary book, My Stroke of Insight: A Brain Scientist's Personal Journey, which tells the story of a stroke which essentially knocked out her left hemisphere and enhanced the functioning of her right hemisphere. In this right-hemisphere state, she seemed to experience something akin to enlightenment. Dr. Jill has dedicated her career to the advancement of post mortem research into the human brain and to the education of the public about the fragile, yet resilient nature of this incredible organ. Because of the long-term shortage of brain tissue donated for research into severe mental illness, she travels throughout the country. By sharing her science and her unique personal journey, she communicates a message of hope, education, and celebration. Now, here's the interview.

Dr. Dave: Dr. Jill Bolte Taylor, welcome to Shrink Rap Radio.

Jill Bolte Taylor: Thank you, David.

Dr. Dave: Well, I saw a video of your presentation at the TED conference, and it blew my mind. And for listeners, TED stands for Technology, Entertainment, and Design, which seems like an unlikely conglomeration, but they have some wonderful speakers. And I'm going to be sure to put a link to that session you did

at TED in our show notes. Let's start out by having you tell us about your life before you had your stroke. In your book you talk about the left and right hemispheres of the brain and how they function. And this turned out to be important because you had a stroke on the left side of your brain. So, before you tell us about your experience with the stroke, perhaps you could give us some background on the functioning of the left and right hemispheres…and also a bit about your background as a brain scientist, because that's very relevant, as well.

Taylor: Well, I grew up to study the brain because I have a brother who has the brain disorder, schizophrenia. And although he wasn't diagnosed until we were young adults, when I was a little girl, he was only 18 months older than I was. It was apparent to me at a very early age that he was very different in the way that he perceived the world and in the way he chose to behave. And because he was my sibling, he was my constant companion, as siblings are in a family unit. I really grew up to see the world through his eyes, and it just did not resonate well with little Jill and who I was and what I thought was how I was supposed to be in the world. So, because of my fascination with my brother and the awareness that we were very different, I dedicated my career to studying the brain and became fascinated with the brain, obviously very young, and was fascinated with body language and different ways of communicating with one another and how we can observe ourselves or engage in the drama in our lives. So, I really had kind of a shifted perspective of what is normal and what is not normal, but I didn't know *who* was normal. And I didn't know if it was him, or if it was me, until he was officially diagnosed as young adults.

Dr. Dave: Mm-hmm.

Taylor: But I pursued education in physiological psychology and human biology for undergraduate and then received a Ph.D with a focus for my research in neuroanatomy of the brain, and it was my intention to always study the post mortem investigation of the brain as it relates to schizophrenia. What are the biological differences between someone like my brother and someone like me?

Dr. Dave: Yes.

Taylor: So, that was my background leading up to the morning of a stroke. So, I was performing research and teaching in the Harvard Medical School system at the time, but the relationship between the right and the left hemispheres is extremely significant in the world of brain research because each of the hemispheres perform unique functions. They're both always functioning but there's usually certain cells that are dominating or inhibiting other cells. And that's unique for each one of us. When you look at stroke survivors, for example, the first question I always ask anyone who calls me and says, "My loved one has had a stroke," is, can they speak? Has it influenced their ability to speak words or to understand language? And if the answer is yes, then I can pretty much automatically assume that the stroke happened in the left hemisphere as opposed to the right hemisphere. And, of course, the

opposite side of the body becomes paralyzed when a stroke happens and the motor cells are influenced. So, the two hemispheres complement one another. They're constantly always functioning, but they're not all, all the cells are not always constantly firing. Some are more dominant; some are inhibited by those dominating cells.

Dr. Dave: Yes, and you know, I guess it was in the seventies when we started to hear a lot about split-brain research and so on, and there was a popularized view of the functioning of the left hemisphere and the right hemisphere, but I suspect it was overly simplified.

Taylor: It really was, and I think that what happened – because I was born in '59 – so all of that was pretty big when I was a teenager.

Dr. Dave: Mm-hmm.

Taylor: And I think that it oversimplified it to the point of saying, okay, I am a right-hemisphere person.

Dr. Dave: Yes.

Taylor: Or I'm a left-hemisphere person. And as a result of that, we ended up with all kinds of personality tests that came out to identify which hemisphere are you. And I always had a certain amount of skepticism about that level of simplification because I had two hemispheres, and we all have two hemispheres. I was very blessed that my father was extremely creative, extremely musical, extremely social, and anybody would have defined him as right-hemisphered, while my mother was history and philosophy of science and mathematics, and she had this incredible mind. She was a Radcliffe/Harvard girl, and so my mother had this extremely well-developed and beautiful left hemisphere. And I'm looking at me as their offspring, saying, "But I'm both. I have this right hemisphere from my dad and this beautiful left hemisphere from my mother," and we all do. So when you pinhole a child into, "Oh, your child is very right-hemisphered," and then that's all they develop, that's unfair to the child. For me, the purpose of the video was to help people to actually bring new fuel, if you will, to the old argument, but to expand it beyond where we used to be with it and to try to help people recognize, "Yes, I do have both of these hemispheres. They both have these beautiful gifts, and I don't have to be just one way. I have a choice, moment by moment, in how I do want to be in the world, and how I do want to spend my time, and how I do want to look at this specific situation."

Dr. Dave: Now, part of the reason that your story is so extraordinary is, here you are, working at Harvard as a brain scientist, and then you have a stroke. So, it gives us an unprecedented view from the inside of a person who has extensive training and knowledge about the functioning of the brain, and you're able to, as it were, witness this process from the inside. So, take us through the morning of your stroke.

Taylor: Well, on the morning of the stroke, I first woke up and had a major pounding, pulsating behind my left eye, and it was that kind of pain you get when you bite into ice cream. It was that excruciating, where you just scrunch the whole left side of your face in order to endure the pain.

Dr. Dave: Sure.

Taylor: And it would pulsate like that, so it would grab me, and then it would release me. It was very unusual for me to experience any kind of pain, and I was only 37 years old at the time, so I was physically fit; I generally have low blood pressure; my weight is excellent; I exercise daily; I had zero of the risk factors for stroke. So, I'm not a girl who's thinking, "I've got a bad headache; I'm having a stroke."

Dr. Dave: Yes.

Taylor: So, it turns out that it was a hemorrhagic stroke, not an ischemic stroke. So, with a hemorrhage, a blood vessel – it was actually a congenital malformation in the blood vessels in my brain. It was an arteriovenous malformation, an AVM, where an artery is directly connected to a vein with no capillary bed which buffers the pressure system in between that artery and vein, and it was essentially a ball waiting to blow inside of my head. And when people have an AVM explode, usually it happens between the ages of 25 and 45, so I was right on time. I was 37 at the time. So, I woke up, and this blood vessel broke inside my brain, and it started out as this pounding headache, and so I got up and I jumped up onto my normal routine, which is a CardioGlider, a full-body exercise machine. And I was exercising on this machine, and I was looking at my hands, and my hands looked like primitive claws, grasping onto the bar. And it was as though my mind had shifted away from the normal perception of me and my normal reality, where I'm on the machine, having this experience, to some esoteric experience where I'm *witnessing* myself having this experience. It was all very peculiar. So, I then got off the machine, and I was walking across my living room, and I don't want to run through the whole video for you, but for me, the most noticeable factor was a slowing down of everything in my body. I just felt slow, and as I slowed down, my movements became very rigid and very deliberate, and I could actually hear conversations going on. It felt as though conversations of the cells communicating with the cells. And then I lost perception of the boundaries, the physical boundaries of my body, where I begin and where I end, where I just saw myself as energy, radiating energy. And the atoms and molecules of the density of my form just blended with the energy radiating around me. So, the portion of my brain that was going through this process… As you know, the unique factor of me having been a neuroanatomist, studying the brain, understanding how the brain organizes information in watching the process-by-process deterioration of my mind and its ability to be able to communicate in the external world… But it wasn't until my right arm went totally paralyzed by my side that I that, "Oh, my gosh, I'm having a stroke!" Up to that point, I'm just trying to figure out what's wrong with me. Am I having a migraine? Am I

having…what am I having? I don't know what I'm having. But the key for me was when my right arm went paralyzed, and then I realized, "Oh, my gosh, it's a stroke, it's a stroke!" And I'm a neuroanatomist, so I'm curious. It's like, whoa! This is so cool!

Dr. Dave: (laughs)

Taylor: Because it's like, wow! How many scientists *do* have this opportunity…

Dr. Dave: Yes.

Taylor: To explore their own process of degeneration! But I certainly had no idea that I was going to end up as far away from normal reality as I got on that morning.

Dr. Dave: Well, at some point you describe a process in which you… First of all, you describe the left-brain inner chatter, if you will, quieted down to where you weren't able to form words and weren't having thoughts…

Taylor: Right, right.

Dr. Dave: It sounded like there was a period during which you were in a kind of state of ecstasy, when you felt the flowing energy and so on.

Taylor: Right.

Dr. Dave: How long did that period last, would you guess?

Taylor: Actually, it lasted six weeks.

Dr. Dave: Wow…

Taylor: It wasn't that the brain chatter became quiet; it's that it got shut off. This experience has really given me a different perspective, as a neuroanatomist, about my brain and about how it organizes information. And I realize now that I am neurocircuitry. I am cells communicating with other cells with chemicals, and when we alter the chemical communications, we can alter which circuits are running more, or running less, but ultimately, we are circuitry. And on that morning, I was actually having the circuitry being completely silent. It was just like a remote control – pushing a mute button. It wasn't a little, oh, dazzle-dazzle, drag-down, quieter-quieter. No, it was on or it was off. And when it was off, I was no longer attached. Because I see – when you think about it, how is that you know, when you get up in the morning you're brushing your teeth, and you look into a mirror, and you say, "Hi David." Did you ever wonder how you know what your name is?

Dr. Dave: No. (laughs)

Taylor: Yeah, now you will. Yeah, now you will! And you know your name because your brain chatter is telling you what your name is. All the time, you always have this "knowingness." It might not be in language that you're listening to, but sometimes it is. You have this ongoing brain chatter in the left hemisphere, in the language center, that is designed to have communication, and it helps you retain information about the external world. So I know where I work because my brain tells me where I work. And I know which car is mine because my brain tells me which car is mine. So it's always relating me to the information in the external world. And when that circuitry went off – turned off – I found myself flushed in silence, and an unusual silence. But in the silence, there's so much… I'm no longer distracted by the details of the external world, and I was captivated by the magnificence of the present moment. And since I could no longer identify the boundaries of where I began and where I ended, I was no longer this confined little entity. Instead, I was at one with all the energy that was around me. And it was beautiful there: it was peaceful, it was quiet, it was enormous… It was that all-knowing space where you know absolutely everything, and you don't know a single detail that has anything to do with the external world. And it doesn't matter, because you have this sense of peacefulness and beauty…and euphoria! In the video, I define that as nirvana.

Dr. Dave: Yes, that's what got me so excited about wanting to interview you because it sounds so much like the nirvana or satori experience that long-time meditators report.

Taylor: Right.

Dr. Dave: And they talk about working at learning to turn down the chatter, to turn off the words. And you had that experience kind of forced upon you.

Taylor: Correct.

Dr. Dave: What sense do you… Had you been a meditator, by the way, before this experience?

Taylor: I wasn't a formal meditator, as I think of "What is meditation?" but I've always been a child of nature, so every day, it was a priority for me to get exercise and movement, and I would usually walk at least an hour in nature, try to find a place where I could be alone… And that is a form of meditation. So for me… But you know, when you go out in nature and you start really being at one with the birds, and you're listening, and you're paying attention, and you're distracting your mind – the brain chatter – away from your daily routine of, "Oh, I've got this experiment I've got to deal with tomorrow, and I've got to take care of this and take care of all those details…" It's that willingness to shift to a different perception than the constant, constant, constant details of my life. And so, in a way I was, and in a way I still am, but I'm not trained in meditation. I understand there are lots of different

forms of meditation that do essentially the same objective – again, primarily to quiet that brain chatter – so that you can hear the rest of life that's going on. And I know that there are different techniques, but I'm not at all versed in the different kinds of techniques that different people use.

Dr. Dave: Okay. Well, the experience that you described sounds like so much of what I've read from mindfulness meditation and Buddhism, Zen, and so on. Did this experience change your sense of your relationship to the universe, to ultimate questions?

Taylor: One hundred percent shift. One hundred percent. Because for me, to sit inside of a silent mind, the brain chatter – those selves – were flooded in a pool of blood. And they couldn't function. So, I sat in absolute, total silence for 2 ½ weeks, up until my surgery, and then it took another couple of weeks after my surgery before the blood clot – once the blood clot was removed – for the swelling of the brain to go down and everything to get back to somewhat normal. It was a while before the brain chatter started to come back online, and when it started to come back online again, it was as though the slate had been washed clean, or the disk had been totally emptied. I was an infant again…

Dr. Dave: Mm-hmm…

Taylor: I didn't have all of my language, so I was sitting in a silent mind for weeks upon weeks, and early on, you know, I was infantile. When you don't have your brain talking to you, you don't have any information about the external world. So people can talk to you and use language, but I didn't have any understanding of those words, so I couldn't understand it, anyway. So it was very interesting to be, from my perspective, to be in that silence, but then I had to learn language again from scratch. I had to learn words. I had to learn to speak again. I had to learn to read again. Reading was a terrible, terribly difficult experience for me. So I essentially was an infant. When I wiped out the language, I wiped out my knowledge of the external world. I didn't wipe out pictures; I still could read – eventually, pull back on my anatomy that I had learned. I could still visualize the abdomen, but this was months later it took for me to be able to capitalize on what memory was still left for me in the visual world.

Dr. Dave: Well, I asked you if this had changed your relationship to ultimate questions, and you said, yes, 100%. So how has it impacted your sense of spirituality, or God, or life after death, or any of those issues?

Taylor: Well, as far as life after death, I have no idea what happens after death, but my experience of death, I have no fear of that. Because for me, I'm going to do what I did, essentially: I'm going to melt away my connection to the external world and move into a space of what I would describe as bliss and euphoria. And so that doesn't scare me. It was a cognitive choice, about a million times a day, for me to recover. I didn't just "recover." I recovered because I chose to recover, and I chose

to endure the agony that I had to endure in order to force my mind - by choosing to pay attention to something that I didn't understand and that brought me pain - in order to familiarize myself with that material more so that my brain could wrap itself around that. And that starts at having zero information and then being willing to learn and learn and learn. And learning is a difficult process for a brain that's been wounded.

Dr. Dave: Are you saying you could have chosen to just hang out in that state of bliss?

Taylor: Oh, absolutely. Oh, absolutely. In the very beginning, I had no intention of ever coming back. Once I was gone, I was gone. I was so far gone that there was no reason. There was, I couldn't imagine… I could not imagine enduring what I was going to have to endure in order to recover. So yes, it was a choice. For me, it was a choice. Now, it was a choice moment by moment, to say, "In this moment, I'm willing to pay attention to you and try. But if a doctor came in and they really didn't have time for me, and I was just another thing on their list, and I could feel that energy, it's like, "I'm not going to waste my energy trying to focus on you when you're not willing to focus your energy on me." So, I responded positively to people who came into my world and brought me themselves 100%, looked me in the eye, touched me appropriately, connected with me, made me their focus for these moments. Then I could try to connect because that person was available. So, absolutely, I believe that recovery – I was responsible for my recovery, because I made the choice to try or to not try. And I think that the alternative – and I always teach this to my medical students – my alternative was to be (inaudible) bliss, and you want me to come back here and pay attention and learn something from you. You have to make yourself a very attractive object for me to want to focus on because otherwise, I'm out in the lap of the universe.

Dr. Dave: It's interesting that that bliss that you describe is, sometimes people talk about the bliss of pure consciousness. And there are those who argue that that's really what the universe is made up of…

Taylor: Right.

Dr. Dave: …is consciousness. And it sounds like that's the kind of experience that you had, and that experientially, it moved you into this place where you no longer fear death…

Taylor: Right.

Dr. Dave: …where you have this sense that you will just dissolve into consciousness.

Taylor: Yeah. That is what it felt like to me. As I would describe it, is, I felt like a droplet of water that essentially got reabsorbed back into the ocean. And so the individuality of me as that droplet and any life or experience that it would have, just got reabsorbed back into the bigger picture. And when I experienced the absence of

knowing – the absence of thinking and relating to the external world in any way when it's void of the boundaries and the definitions, and the language, and the right and wrong of it all –in absence of all that is an experience for me that was an all-knowingness. And so it was a cognitive choice for me to leave that space and to do what I needed to do in order to become distant enough away from that all-knowingness to relearn all the details. It's two completely different perceptions of reality, and the point for me of that video was to help everybody recognize that we have both of these worlds inside of us all the time. I'm receiving literally over 100 messages and offers a *day* since that video – it's been a month.

Dr. Dave: I'm not surprised.

Taylor: It's been just a constant flow, and people who relate to the experience of being at one with all that is, they're just going, "Thank you! Thank you for validating our experience to this group of (a?) left-hemisphere world that we are dominated in which has to define it and measure it in order to believe it." And my point is that we all have both, and I'm excited that people are talking about the brain. First of all, I'm absolutely thrilled to death that there are hundreds and thousands of people now who are talking about the brain, because I think that the brain needs to be talked about. And I think looking at our relationship with this organ and trying to figure out… You know, one group of people can't just say mysticism isn't real when you've got hundreds of thousands of people having an experience. Well, what is the experience, and what is the biology of the experience? Let's not say it isn't real and it doesn't count. They might not like the language that is used, so find your own language. But let's look at it, using the tools of modern technology and modern science in order to have a better understanding about what's really going on.

Dr. Dave: Yes. Now, of course it does raise the… I suppose what you would call the reductionist question…

Taylor: Mm-hmm.

Dr. Dave: …of, is it all just the mechanics of the brain, or is there something else?

Taylor: Well, who knows the answer to that?

Dr. Dave: Right…

Taylor: But to me, even if we do reduce it to the brain, great. We all have one, and it has two halves. So if it is the brain, how can we really activate both hemispheres so that we can really take advantage of what we are as human beings on the planet. And I see the left hemisphere as being this beautiful, magnificent instrument that we can use in order to create the things and manifest what we do in the external world. At the same time, we have this beautiful, magnificent right hemisphere that is connected, if you will, to the big picture. Don't you want a life that is a

combination of both the big picture and the details? Because that way, then, you've got all of it. So, even if it is just the organ, it doesn't matter. The organ is a biological entity created or not created – I don't know how, I'm not even going on *that* trip somewhere –

Dr. Dave: (laughs)

Taylor: But it's still the organ. It doesn't say, just because I can access this experience of bliss, that in the absence of me, that's not what I will be, or what is beyond me. You know, I did not die that day.

Dr. Dave: Yes.

Taylor. I've never made any comment that would indicate to anybody that I ever did, or that I did have a post-death experience. I did not. I had a hemorrhage. I had a hemorrhage that shut down the neural circuitry in part of my brain. That part of my brain became swollen; those cells became non-functional. They had been dominating in my own personal brain when they became non-functional. They lifted their inhibitions from the other part of my brain that they had inhibited. And I became a different entity, with a different character, different personality, different interests, *completely* different perspective of the world. And then I made the choice to recover the circuitry and the functions of the hemisphere that had been dominating before. So I can't speak beyond. All I can say is, we have this incredible brain, and I'm really looking forward to how we explore, how do we help people manifest using both halves…

Dr. Dave: Sure.

Taylor: …at their choice.

Dr. Dave: Yes. To what extent are you able to access that experience now, to go back to that place of bliss and so on. Are you able to get right back there, or to just sort of get back there?

Taylor: Well, I made the decision when I was in the process of recovery. I was willing to recover enough of my left hemisphere, as long as I didn't have to go back to being the person I was before.

Dr. Dave: Interesting.

Taylor: So for me, it's a personality. Both of my hemispheres – my left hemisphere, she was very smart; she was very determined, very motivated, very go-go-go, very judgmental, very scientific in her way of being. Very rational, very linear, very methodical, very all these wonderful tools, but there was a part of her that was also all about being right. Being right, being wrong, and being good and being bad. Making that judgment. And as I was in the process of recovering, well, when I lost

her, I became innocent. I became an infant again. I had no knowledge of the world, and yet I was at perfect bliss. I was happy; I was euphoric. I would sit on my couch in my living room after the hemorrhage happened, waiting for surgery to happened my mother would just look at me, and I'd sit there with this grin on my face. There was a joyfulness. There was a joyful, childlike innocence about my life. And it was, I was so excited that I was alive! I was alive! And I could look out and I could see color. I had eyes that could see color! It was like, oh, my gosh! It was just so exciting just to be alive. And there's this little piece of resistance saying, I don't want to go back to your world. I don't want to go back to the speed and the urgency and the meanness; there's a meanness about it. I didn't want to go there and do any of that again. So, my agreement with myself was, I will recover; I will continue to dwell into what I need to in order to recover different circuits of my brain as long as I didn't have to lose myself to that world again. So I didn't, and I just took my time. It took eight years for me to walk my way back into a world that gave me a life that I could continue to be in my peace, in my joy, in my enthusiasm for all that is, and still communicate with the external world. Because in order for me to bring my message of how beautiful we are as living beings, and we have both of these hemispheres, in order for me to really communicate that again, I had to completely recover my left hemisphere.

Dr. Dave: Wow. It strikes me that this was a transformative experience for you. It was life-transforming, not just in terms of a medical thing that happened to you, but in terms of a choice about your personality and who you wanted to be in the world.

Taylor: Right.

Dr. Dave: And I'm also struck by the role of letting go of judgment seems to have been important. That letting go of evaluating right or wrong, which plays such a strong role in Buddhist theory, that it's our judgments that stand in the way of that state of bliss. So that's what's fascinating, is that through a different route, it seems to me, you've come to some places that have been described and experienced elsewhere, through other ways. I want to touch on something else relating to right-left hemisphere work, because there's been some research that was brought to my attention by one of my listeners, which has been done by Richard Davidson, who is, I believe, a psychologist at the University of Wisconsin in Madison. He's done some research with meditators, and his research seemed to show that, he says, "By the end of the study, those who had meditated showed a pronounced shift in brain activity towards the left 'happier' frontal cortex. The meditators also showed a healthier immune response to flu shots, suggesting that the training affected the body's health as well as the mind." So I'm struck that your experience kind of emphasizes that this was going on in the right hemisphere, and then there's this other rather surprising research that seems to locate some of this stuff in the left hemisphere. Any thoughts about that?

Taylor: Yes, I think meditation… I'm very excited because the scientists are actually having individuals go into functional imaging machines and PET scanners to figure

out what is actually shifting inside of the brain. The beauty of the brain is that we all have one, and it's all very unique to who we are, so ultimately, variation is the rule, not the exception. In order for anything to be defined as normal in anatomy, it only has to happen 70% of the time, 70% of the time. That's not much more than half. So, from an open-minded perspective, as far as anatomy is concerned, we are all unique. And we are unique because we are influenced by our environments. Depending on language, for example, people who read language from left to right, their language centers will be structured and organized, and the circuitry that is interconnected will be different from people who read visual or vertical language, or pictoral language. So those brains would be a little bit differently wired. At the same time, as I emphasize again, I'm not an expert on meditation, but I know that there are different types of meditation that would influence different circuits. I'm certainly not saying that the only place where one can find bliss is in the right hemisphere, even though that was what I believe was my personal experience. The thing that these imaging studies generally have in common is that in order to experience that experience of joy, the language centers have to be silenced. So again, it's going to be, what can we do - through what kind of mantra or prayer or meditation - that is preoccupying the mind enough that the brain chatter that is taking care of all the routine details of our lives becomes quiet. And when that becomes quiet then other areas in the brain have the capacity for us to shift outside of the me-me-me, I-I-I, detail-detail-detail into an experience of feeling a deeper inner peace. So, I think it's wonderful that different experiments are showing different options. I think it will help people who study those things better understand – and put framework – on what's actually going on in the brain.

Dr. Dave: Yes. Yes. In your book – and I should mention, and I will put a link to your website so that people who are interested can purchase your book or download a copy - and your book is titled A Stroke of Insight, and you go into a lot of wonderful detail about all of this, and about brain functioning as well in there, and it's all very readable and understandable. One thing you say in there is, "If I had to choose one word to describe the feeling I feel at the core of my right mind, I would have to say 'joy.' My right mind is thrilled to be alive."

Taylor: Yeah. It's just that most innocent, open your eyes and say, "Wow! Wow! I am alive, I am alive." Anything else beyond that, that's all gravy. That's great. But just to be *alive* is this thrilling moment and this thrilling experience. And to know that, that is just such a wonderful blessing in my life, in all the details. You know, details are wonderful, too, but even in the absence of that, I am alive. And I think that one of the interesting things is, when we look at individuals who have suffered some kind of trauma, we automatically, generally project our negative, "Oh, woe! How bad that is for them! How sad, how terrible, how awful." Gee, "suffering" a stroke, this is one of my things. So many people say, "I suffered a stroke," and you know, no, I did *not* suffer a stroke! I *experienced* a stroke, and for me, it was not a dreadful, awful experience. And that is a projection of someone else's fear of what

it would be like for them. So, a lot of the book is about recovery, and there are 50 recommendations for anybody who's experiencing any kind of brain trauma, whether it's due to war, or due to stroke, or due to a bicycle accident – any kind of recovery – but also recommendations for how to treat your own brain. Your normal, healthy brain – if that's what you think you have inside of your head – how to get that to do what you want it to do; how to create a relationship with your brain so that you can work with the cells in order to have them perform their functions better, and what you can *give* them in return for that. Because they want sleep; they need good nutrition; they need you to move your body because that's how they flush out their waste. So, I think it's an overall, very user-friendly book, in order to take people on a wild ride, a wild ride that a lot of people are curious about – what *would* it feel like to experience this? – and then to have some inside into other people, other types of minds, minds of individuals with schizophrenia. What's it like inside of their mind for them? What's it like to have a bipolar mind? What does that really feel like on the inside? And this might help give you a perception of looking at someone else with a more open perspective that can help you be more compassionate in your interactions with people who are different than you.

Dr. Dave: Yes, well, this raises the question of whether or not your experience helped you to understand your brother with schizophrenia any better.

Taylor: Yeah, yeah it really did, in many ways. In the beginning, it was kind of scary because I witnessed how people treat – not all people, of course – but how strangers in a store would look at me, and they could tell. I mean, it was obvious that I was a woman who wasn't normal. In the beginning, I had "face droop," and I drooled on one side, and I was in slow motion, walking. But I had to get movement, so my mother would take me to the grocery store, and while all the shoppers were hustling and bustling around, here is this woman in *very* slow motion, just trying to get my movement in. So, I definitely learned what it feels like to be on the inside of a mind that is not capable of functioning like a normal mind in our society. So, I did have that experience. At the same time, it gave me an insight into really, clearly understanding that I am neurocircuitry. I am neurocircuitry, and I can recognize you by your face because I have cells that perform that function. Or I can track a moving object, because I have cells that perform that function. And if those cells, for some reason, are wounded or no longer functioning, I can't perform that function. And so now I look at my brother's brain, and I look at other people diagnosed with schizophrenia, and I see the circuitry of what circuits are really working well. Why is it that my brother can experience hallucination and delusion, and what other circuits are not covering or inhibiting that? So, it's given me a completely different perspective, both from the inside looking out as well as the outside looking in, in people who are different.

Dr. Dave: Yes. We've been hearing a lot about the plasticity of the brain recently, the ability to relearn for damaged areas to be compensated for by other areas of the brain, and your story, your experiences perhaps the most dramatic – one of the most dramatic – examples of that that I've encountered. Just hearing how you're able to

speak so fluently and how you've regained your professional persona, knowledge, etc., after having been in that state of droopy face and drooling, and so on. It's pretty remarkable, I think.

Taylor: Oh, I think I had an advantage in the process of recovery because I was totally, absolutely in awe and in love with the brain to begin with. To me, I chose neuroanatomy because I knew I would never be bored. That was my bottom line; I wanted a field that would always be stimulating. And we're babies, in so many ways, in really understanding what's going on in the brain. So, I knew that throughout my lifetime, there would always be new things, new ideas, new things to think about, new ways of wrapping our minds around complex ideas. So, to me, the first thing I think, one of the reasons why I recovered so completely, was I believed in the ability of this brain, this organ, to recover itself if I got out of its way. And to get out of its way meant one, I would give it sleep, if it asked for sleep – if I was tired, I would go to sleep. I would feed it well, with good nutrition; I would take care of it, I would pay attention to it. I would exercise my body. Science shows that exercise also exercises the brain. But I think the biggest thing was, I refused to see myself as less than I had been before. Because I was different: I lost my left hemisphere; I lost my climb in the Harvard ladder; I lost my relationship with the external world; I lost all my relationships; I lost everything, it was all gone. I didn't even know what a mother was, much less who my mother was. I mean, I had no information about the external world, and yet I felt perfect and whole and beautiful just the way I was. So, for me, I didn't become "less than." I just became different. And then it was a matter of choices. Okay, well, I had taken care of my body, so it could go on for decades in this condition. Okay, well, being in la-la land and sitting in the lap of the universe was a blissful experience, but okay, I'm going to have this when I'm dead, probably, and right now, I *am* alive. I *am* alive, and what can I do now, based on what I've learned about this experience of bliss? Boy, wouldn't this be an improvement in our society if everybody knew that they could come here and feel this? And so, as I mentioned in the video, that's really what motivated me to recover, was the willingness to say, we have this incredible experience always available to us. It's always there; it's just like, I can't quote who it was, but someone brilliant said the sky is always blue. The blue sky's always there, and I see that as the right hemisphere. And then the clouds might come in, but the blue sky is still always there. So, the left-hemisphere brain chatter might come in and distract you away from being able to see that beautiful blue sky, but it doesn't make the blue sky go away. So, as soon as you get rid of those clouds, there's that beauty again. And for me, that is the existence of what I am as a living being. I have the blue sky all the time, I have this incredible left-hemisphere language center that interacts with the external world, but I don't always have to focus on the clouds. I can flush those away and go back to the simple beauty of what I am as a living being.

Dr. Dave: Well, that's a great place for us to close. So Dr. Jill Bolte Taylor, thanks so much for being my guest today on Shrink Rap Radio.

Taylor: Thanks, David. I really appreciate it.