Shrink Rap Radio #182, Nov 14, 2008, Effects of Meditation and CBT on The Brain

David Van Nuys, Ph.D., aka "Dr. Dave" interviews Dr. Philippe Goldin, Ph.D. Clinical Psychologist

(transcribed from www.ShrinkRapRadio.com by Goh L.H, Lawrence)

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Introduction: That was the voice of my guest Dr. Philippe Goldin a Clinical Psychologist who spent six years in India studying Tibetan Buddhism and is now at Stanford conducting imaging studies on the brain. He'll be one of the feature speakers at the upcoming conference on Happiness and Its Causes in San Francisco, on Nov 24 through Nov 25. You can find out more about both Philippe and the conference in our shows notes at shrinkrapradio.com. Now here's the interview.

Dr. Dave: Dr. Philippe Goldin, welcome to Shrink Rap Radio.

Dr. Goldin: Thank you.

Dr. Dave: I am looking forward to discussing several things with you; I definitely want to talk about your presentation at the upcoming San Francisco conference on Happiness and Its Causes. But before we get into that, I like to focus on your background and your research on Mindfulness Meditation and the Brain.

Now I seem to recall that as an undergraduate you didn't major in psychology at all is that right?

Dr. Goldin: Correct. My undergraduate degree is in Asian Studies.

Dr. Dave: Very interesting. And sometime after that was it that you decided to go to India to study Buddhism?

Dr. Goldin: Yeah. Actually I did my junior and senior year abroad in Nepal through the University of Wisconsin, Madison and that exposed me to different languages and I studied at Sanskrit Tibetan, Nepalese languages and studied Hinduism, Buddhism, Islam and just living in a totally different culture. And that's where my initial exposure to many ideas including Buddhist ideas begin.

Dr. Dave: Wow. You must be one of those people who picks up languages pretty easily, cause I read that you became a translator as well. What language were you translating from?

Dr. Goldin: Yeah, I was actually studied Tibetan Buddhist practice for that, I studied Tibetan language in-depth and I learned both spoken Tibetan and written Tibetan and also Debate language which is a very — it also in Tibetan language but it's a different form of logic and vocabulary and sentence structure and I was able to become proficient enough to serve as a translator for different teachers and to translate public and private teachings. I really enjoyed the role of being a conduit or translator.

Dr. Dave: Wow. Yes, that's really amazing, fascinating. You studied philosophy, Buddhist philosophy and debate at a monastery and a Dialectic Monastic Institute.

Dr. Goldin: Uh-huh.

Dr. Dave: I don't think we've heard much about that angle here in the West. I have the impression that there is a branch of Buddhism that regards debate as if a sort of a specific practice on the road to enlightenment? Is that right or ...

Dr. Goldin: Yeah. Well within the Tibetan Buddhist tradition and even before that in India Buddhism there are many different schools of Buddhist practice and philosophy and so forth. And many of them would engage in discussion or analytic debate where they would take the words of Shakini Buddha and all the different commentaries and really try to delineate what was being said and what was accurate, what was inaccurate and that tradition continues to the present. So within Tibetan Buddhism there are different schools including the Geluk and Sakya where they emphasize on studying texts, studying philosophy as preparation for sitting and meditating. And then even in more depths where you spend a lot of time with your colleagues doing fantastic, fun, intellectually stimulating, passionate debate where you really go at it and try to find out flaws in thinking and the whole motivation is to identify sources of ignorance, confusion and to remove them. And this all preparation for sitting meditation but in it of itself the debate has an incredible quality of clarifying the mind.

Dr. Dave: Fascinating. You know it puts me in mind to of Hasidic Judaism, isn't there a similar kind of emphasis there on augmentation?

Dr. Goldin: Yes and lots of debate on language, entomology, the meaning of words and the number of meaning of words and trying to delineate exactly what in different components of words and means. And this is all practice of the — which all — this is on the kind of analytic meditation practice and kind of find the wisdom component of the mind so that when you really meditate or you can use that strength of intellectual to pierce into how things abide, how things exists, how things occur. And that really strengthens those concentration and mental clarity.

Dr. Dave: So I take it that you are a meditation practitioner and as well as being a scholar on these topics?

Dr. Goldin: They go together.

Dr. Dave: Yeah (laugh) okay.

Dr. Goldin: One most definitely, they feed each other and then not only to do formal sitting meditation but to bring that meditation sensibility into moments throughout the day.

Dr. Dave: Yes. I'm just wondering if you found that the debate practice and techniques that you studied in the Tibetan language if those have carried over into your work, in your thinking and the English and Western domain.

Dr. Goldin: Well that's an interesting question. Here is a little more difficult in western academic circles to that we don't have the same structure for debate. I think sometime it goes on a very slow manner via published articles and like an article and then commentaries and so forth, that's a very slow process. It's less of a tradition here in our western — like in our laboratories in among our researcher actually debate with each other. We do ask each other a lot of question but it's a more free flowing not structure but having said that there are some groups that are trying to incorporate debate and the debate here is really — the biggest difference here is the motivation. In the Buddhist tradition before you start a debate session every together invokes a motivation on intention to bring ones energy and intellect to remove sources of ignorance, confusion, doubt. That's not always the motivation in western academic traditions.

Dr. Dave: I'll say (laugh), I'm thinking of some rather difficult department meetings (laugh) in the academic setting.

Dr. Goldin: Yeah. It's I think one of key things here is intentionality, motivation. Why am I studying this? Why am I meditating on this? Why am I focusing my intellect on this? For what purpose? For what intention?

Dr. Dave: Are you able to give us an example of the sort of questions that you would have debated there in Tibet? Or in India?

Dr. Goldin: Sure, sure. Say for example if this very moment when I am looking at an object, the mental percept in my mind, in my brain is something that's exists — is actually exists in this moment about something that I saw a moment ago. So the — so is interesting is the; Do I see the world in a delayed fashion? Or in the very current moment? So through the five sensory doors, hearing, seeing, touching, smelling, etcetera, thinking. We are usually seeing the world, the very mental percept arises after the object has been perceived and then the thoughts about that object or about that mental representation, you know, is another step removed in time. So we are kind of seeing things in the delayed fashion, so then people are seeing so when is it you can say that a person actually sees an object or then thinks about an object or then interprets an object. So we actually delineate all the different steps in the act in some object to perception to thinking to interpreting, elaborating.

And that's interesting cause that's actually something that often happens in the context of psycho-therapy too where you try to slow down and clarify, okay, now you ended up feeling angry, what happen just before that, what happen just before that what are the chain of events that lead to this current state. So in fact there is a certain overlap of this process here that we do here in western tradition as well.

Dr. Dave: Yes and even western brain science and so on would have something to say about the delay (laugh), you know, how long neuro-transmission takes etcetera

Dr. Goldin: Yes.

Dr. Dave: Well at some point you return to this country and you completed a Ph.D. in Clinical Psychology, given your training in clinical psychology presumably to be a therapist, how is it that you have become so involve in research? Or was that your goal all along?

Dr. Goldin: You know actually from the first day of graduate school at Rutgers, I was taking classes in the neuroscience track and in the clinical psychology track which were in the same department there in psychology. So from the very first day, I was always been interested in biology, biochemistry and philosophy and language and etcetera. So from the get go I just kept following that and what I have been able to do really most of it during as a post doctorate researcher in the research science now at Stanford, is simply to integrate all these things that I am interested in, the brain, the physics of magnetic resonance imaging, meditation, cardio therapy, treatment for anxiety, depression and to really bring all those things together. And that's made the waking up and going to work much more passionate (laugh).

Dr. Dave: Yes. How won't ...

Dr. Goldin: Total passion (laugh).

Dr. Dave: How wonderful that you found a way to integrate these and that the world has come to a place, the world of psychology, has actually moved along to a place where you are quote "allowed" (laugh) to study the intersection of these different passions.

Dr. Goldin: Yeah. There is a huge shift or movement, I would say, momentum building for understanding in the — what are the sources of empathy, of compassion both in a work place, in between people interpersonally, intrinsically, what's happening in the brain when a person is in a state of sadness, of compassion for others or compassion for self? And these are topics that are maybe a decade ago or a couple decades ago, in the neuroscience field would not had been examine but now, there is a huge movement and a lot of energy and money and effort been put into trying to understand these basic and very, very important human process these compassion, empathy, perception of others, perception of pain in others, because these are part of the human makeup, part of the human behavior and experience. So is very, very exciting time.

Dr. Dave: Yes, indeed and that's why I am so excited to talk to you because you are right on that frontier. Now I believed you've publish some research in which you did F.M.R.I. studies of the brain to explore the effects of mindfulness meditation on depression. Maybe you can start out by telling us a bit about mindfulness meditation and than talk about that research.

Dr. Goldin: Yes. So the mindfulness meditation is one of many kind of meditation and so the mindfulness has to do more with training the mind in kind of adhering to the object internal or external for the moment to moment and it's one type of practice of building the strength of attention visionally, staying in the moment. And so you can think it as a behavior and you can think about it as a training of attention and training of a sensibility about slowing down the processes in the amount that would normally judge, elaborate, criticize, etcetera, and instead just observing.

Dr. Dave: Yes.

Dr. Goldin: So we, with my wife, Wiveka Ramel back in San Diego VA, we did a — she did a treatment study for people with major depression. There was no brain imaging in that study but she was looking mesmerism of change with mindfulness meditation and she was focusing on negative self focus rumination, the negative self focus beliefs and spinning on those beliefs and that the extend to which that tendency went down that predicted reduction in symptom of depression, anxiety.

And than more recently here at Stanford I've been able to do a functional brain imaging study using F.M.R.I. one kind of neuro-imaging tool to get under the skull and look at the brain and we've been — and that's been with adult with social anxiety or social phobia and looking at the effects of training in mindfulness meditation versus say exercise versus cognitive-behavioral therapy, the gold standard psychotherapy? And one of the things we have been finding is that one of the affects of practicing mindfulness meditation is that different forms of emotion regulation, emotion awareness and emotion regulation become more effective, more efficacious for people who have completed the mindfulness class. So some of them talk about this as the WD40 effect (laugh)? Like mindfulness somehow infuses the mind with a little more space, a little more fluidity so that any type of emotion regulation technique becomes more effective, more easy to implement and at least in the sample of adults with social anxiety.

Dr. Dave: Wow, very interesting. It seems like I am reading more and more, hearing more and more about studies using this F.M.R.I. — Functional Magnetic Resonance Imaging.

Dr. Goldin: Uh-huh.

Dr. Dave: Was that a very difficult technique for you to pick up?

Dr. Goldin: I was very fortunate because I was part of an incredible team at the San Diego Veteran Hospital, University of California, San Diego, San Diego

Shrink Rap Radio #182, Effects of Meditation and CBT on The Brain Veteran Hospital where we as an interdisciplinary group worked together in a wonderful fashion. Psychiatrists, psychologists, neuroscientists, computer scientists, physicists figuring out massive statistics, different data analytic methods to try to figure out how to use this incredible technology which essentially allows us to let the brain speaks for itself rather than self report, like in a question here?

Dr. Dave: Yes.

Dr. Goldin: We let the brain show us patterns of activity and then we as neuroscientists have to really work hard to map the patterns of activation onto psychological functions within the context of specific experimental design. So it's quite challenging in the sense you have to be many different domain of thinking, statistic, experimental design, the psychology of the task that you are presenting.

But it's a wonderful tool, it allows us to let the brain present its own patterns and to then with sometimes with map on to subjective first person experience, sometimes it's different. So but it's a wonderful tool, we're still in the infancy of brain imaging techniques for humans and I think it will be as technology advances we'll have more and more better resolution and better techniques for analyzing and modeling how the brain works. It's beautifully complex.

Dr. Dave: Yes, at this point it seems like it's a fairly gross measurement although it's leaps beyond what existed before.

Dr. Goldin: Correct.

Dr. Dave: But definitely there is room to kind of a more finer source of measurement.

Dr. Goldin: Yeah and there are many different neuro-imaging tools, all of which have pros and cons, strength and weakness. One of the movement is being to try to combine different type of imaging technologies together and that also complex as well because they give us very different signals, where in terms of resolution, spatial resolution and of the temporal resolution. So but that's what we are here for is for these very powerful challenges and there are a lot of smart people trying to work on this.

Dr. Dave: Well I think that all of your discipline in meditation and debate, harnessing your own mind and concentration must come to play (laugh) in your ability to focus on and integrate all of these complex topics.

Dr. Goldin: Uh-huh. Where the students are — my students I work with are — I am always encouraging them to sit, slow down and meditate on the data (laugh).

Dr. Dave: (laugh). You know with so much to do, it's really hard with this western brain to get that it could be useful and valuable to just sit and do quote "nothing."

Dr. Goldin: Uh-huh. Yes, well ...

Shrink Rap Radio #182, Effects of Meditation and CBT on The Brain **Dr. Dave:** Do you ever wrestle with that or have you wrestled with that?

Dr. Goldin: Well life right now tends to be so busy. Well there is certain small steps that we can take, say for example; What would it be like to turn the TV off?; What would it be like to perhaps even turn the radio off?; What would it be like to just sit with a cup of tea on your porch or on in your kitchen and just slow down? In fact that's on personal level but on a institutional level, there are those clinics, research labs, institutions, businesses that are encouraging people to slow down in order to be more creative, to have better health, to feel more at ease at work and even with employees because I think the long term we are realizing that these are very, very important skills to maintain well being and creativity and productivity.

Dr. Dave: Yes.

Dr. Goldin: Yeah.

Dr. Dave: Now on my own personal note, I saw that you have a 2008 study on which you were a team member on having to do with tinnitus or ringing in the ears. Now I am a tinnitus sufferer myself, so what's the latest from the research frontier on that topic?

Dr. Goldin: Yes. Tinnitus ... this painful perception of sound in the ears clearly some of the sequelae that arrives from having that problem — more anxiety, more depression, more stress, so some of the idea of using cognitive therapy or stress reduction training of some kind to help reduce the anxiety and maybe symptom of depression that arrives from this persistent painful auditory experience. That's one of things that's been doing ... that people have been approaching.

The other thing is to try to see is it something in the brain that can tell us when a person is hearing sound, in the normal manner and then hearing sounds that are more of a buzzing nature that are interfering. And then the possibly longer steps is, is there a way to provide specific form of training to help people modulate their own brain activity. So in other areas that's happening that hasn't yet happen in for tinnitus but that's definitely something because right now when we use the word neuroplacticity or the ability for people to train their own brain activity. There are techniques like real time F.M.R.I. that allows us to give feedback to people in the moment on their own brain activity.

So can a person modulate part of their brain networks to reduce the perception of sound? Well in fact in meditation, you know, there are techniques for doing that, where people begin to shutdown the perception of sound, smell, taste, etcetera. I haven't seen anyone try to map that on tinnitus, so that would be a very fruitful area.

Dr. Dave: Well I can tell you that the way that I've dealt with it, you'll be interested in because it's really kind of a meditative way which is when I become aware of it and it's kind of like the refrigerator running in the background. Much of

the time I am not aware of it if I am absorbed in some tasks, if I am doing something that I am really absorb in then I am totally unaware of it. And yet at the same time it's loud enough that I notice when I tried taking up motorcycle riding again and I decided not to (laugh) I must say, but I could hear the tinnitus over the sound of a loud motorcycle and the wind in my ears. So it's loud but it kind of comes and goes. So what I've tried — the attitude I've tried to take towards it instead of making it the occasion for anxiety and alarm is just a remainder to bring myself into the present, a remainder to remember god or the bigger picture or whatever as you will.

Dr. Goldin: Humm. I like that.

Dr. Dave: Yeah, I do too and it kind of seems to work for me. Well lets ...

Dr. Goldin: Yeah the idea of reframing what this means.

Dr. Dave: Yes.

Dr. Goldin: When I hear this sound, is it the sound of angels? Is it a sign of god? Is it a sound of some benevolent force remaining me to stay in the present.

Dr. Dave: Exactly, exactly.

Dr. Goldin: Yeah. That's a great way to reframe and use it.

Dr. Dave: Yeah, thank you. Well let's talk about the upcoming Happiness Conference in San Francisco and by the way I'll be sure to put a link to the conference web site in the show note so that people can get more information but tell us a bit about the conference.

Dr. Goldin: Yeah. So happiness and its causes is something like a movement in order to raise awareness about the sources of happiness so for example there is a wonderful book by Matthew Ricard call *Happiness*, it came out a couple years ago where I think he basically says that happiness is a skill. It's a skill that can be developed and it behooves us to learn how our own mind works, what are the pit falls, what are the cul-de-sac that we kind of going to, what are the habits that prevent us from experience happiness from moment to moment at different levels.

So the conference is in this case is it's has done in Australia, it's been done in London and now in San Francisco coming in a few weeks actually now in November and Robina Courtin, a Tibetan Buddhist nun is kind of spearheading it but she invited all kinds of people, social workers, lawyers, conflict resolution people, psychologist, psychiatrist, neuroscientist, all kinds of people to come and speak about the sources of happiness whatever things that might help support or facilitate well being, compassion, etcetera. So it's going to be a very interesting dynamic set of talks and discussions.

Dr. Dave: It really does looks like it's going to be that indeed and I plan to be there and I look forward to meeting you there and as I look — when I first heard

about it, and I look through the speakers I was expecting to see a lot of names that I would recognized from the positive psychology movement. I didn't see any, it's looks to me like it's primarily coming from a Buddhist perspective. Do you know if there, you know, there has been a lot of work in what's been call positive psychology, I be interested in your take on that and whether you see any sort of intersection or cross cutting between the Buddhist take on happiness and what's happening in the world of positive psychology.

Dr. Goldin: Yeah. I do believe that there's an overlap, I think for the purpose of the conference, we been according with interested in getting people from all domains, so there's film makers, there are social workers, athletes, there are coaches and so forth. So because happiness can arise and, I mean, people are working on that in many different domain including businesses, you have people from Google coming as well. During the positive psychology cause the — this is really in contrast to the medical model, which is mostly about psychopathology or pathology — what's wrong with the body, the person, the system.

And the positive psychology is rising in contrasting so here we have human beings, what are the skills, the aptitudes, the ability of that people can developed to become optimal, to function more optimally, to actually experience joy, take responsibility for enhancing their compassion for self, for others, empathy, care and how can people take situations that ... and take perspective or reinterpret situation in order to make them less toxic.

So the positive psychology is very interesting in that it's really enhancing positive qualities in people not just focusing on anxiety, depression, schizophrenia, substance abuse. And that's a very, I think, healthy balance that's arising in both psychology and medicine and so forth. I think it's a representation that people are — that people recognize that they want to be even more well and that we can be, I mean, we wait for the question to what are the extents, what is the extents or the limit of well being?

Dr. Dave: Yeah and you know I think too that they have been generating data showing that qualities like generosity and forgiveness and passionate engagement, that these kinds of things are associated with happiness and seems to me that, you know, you were talking earlier about the Buddhist take on compassion. It does seem like there's overlap there.

Dr. Goldin: Yes. Definitely. And there definitely is an overlap and I think that and it's just from a mechanism point of view, you can think with as I was mentioning earlier about these negative self rumination, when my attention is focused on myself, and if I had the habit of negative thinking about the self, this leads to low self-esteem **[audio gap 0:28:49.1]**, like to what would happen if everyday I practice positive affirmation about myself? I am find the way I am, I am doing a good job, I am a good mother or father, a good person and what is it need to be generous to others, what is in terms of getting material goods but also wishing well, like say for example, get on the bus, walk into a mall, see other human beings and just think may that person be well, may that person have a sense of ease. Just practicing that could be very powerful and as you mentioned forgiveness, how much energy in the mind and body is encapsulated into

revenge? Or into anger about others? And to release that, I forgive, I forgive. Both I forgive myself, I forgive others. And then something that I think is integral, people just need to practice it in themselves and see the results for themselves.

Dr. Dave: Yes, there are ample opportunities for practice at Wal Mart (laugh) and other such places.

Dr. Goldin: Wal Mart, the bus, the mall (laugh). At home (laugh).

Dr. Dave: Yes, yes, there are challenges all around.

Dr. Goldin: And everywhere.

Dr. Dave: Yes. Without giving it all away, can you give us a bit of a foretaste of what you will be talking about in your presentation?

Dr. Goldin: Meta-cognitive-perspective, Cogni-perspective taking. So one of the mechanism that Zendel Segal who's a fantastic clinical psychologist researcher at University of Toronto, that he's purposes these idea of disinterring or that the contents of my awareness, be it my thoughts, my emotion, my memories, my sensations, to what extent do I rarefied those like that's me, that thought, that feeling, that emotion is me. As oppose to disinterring, stepping back and just seeing those momentary experiences phenomena and in one way this can be conceptualize as meta-cognition, reflecting on how I relate to the contents of my awareness. So I think that this is a key, trainable mechanism or aptitude for disinterring from the contents of awareness, so that instead of getting stuck, rarefying, ossifying the contents of my awareness. I can actually make them more fluid and see that I am something — I am a person who has these experiences but those experiences are not the definition of me.

I actually have some brain imaging data where I asked people with social anxiety disorder to shift from oh my gosh this negative belief or this person who ask with an angry face spinning on the how these reflects something negative about me and then I give them a key to shift into just observing the thoughts, feelings, sensations, the reactivity and how that reactivity changes from moment to moment.

So that's a Cogameta-cognitive shift and literally seeing how that affects their negative emotion experience, to these emotional probes both behaviorally and also neurally what's happening in the brain.

So I'll be just briefly talking about this as one tool for as a mechanism for bringing a about happiness. To be free from the automatic habitual reactivity might be a source for happiness.

Dr. Dave: All right. Well Philippe as we wrap up, is there anything else you like to leave our listening audience with?

Dr. Goldin: Yes. So in a research lab here at Stanford, in the Psychology Department, we are very fortunate to be conducting two different studies for

adults with social phobia, social anxiety disorder. We offer for free training and treatment for social anxiety, we are encouraging people to contact us and our number is 650-723-5977, that's 650-723-5977 and we are actively looking for adults in the area who have social anxiety, social phobia to participate in our training and treatment that we offer for free for as part of a research setting.

Dr. Dave: How would I know if I have social anxiety and whether or not I have social anxiety that severe enough to warrant your interest?

Dr. Goldin: Yeah, social anxiety is characterize by an intense fear of social or performance situations where I am worried that I might do something or say something to humiliate or embarrass myself, and or make people think badly of me. So there is usually an intense fear of social situations, performance situations giving talks, dating, interacting with others and or in a very strong avoidance. So actually I sculpt my life by avoiding all kinds of situation that I fear and I think that this is something that everyone have to some degree and but it exists on a continuum and we actually do phone screen and diagnostic interviewing and so forth. And I think a lot of people, hopefully people will recognize that it's just not shyness but it's actually a more extreme — that will be interferes with interpersonal functioning, how a person feels in different situations. So but if you need more clarification, please call us.

Dr. Dave: Okay. Well I'll be sure to put that phone number in our show notes as well. Dr. Philippe Goldin thanks so much for being my guest on Shrink Rap Radio.

Dr. Goldin: Thank you so much. Be well.

Dr. Dave: I hope you enjoy this conversation with Philippe Goldin. The lap phone number if you want to be involve in the study on social anxiety is 650-723-5977 and also there is a web site that you can go to and that's http://caan.standford.edu and c-a-a-n is phonetically is what California Alpha Alpha Nancy. The conference web site you'll find at www.happinessandiscausessf.com or you can do what I do which is to do a google search on happiness conference San Francisco and that will bring it up.

I have to say I am very impress with Philippe Goldin, so much so that it's all I can do to hang on to any shreds of self-esteem. Let's see he reads, write and speaks Tibetan among other Asian languages, for my part I can speak halting pig-Latin (sp 0:36:20.3) and a smattering of butchered Spanish.

He's able to debate the find points of Buddhist philosophy with Tibetan masters. I can sometimes answer questions from undergraduates. I am sure he is able to focus his concentration like a laser beam drilling a hole through metal while the drunken monkey of my mind is still quite drunk.

He gets to play with high tech toys like F.M.R.I. devices; my highest tech is an iphone.

He does trail blazing research and I ... but wait a moment ... time to take a deep breath or two (deep breath) ... bring myself back into this moment in which he and I and you are all perfect.

If any of you are able to attend the happiness conference be sure to say "Hi." I'll be that perfect being in a black shirt that says "Shrink Rap Radio."