Peter Russell - BATGAP Interview (# 238)

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{BATGAP theme music plays}

Rick: Welcome to Buddha at the Gas Pump. My name is Rick Archer and my guest today is Peter Russell. I've known about Peter for a long time. I read two of his books – *The TM* book and the *Global Brain* - back in the early 80s and really enjoyed them, and been sort of following his career from a distance., and so it's really a joy to be speaking with him today.

Let me just read a brief bio from the back of his book. "Peter gained an honors degree in physics and in experimental psychology at the University of Cambridge, England, and a post-graduate degree in computer science." In other words, he had the kind of adolescence I'd like to have in my next life time.

"He studied meditation and Eastern philosophy in India, in fact he became a teacher of Transcendental Meditation in 1969" - I became one a year later - and on his return conducted research into the neurophysiology of meditation at the University of Bristol."

"As an author and lecturer he has explored the potentials of human consciousness, integrating Eastern wisdom with the facts of Western science, and shared with audiences worldwide, his discoveries and insights about the nature of consciousness, global change, and human evolution. He has given a lot of programs in various businesses, and his books include *The TM Technique, The Brain Book, The Upanishads*" – he didn't write the Upanishads but he did a commentary on them, or something – "*The Global Brain Awakens*, and *Waking Up in Time*. He also created the award-winning videos *The Global Brain* and *The White Hole in Time*, and his website is www.peterrussell.com"

So today we're going to be talking a lot about this book, I think, *From Science to God*, and I'm of the opinion that, and I think Peter might be also, that the ideas presented in this book are really Earth-shaking, really fundamental, very important, actually have implications for the survival of life on Earth, or the nonsurvival, as the case may be, hopefully the survival.

So I think it's going to be a really interesting conversation, but Peter, let me just properly welcome you. I haven't even switched the camera to you yet, so hello, and let's learn a little bit about you before we really get into talking about more of the philosophical, scientific ideas.

Peter: Okay, well as you said in the introduction, I started off as a scientist and that was my love, and I was good at it. I was always, in the background, sort of interested in the mind and consciousness because it was a hobby thing. I would, back in my teenage years, read about … and this was when we thought yoga was about lying on beds of nails and sticking things through your cheeks, this was way back when yoga was just beginning to get noticed.

So I went to university, I went to Cambridge, I started in mathematics and physics, then I moved into psychology. And the move to psychology came really because I was getting more and more interested in consciousness. I was realizing that physics - much as I loved physics and I was at the stage where I could sort of solve Schrödinger's equation for the hydrogen atom, which means nothing to most people, but it's a *huge* thing in physics, that from pure mathematics you could start deducing hydrogen and the chemistry of hydrogen - I realized it was going to tell me nothing about the mind or consciousness.

And the fascinating question to me was how would hydrogen, from which the universe began - well it began from atoms or energy, but it became hydrogen , which is just a colorless gas – had evolved into species such as ourselves who could do the mathematics of hydrogen! That to me was fascinating; I realized physics was never going to answer that so I looked to psychology and got fascinated by the brain.

But no one was really interested din consciousness in those days, and that's what took me into meditation, I realized the people who really had sort of understood consciousness or studied consciousness, were not doing by sticking EEGs on the scalp and measuring the electric energy of the brain, they were sitting down and looking firsthand into their own consciousness, through meditation and things like that.

So that drew me into meditation, I started actually exploring some Buddhist practices but didn't *really* get off on them in that stage, and came across TM and it just worked. And I just fell into it, it just was fascinating, and I met the Maharishi and he invited me out to India. So I went to India in '69 and really got in depth there, in the study of meditation. And I think, I think two things happened in India. One, I realized there was something to spirituality.

As a kid, you know, being a budding scientist, I totally rejected religion, when I realized it was just something I was meant to believe in. But I was grown through the process of confirmation and the Nicene Creed, you know … "I believe in one God, the Father almighty, maker of heaven and Earth," blah, blah, blah. And I realized… I was actually going to sign off on this? As a belief system? It's like, no way! I thought it was just a charm.

Anyway, when I was in India I realized there was something to spirituality, not necessarily to religion as such, but they were all coming from a common source, and I got fascinated by what was that common source. And also realizing that so many of the problems we face in the world today, whether it's personal, environmental, social, economic problems, time and again they come back to human consciousness, human decisions, human values. And yet we try to deal with the outside situation, we try to resolve the problem out there, never actually looking at what is it in our consciousness that leads us to create these problems in the first place?

And so I came back from India really moved by those two things – wanting to explore what is the essence of spirituality, and how to share that in the world today, seemed like that was the most important thing to be doing. So that's how I started.

Rick: Great, yeah, I heard you say something in one of your recordings, something like, "Religion is the remnants of spirituality," or something like that. But that was a good phrase, it's like, you know, some great sage comes along, like the Buddha or Jesus or somebody, and really has not only

concepts to impart to people, but an experience to impart, and then over the passage of time it gets more and more and more deluded, and you end up with something that bears very little resemblance to what that person was actually trying to impart.

Peter: Yes, yes, and by the time it's translated then absorbed by a culture - and usually the culture that's absorbing it is not an enlightened culture; they're sort of fascinated by it - but they're being absorbed by an unenlightened culture and ends up as ritual, dogma, doctrine, and the real essence is lost.

Rick: You'll remember the phrase, "Knowledge crumbles on the hard rocks of ignorance."

Getting right to the topic at hand, this book that I just read, *From Science to God*, why don't we start by having you explain to us what a paradigm is?

Peter: Okay, a paradigm is … it was a term made popular oh, about 30 years ago by Thomas Kuhn, probably 40 years ago now, who was a philosopher of science. And he was looking at scientific revolutions; how science changed its views. And he coined the word 'paradigm' basically to mean the underlying set of theories that are accepted as the current truth, in any given area of science.

So you know, if we take physics, things like Einstein's Theory of Relativity and Quantum Theory are accepted as the current truth; two-hundred years ago Newton's idea was the current truth. Or in molecular biology, the current truth is that DNA … that it's really important to understand DNA.

So a paradigm is the underlying theory within which science does all its business. And what Kuhn was fascinated by was the resistance we have to changing our belief systems, it's like we hold onto our beliefs more strongly than almost anything else. I sometimes joke that we'll change homes, we'll change jobs, we'll even change partners, we'll even change gender, rather than change our *belief* about things! I think it holds true in religion and in science.

And he showed that when a new idea comes up that challenges the current paradigm … a good example of that is 400 years ago we thought the Earth was the center of the universe, and when people came along with ideas - like Copernicus, or observations - like Galileo, that challenged that and said maybe the Earth is going around the sun, the Church, which was the established paradigm-holder at the time, threatened them, put Galileo under house arrest; they couldn't take it.

Rick: they burned that other fellow – Bruno ….

Peter: Bruno! Bruno was burned at the stake. Well he did a lot of things wrong – he supported Copernicus, he also said God was a woman …God was a 'she,' not a woman. He said "God is she, not he," he was quite a revolutionary.

Yes, and Galileo, you know, that's the threat at the time, you don't like the criticism to the current paradigm. And he showed that people hold on to their views, and new views put forward *gradually* get new adherents, but it's sort of a fighting process. We hold onto our old views, and then finally there's a shift and we take the new paradigm. Then that becomes reality for a 100 years, or something, and then something else shifts.

Rick: It's easy to scoff at that, you know, from our current perspective, but I suppose in its defense, partial defense, there's something to be said for a certain stability. I mean we don't just drop everything at the slightest suggestion of a different idea; we have to have a certain stability, but I believe that in general it's been much too rigid and inert.

Peter: Yes, I think what he was pointing out is when there's a real challenge to the paradigm, rather than sitting down and rationally saying, "Oh, maybe we've got it wrong," we ignore the challenge, we push it aside.

Rick: Yeah, and you could see how people would do that. Well, in one way you can see it because they've invested a lifetime, and in this day and age they might not have all sorts of funding, you know, all sorts of published papers and what not that are about to be invalidated, [or] remove from them the funding. So you can see how and sympathize with them, in a way.

Peter: Yeah, and in fact that's happening today in cosmology, where the current paradigm is the Big Bang model. And I was reading a paper in *New Scientist* recently saying, there are a lot of other views, but they can't get funded. What gets funding is anything that supports the Big Bang model, but people coming up with alternative views find it very hard to get support.

Rick: So just for a moment, talk a little bit about Kuhn's explanation of anomalies and how anomalies challenge the status quo understanding. And there's also a bit of a humorous angle on it in terms of science progressing through a series of funerals or something … I think you put it.

Peter: That was Max Plank who said, "Science proceeds not because scientists change their minds, but the old scientists, the scientists who hold the old view, eventually die out." I think somebody paraphrased that to "Science proceeds by funerals."

Yes, the anomaly is the observation of a finding that threatens the old paradigm. So when we're talking about the old view of the universe where the Earth was at the center, that paradigm actually had two bits: one, the Earth was at the center, but also that all the stars, all the heavenly bodies moved in circles. Because Plato said the heavens are perfect, and circular motion is perfect, and therefore everything moves in circles in the heavens.

And the anomaly was the planets, because they didn't. In fact, the word 'planeta' in Greek means to wander. These were the wandering stars, they move forwards, they move backwards – what we call retrograde – they sort of wandered around past each other, and nobody could explain how the planets moved, this was the anomaly. But because everybody was wedded to circles, they dreamt up these complex things of circles, rolling around circles, trying to adjust the movements, and this great debate about whether you could do it in 112 circles or 120 circles – how many circles would it take to explain all the planets movements! And it never quite worked.

So that was the anomaly, but the anomaly was people tried to explain the anomaly *in* the existing model, and that's because we're tied to the existing model so we try to explain it in that. And then it takes a brave soul to come along and say, maybe we can explain this differently. And that's what Copernicus did, he said, "If we make the sun the center, then we can begin to understand why the planets move as they do. If the Earth is another planet going around the sun, then we can begin to understand things."

So the anomaly is the observation which cannot be explained. Basically, the anomaly cannot be explained within the old paradigm. What Kuhn showed is that we hold on to the old, we try to explain it in that way, and that's when we get ourselves in a twist.

Rick: Sure, and then eventually Galileo came along with his telescope and the bishops refused to look through it because it obviously couldn't be true, but then eventually Newton came along and provided the mathematics for understanding the laws of motion, and the whole thing began to make sense. And there have been a series of funerals between then and then and then, and so the paradigm pretty much shifted.

Peter: Yeah, although it's interesting because although it shifted intellectually, in our *experience*, we sort of live in the old paradigm still. You know, we talk about the sun rising and the sun setting, we still perceive here and the sun going around us, although we know it's different.

Rick: Yeah, of course if you go to the South Pole, you just sort of see the sun going around the horizon.

Peter: Yeah, yeah.

Rick: Okay, so it's easy to look back on these people and think, "Oh, weren't they foolish and stuck in their ways, and we know so much better now," but fact is, we are as much stuck in a paradigm which probably needs revising as those middle-age people were stuck in theirs. And that is the materialistic paradigm and materialism. So let's talk about that a little bit and what are some of the anomalies that are starting to peck away at that paradigm.

Peter: Yeah, well I think the current paradigm, the materialist paradigm which really pervades *all* of science; it's a deep, deep paradigm. It pervades physics, biology, chemistry – almost every science believes that the fundamental nature of the universe is space, time, matter, energy, and once we understand this physical world of space, time, matter, energy, we will understand the universe and be able to explain everything, that basically the real world is a physical world. And very few people question that, it just seems so natural.

There are things which question that. There are things like paranormal phenomena, healing, clairvoyance, those sorts of things, precognition, which don't quite fit into it. But I don't think they're real anomalies, I mean, who knows, maybe one day we'll be able to explain those things. I think the *real* anomaly for the current materialistic paradigm is consciousness itself - the very fact that we are aware, that I'm actually having experiences now. I'm not just a biological automaton doing its thing and talking to you; I'm actually experiencing it, I'm having thoughts, I'm having feelings, and I'm aware of them. And there's nothing in current scientific worldview that explains this.

In fact, what's fascinating is that any theory in science is validated by its ability to predict things –predict the future, predict change, predict how the world is. And there's nothing in the current scientific worldview that predicts that any of us should ever have an experience, but we don't then question the current scientific worldview; we try to explain that within the materialistic view.

And the current way we try to explain it is we think that our consciousness comes out of brain activity in some way, something to do with the complexity of the information processing creates experience. But the big problem here, in philosophy it's called 'the hard problem,' is how is it that something we assume to be unconscious – matter, the matter of the brain – ever produces something as immaterial as consciousness itself?

I think that's the anomaly, it's the very fact we are aware, that's the one thing that cannot be explained. And yet what we are trying to do is explain it within the old system.

Rick: Do materialistic scientists recognize that as an anomaly, is it really in their faces so to speak, something that keeps them up at night, or do most of them just brush it off and ignore it and they go on about their work?

Peter: I think it varies a lot, who knows. I would say most people just sort of ignore the problem, and that's been the way it is from the past – we've ignored consciousness … we can't measure it and it doesn't seem to affect reality. Although with quantum theory and things, all of those things begin to say, "Hang on, the observer, the act of observation is somehow important," so it is pointing to consciousness.

But I think generally they sort of ignore it. They say, "One day we'll understand the brain so well that we'll understand how it creates subjective world view." But I think there is a growing number of others who are beginning to say, "Hang on, we *really* maybe need to question things here."

Rick: Do some of them consider consciousness to be a – well, I was going to start drawing the analogy between consciousness and the electromagnetic field, and radio and television transmitters and so on. And you know, a radio transmitter is a physical thing that stimulates a nonphysical field, but then that gets us right into speaking of consciousness as a field. Because the radio transmitter doesn't *create* the electromagnetic field; it just stimulates it.

And so then we'd have to say, well if we're going to go for that metaphor, then the brain doesn't create consciousness; it's a receiver of a sort.

Peter: Yes, and there are people, I was reading something today about that, I think there are people who still take that view. But it's still, in a way, believing that the physical world is the real world and that consciousness is something else within the physical world. And I think part of the problem is that we make consciousness a noun and we begin to think that consciousness is some *thing* in the world to be known and explained, rather than recognizing that the truth is, we are conscious; that's the real truth, that everything we know takes place in our own experience.

When we add n-e-s-s, 'ness,' to a word, we take an adjective, which is describing something, and make it into a noun in order to talk about it, well that doesn't mean that it exists. I mean, we can talk about being happy. Happy is an experience, but happiness as a thing doesn't exist. We can't go and study happiness as a thing; we can study the experience of being happy.

And I think it's the same thing with being conscious. We all know and the one thing we cannot doubt is that each of us is aware. We can doubt our experiences, I mean right now we could all be living in the matrix, and it might all just be a virtual reality, but still, we couldn't doubt that

we are aware. And that's the truth, that we are aware, but when we turn it into a noun, as conscious-*ness*, we somehow separate it from ourselves and start looking to explain it as another thing in the world.

I think this is one of the fundamental mistakes. We lose sight of the fact that we are embedded in consciousness, everything we know is happening in our experience. All our theories are just things we are aware of in the mind, constructions we've made.

Rick: Hmm, you know, things exist, this book exists, but then spiritual people talk of 'pure existence,' or 'being,' which they're pretty good words, they have a nonphysical connotation, like 'the now,' that kind of thing. Back to the example of the sun appearing to go around the Earth, I mean, even now, as you say, it looks to us like that's what happens, but we know, intellectually and through our scientific investigation, that that's not what's going on.

And by the same token things appear to us to be physical, but quantum mechanics and advanced physics have told us that you can't find physicality there if you look deeply enough. So I think it's an apt comparison where the everyday, ordinary, apparent reality is one thing, but the actual reality is something else entirely.

Peter: Yes, yes, and I think it's fascinating. This is something that modern science is showing this, as you say it is. In a way, there's nothing there when we look down into what is substance made of. First of all we discovered it was largely empty space with electrons and protons flying around creating atoms, and then we realized that electrons and protons aren't *things* in the sense we think of things; they're just potentials of having a certain observation.

It was Hans Peter Durr, a current German physicist, who said, "Whatever matter is, is not made of matter." I think all we can say ultimately is that there is information there. You know, an electron isn't a thing; it has something we call 'charge.' We don't know what charge is or spin or mass, we don't know what they are; they're just numbers. And we can detect information and know how the information unfolds, and that's what I think mathematics and theoretical physics does, but there's no *thing* there.

The thing-ness comes in our experience, or the book appears solid because all the forces holding the atoms and molecules and cells of your hand together will not go through the forces holding all the bits of the atoms of the book together. And so it's impenetrable, and so it's this solid experience.

But yeah, there clearly is a world out there, but we don't know what that's like. It's certainly not like our experience. Our experience is something that's constructed for us. Basically the brain is putting together a picture representation of what is out there, and we experience that representation and take that to be physical reality, and what we're discovering is, it's nothing like it.

Rick: Right, and a dog has its interpretation, and a moth has its interpretation, and a bat has a different one, and yeah, who's to say that one is better than another?

Peter: Exactly.

Rick: In many respects a dog's is better than ours – their sense of smell and hearing. So we're all just kind of getting slivers of what's actually going on.

Peter: Yeah, and making our own individual models, representations of it, yes.

Rick: So the whole idea of the materialistic paradigm seems to me to be on pretty shaky ground, because if you look closely enough there is no such thing as material.

Peter: Yes. We don't know what matter is, we're discovering we don't really know what space and time are, scientists, for a long time, have not known what energy is - they're just terms we *use* to *describe* how our experience comes to us.

Rick: So I don't know if you've watched any of these debates between Deepak Chopra and people like Richard Dawkins, and Michael Shermer, and Sam Harris, and all that stuff. They go back and forth, it's quite entertaining.

Peter: No, I haven't watched them.

Rick: Oh, you should, you get a kick out of it. Deepak gets all excited and those guys call him a Charlatan, and it's kind of very emotional, but I don't know, I side with Deepak. And if you think about it, as we're doing now, as we're talking about it now, you might not want to jump to the conclusion that consciousness is the ultimate reality, but at least it should humble you into realizing that materialism is a lot more tenuous than we might assume.

Peter: Yes, I think this is coming back to the paradigm, this is an example of people holding on to the old view despite the challenges in their face. And I think it was Schopenhauer who says, "First you're ignored, then you're ridiculed, and finally you're accepted as if it's the truth that's always been staring you in the face."

And so we got past the being ignored and now it's the ridicule, so as you say, Dawkins will ridicule Deepak.

Rick: The more advanced physicists these days who are being ridiculed, guys like John Hagelin, are suggesting that consciousness *is* the ultimate reality, that if you get right down to it – and he even wrote a paper, *Is Consciousness the Unified Field?* – that if you go deep enough, there are parallels which are not merely analogous, but which are actual. So let's play with that for a bit, that the idea of consciousness is the ultimate reality, the substance of creation.

Peter: Yes! I would certainly go with that. I would approach it a *slightly* different way from Hagelin and other people. To me, there are two parts of this, the one we've touched on is that there's nothing we can really say about the external reality except there's a field of information there. I mean, you call it a field of being, but it's obviously a highly structured field of being because an electron is different from a proton, the substance of my finger is different from the space around it. It's clearly highly differentiated, all the way from the subatomic levels right up to galaxies, the whole universe, so it's *full* of information, but anything we say about it is just a projection from the mind. So that's one part.

Then the other part comes when we were talking about consciousness being created by the brain. The view that's gradually gaining momentum is that consciousness is already there. We

talk about animals being consciousness, you know, a fly is probably having its own little, tiny experience, and there's no way you can draw the line. Because if you draw the line and say, "The fly has its tiny experience but maybe a worm doesn't," you have to explain what is the difference whereby a physical process in a worm doesn't give rise to experience, but a physical process in a fly does," and you're back to the hard problem. But instead of putting it in the human brain, you put it down the evolutionary tree way back to a much finer level, but the same problem raises its head.

And what I think a growing number of people are coming to is the realization that there is no line, that that capacity for experience is there, *always*, in the universe. In other words, it doesn't get created when some particular nervous system or one that's complexly erratic gets created, that matter doesn't create consciousness; consciousness, the capacity for experience is already there.

But as you've already suggested, the experience of a worm is probably a billionth of what we have, it's just a tiny, tiny, tiny, tiny image in awareness, but it's not nothing at all. So on that view you have to say, the potential of consciousness goes all the way down into what we call matter itself, but there's nothing of matter there. And so this field of being, this field of being, is itself, or has itself, the capacity for awareness.

That doesn't mean to say that atoms experience the world at all, but the *potential* for awareness is there. And maybe it's only when it gets to the structure of a simple cell, where you have a lot of chemical information processing going on, that awareness as we know it begins to sort of come along. I think awareness and life are closely connected.

So in that view, you come to the view that the universe is an *aware* field of being, aware of itself, and in that awareness of itself, creating its experience in the material world. Whether it's the material world a fly experiences, or we experience, or a blue whale experiences, it's the universe knowing itself, it's knowing this field of consciousness, which it looks to us like the material world.

And so we see this field of consciousness as senses detect the information that's out there, and then we create this experience of materiality. But the material world as we think of it, actually only exists in our experience. What is out there, I would argue, is just a field of being, knowing itself at *all* different levels of creation, all different levels.

Rick: There's a Sufi teaching that you quoted in your book: "God sleeps in the rock, dreams in the plant, stirs in the animal, and awakens in man."

Peter: Yes.

Rick: I'd say that in most men God is still stirring …. But potentially awakens.

Peter: Well I think there are two levels of awakening. We've awoken to the fact we are conscious, we recognize that we're conscious but we haven't actually awoken to the true nature of consciousness. And that's what I think a lot of spiritual traditions are about, is that true, full awakening of consciousness.

Rick: Something you just said was very interesting. If we say, if we postulate that consciousness is the ultimate reality, that if you take anything and boil it down, look deeply enough, go down to its fundamental essence, you find it is consciousness, then there is nothing *but* consciousness. If you say that then the conclusion is there is nothing *but* consciousness.

So everything that is happening – stars and planets and iPads, and computers and people and dogs, and everything else, is just consciousness somehow appearing to assume forms, and interacting within itself.

Peter: Yyyes. Um… yes. Trying to explain this is the hard thing, because we're sort of caught in material thinking. It isn't a consciousness as human forms; it's that the forms are in the structure of consciousness.

Rick: Yeah, that's why I said *appearing* to assume forms.

Peter: Yeah, okay, so the way I see it is like, you have this field of being, there's a field of being which isn't material, which does have the capacity for awareness. And so you get a little tiny know in that field of being – that's something we call an electron, maybe – it's like a knot.

And this is what things like String Theory are saying, that these are little circles of strings that collapse dimensions, but like this little knot, in reality. So there's a little knot in the consciousness field we call an electron, one little know we call a proton. Those knots work together to create a bigger knot, which we call an atom.

Rick: Could you also call them 'excitations,' as if the field – not the silent field of being - stirs into waves, and one wave is an electron, another wave is a proton, and so on?

Peter: Yeah, yeah, exactly, that's maybe an even better way of putting it. Let's use that – they're excitations which sort of exist and persist over time; it's an excitation. But it's just an excitation in this field of being, this aware field of being. And that's why again I'm coming back to this point: consciousness isn't a thing but it is aware. We are aware and this field of being is aware.

And those excitations gather together into more and more complex systems, and eventually reach a complexity where the excitations are beginning to form a system which is beginning to notice the excitations around it, beginning to sense the excitations around it. And in doing, so begin to put together a picture of how the excitations around it are structured. And it's like, "Oh, there's a" you know, a skin cell might notice, "There's an excitation touching my skin called a sugar molecule."

And so experience begins to build out of the excitations of consciousness beginning to notice other excitations of consciousness around it. And then the actual form appears in the experience, that's where the form appears, is in the experience of an individual system, whether it's a cell, or a human being, or whatever.

It's a hard thing to put into words. I have this vision myself but it's always difficult, how to actually put it into words.

Rick: Yeah, but it's a fascinating thing to contemplate, it really kind of takes you deep when you think about it. There's that phrase from physics, 'sequential spontaneous symmetry breaking,' or

something, you know that phrase? And how when we see those charts where things get more and more unified as you get down to a more fundamental level, and at a certain point you only have four forces. And then some of those get unified, and the attempt is to understand the ultimate unification.

And then taking it in the other direction, there's this sort of sequential breaking of symmetry, where things become more and more complex, diverse. But it can always *swing* right back, take it back to its essence, if you begin to mistake any of these diversities as actual physical substance, because if you do, you're not looking closely enough, because ultimately they aren't.

Peter: Yeah, well I think the reason we don't *see* everything as a field of consciousness; we see it as material objects, we see it as matter, energy, is because all the experience is the representation which appears in our own individual mind. And that model is something which appears *in* awareness, but the model itself doesn't include awareness. And so our picture of the world is of color, sound, solid objects, but we never see these things *as* consciousness, because these are just the apparants that appears in consciousness.

You can almost think of it like how you hear that a movie is made of light, the film is just constructed out of light. You then say, "Oh let me study the movie to see where the light is." And you watch the movie again and again, and you study the characters and what they're saying and everything that's happening, and you say, "I can't find any source of light there," because the movie is made of light, but the source of light, which is the projector, if you like, is not actually included in the movie.

And I think it's the same with our experience, everything is a field of consciousness experiencing itself. And we are living in the movie that we've created, and that movie doesn't actually include the consciousness, but the movie is *in* consciousness; it doesn't include consciousness.

Rick: And yet saints and sages have turned around, looked at the projector - light coming out of the projection booth – go on back into the booth, and the analogy begins to breakdown. But their descriptions are that when they look at things, they actually do see them in terms of consciousness. They see them, not only see, but everything is apprehended in terms of its fundamental value as consciousness, and then relative values – its color, its shape and all that – are regarded as kind of secondary.

Peter: Yes, yes, and I think what we're doing here is sort of pointing to it from a theoretical way. And you're right, there are people who have *really* done the inner work and observed their own mind closely, and settled the mind to a level of stillness where you can begin to experience what's going on. I think they are people who are beginning to experience this for themselves, and that's what we call 'higher states of consciousness,' it's people experiencing these truths for themselves.

And this to me is the way in which science and spirituality can begin to meet. Rather than dismissing these experiences as just a mind deranged by too much mediation, we can begin to see, "Ah, if it is all consciousness, then the people who have really explored consciousness are coming to that same truth experientially, rather than what we're doing here, which is a more theoretical analysis."

Rick: Yeah, and you and I have both also done our "lab work" in this.

Peter: Yes.

Rick: Now it's interesting that you should mention "settle the mind," because you know that second verse in the Yoga Sutras, that yoga is the "Cessation of the fluctuations of the mind." So what you've alluded to as being the *key* to seeing things aright, seeing things as consciousness, which they actually, fundamentally, essentially and ultimately are, is that we need to somehow function from a more settled condition.

And it's interesting because a few minutes ago we were talking about the very manifestation of creation as being an excitation, a stirring up or bringing up of a fundamental field. And it's interesting to note that some sages, like Ramana Maharishi and others, have said that from their perspective nothing every happened, the universe never manifested, that they've sort of come back to that perfectly settled state, prior to the emergence of the manifest creation.

And anyway, comment on that.

Peter: Oh, I could comment for hours about the Yoga Sutras. I've actually recently been fascinated with… well let's start there and then go with what you're saying about the experience. That first line says "Here begins the Yoga Sutras." The second line is like, how do you translate it?

Rick: Yoga is "chitta vritti nirodha."

Peter: Yoga means the return to connection, oneness, being, whatever you want that unity. It's the whirling of mind stuff, Chitta is consciousness or mind stuff; it's the *whirling* of mind stuff. We used to take that to be the whirling of thoughts, our minds are caught up in the thinking … we're going here, we're going there. And then nirodha is the key word, and it's really interesting because the common translation says "cessation."

And there's two things about it, one is, what does cessation mean? The relaxing of the whirling of mind stuff, or, as it was translated by a lot of Indian teachers up to the early 20th Century, is the restraining. I was actually at a yoga retreat center a few months back, and I was amazed that on all their t-shirts it was saying, "Yoga is the restraining of the thought ways of the mind." And it's like, "Oh my God!" because I think what's becoming clear is that if you try to restrain the mind, you're fighting a losing battle; it's how do you let the mind relax and settle down.

So it's true, we need the mind to be quieter, but then I started coming across other meanings of nirodha which are actually gaining interest. That 'rodha' can actually mean 'to be caught,' 'to be imprisoned,' and 'ni-rodha' – when 'ni' in Sanskrit,' n-i' is the same as 'ex' in Latin, means 'to come out of,' 'to exit,' 'to exclude' … all those 'ex' words come out of it – and 'ni' in Sanskrit means 'to come out of.' So nirodha can also be translated as 'coming out of bondage,' 'coming out of the prison.' And in that sense, you could translate that second line as: yoga is freedom from the whirling of mind stuff, which to me actually makes more sense.

You don't have to just still the mind, it's like where we're really going in our awakening of consciousness is maybe stilling the mind is the first stage, the cessation of the whirling. But *through* that cessation of the whirling we can begin to remain in contact, we can maintain the state of yoga even with the whirling of mind stuff. And in that sense, it's freedom from the

whirling - most of us spend our time caught up in the whirling, we're caught up in our thoughts, our worries, our plannings, our hopes, our expectations, what's going on. And I think what many o f the teachers are pointing to is that that still goes on, but one retains that inner connection with the oneness, the yoga.

Rick: Yeah, when you're familiar with the verses in the Gita of course, "Be without the three gunas" – meaning still the mind – and then "Established in yoga, perform action," in fact, fight a battle. In that case, do something very dynamic but not lose the freedom established in silence.

Peter: Right, right, so I see that second line of the Yoga Sutras may actually be pointing to that. To me it makes more sense and feels more true to see it as freedom from the whirling of the mind stuff, rather than the other extreme of stopping the whirling of mind stuff.

Rick: Hmm, another point that comes to mind and hopefully we've wrapped up this point, because it's beautiful and I don't want to rush past it. So anymore to say on this before we move on to something slightly different? Is there anything we're missing here?

Peter: I don't think so. You were going, before I asked that question, you were taking it somewhere else about science and the Yoga Sutras.

Rick: Well, yeah, the thought that's in my mind now might do that also, which is that, you know, it's interesting, if you look back throughout history, if you think of knowledge as a territory, it used to be that religion really commanded the whole territory, at least in many cultures. And then this called science was born and it began chipping away at the territory … "Okay, we've got astronomy and we'll take care of that. You guys take care of …," you know? And then, "Okay, we've got genetics," and so religion's territory has been shrinking – looked at in this way.

And if we think of what science does, it generally uses instruments of some kind in order to extend the capabilities of our limited human senses. So we have microscopes, telescopes, the large Hadron Collider, all these different things. But when you think about it, a single human cell is a more sophisticated entity than the large Hadron Collider. I mean there's something so miraculous, even about a single cell, and here we are trillions of them.

And so I'm always fascinated by the notion that the human mind and body, the human nervous system, is the ultimate scientific instrument. And that using it in the proper way, *learning* how to use it in the proper way can enable us to pretty much, in a scientific way, usurp the rest of the territory that religion still owns. In other words, anything, anything – God, angels, whatever – can be scientifically, experientially, repeatedly, systematically investigated and determined to what it is, whether or not it is.

Peter: Yes, yes, yep, there are several things here. Firstly, I think one of the misunderstandings between science and spirituality is that science thinks religion is talking about the physical world. And so people like Dawkins have said that, "We've looked out there, we looked into space, there's no God. We've looked down into atoms, there's no God down there. We've looked back to the Big Bang, we don't need a God. Therefore, God doesn't exist. Therefore, religion is all wrong, QED," and missing the whole point, that really spirituality is about an inner experience.

That's where I think all spirituality came from, that's the seed before it got usurped by culture, it was about this awakening experience, and that is something that's an internal experience. And we can approach that scientifically, which doesn't mean with the current way we approach things scientifically, which is by measuring them, building, as you say, large colliders or whatever it is - timing things, weighing things.

But that's just the *method* of science, the current science. The actual *process* is one of really open investigation, it's saying, "Let's make this hypothesis, let's explore this hypothesis, see what conclusions we come to, and then *test* it by comparing it with other people." There's that thing of coming to a consensus truth, and that's why scientists publish all their papers … "Do you agree? Have I made a mistake here?" – and that's how science, material science, moves forward.

And *exactly* the same principles can apply to our own inner exploration of our own consciousness. And as you say, the human being, the human body, the human brain, is the perfect apparatus, probably the most sophisticated apparatus on this planet to explore consciousness. And we can make hypotheses, we can say, "Maybe if I do a certain meditation practice, this will have a certain effect on my mind." And we do it, and we test it, and if it turns out it does, we've got the conclusion – "Yes, this practice seems to help this."

And then we compare it with other people, you know, "Do you find the same thing?" If everybody else says, "No," we say, "Oh, maybe it was the food I was eating," or something. But if other people agree, then we're arriving at a consensus conclusion. And you could say that all the great spiritual teachings of the world are the publications of people who have done these inner experiments – this inner work, this inner scientific exploration – and are coming to the same basic conclusion, time and again.

So I think you're right, we can approach it scientifically, and this – our body and minds – are the ultimate vehicle for doing that. That's what all the great sages have done.

Rick: And it's interesting to note that people who haven't done the personal experimentation tend to see the various spiritual traditions as conflicting with one another, because they can't see the essence of them because they haven't experienced that essence. Whereas you go to a conference like the Science & Nonduality Conference and it's a bunch of people who have done all sorts of spiritual paths all coming together, and they're pretty much of one mind as to what all the various spiritual traditions have been saying. They can kind of see the common thread, because it jives with their own experience.

Peter: Yes, yes, and that's what fascinates me, is finding out what that common thread is. And the piece that is my own experience, I mean I say, my "lab work" is going off on retreat for ten days - I love just going into silence for ten days, into a meditation retreat. And that's when I do my research - when sitting down, letting the mind become quiet. It usually takes 2 or 3 days to get rid of all that sleepiness and fatigue I didn't know was there.

And then once that's gone and the mind starts becoming clearer, to really begin to observe and practice and carry out my own little subjective experiment, in terms of what really works and what quietens the mind or allows it to settle down. And I would say that almost everything I

have to teach these days in terms of spiritual practice, comes not from other books or other teachers; it comes from what I've discovered in my own personal lab work, and then sharing that with others because it seems to fit what the other great teachers have said.

I mean time and again, you probably have this experience in meditation, it's like, "Ah! Now I get what they were pointing towards!"

Rick: Right.

Peter: I mean, when I first got involved in this it was like seeing everything as these marvelous, flashy experiences that were going to happen. And just gradually over time, it gets simpler and simpler and simpler. It's just like, "Ah, now I get what they were pointing to!"

Rick: I suppose one objection people might raise, I think I heard Sam Harris raise this, was that as opposed to rigorous science which gets published, in which even in the papers themselves they describe what kind of equipment they're using – they're using an ACME such and such, with a 3 millimeter this and that, and you know, it's really … because they wasn't others to be able to replicate the experiments, and if everybody uses different equipment and different parameters and whatnot, then there's no true replication.

And when it comes to spirituality it's kind of sloppy, by comparison. *So* many techniques and practices, and every teacher is teaching things somewhat differently. So how do you kind of reconcile that? And if we want to apply scientific principles to spiritual investigation, or explore subtler realities through spiritual techniques, how do we deal with that problem?

Peter: Yeah, I think it's a very real point that sounds that you're making, and in think that we shouldn't try to make the parallel too close. It's right, I mean the way we explore the physical world is much more precise, and the way the inner world is explored is much looser. But I think for me the point is, it can be scientific, in that sense of being an open exploration and forming conclusions, even if it isn't done in that same precise way that science is done in the physical world.

So I wouldn't … I don't think it can be done; I can't see how it could be done in that same precise way. But seeing that it's a scientific approach, to me, is a way of validating the approach, but I don't think it can be that precise.

Rick: Yeah, I mean who is to say that science and its practices is the ultimate arbiter of truth, and that we need to be as anal-retentive about what our instrumentation is in spiritual practice as science has to be in investigating the physical world.

Peter: Yeah, and even then, all that science comes up with is just more things that have been substantiated within our current paradigm. And so the large Hadron Collider is substantiating what is in the current model of theoretical physics; it's not actually creating new truths, it's merely validating our models.

Rick: True, and also, so it finds the Higgs-Boson, and that's interesting, it puts a lot of things together for us that we could only speculate about before. But I guess you have to wonder about what is really going to have the biggest impact on the quality of our lives, both individually and as a society. And I think you and I would agree that what spiritual development has to offer is far

more impactful, in terms of quality of life and in terms of dealing with some rather serious problems that science is expected to solve for us, but seems to be making worse.

Peter: Yes, and I think this is, coming back again to what we said earlier, that the real problems are within us, in our own thinking, in our own consciousness. Most of the time we're approaching things from a sense of a separate ego out there, to maintain and support this body and what it needs, and we're using the world for our own needs and I think that has run amuck, and this is what we're beginning to see in the world today.

And clearly, if we're *really* going to solve our problems, we need to be looking into our consciousness and how can we really practice, or turn into the reality inside ourselves, where all the sages are pointing to.

I mean, yes, discovering the Higgs-Boson, great - well it's actually turned into doubt some of our current model; it isn't quite what we expected it to be, but so what? Great! Supposing that our models of how atoms work really is true, does that solve the problems we are having on the planet – environmental issues, the social breakdowns, these sorts of things, climate change? No. It's like it's on the sideline – it's fascinating, absolutely fascinating, we're pushing out the boundaries of our understanding of the cosmos, and we may even arrive at a unified field theory, maybe tomorrow or in 20 years time, and then again, so what?

It's like we may not be here much longer to enjoy the results of understanding the unified field theory, if we're not careful.

Rick: Yeah, and of course people who have said that, especially when there's some arguing about funding, people have said that about going to the moon – why bother, you know? It's made of rock. What are you going to do? Bring back some rocks? But the very *effort* to go to the moon resulted in *all* kinds of technological breakthroughs which have benefited life on Earth in a number of ways.

So I wouldn't say let's ditch science and just all meditate. All this scientific investigation and technological advancement is valuable and necessary, but we have a rather imbalanced situation if that's where all our attention is without a counterbalancing development of the inner.

Peter: Absolutely, and the same argument applies to social action. When we're talking about helping the world, there's been this whole argument about, "Oh, sitting in a cave meditating is not going to change the world. We need to get out there and lobby politicians, change corporations … do all that." We need to do both.

We need to basically tend to what is the problem inside and become better human beings, *and* at the same time be out there doing whatever we can to create a better world – the two go hand in hand. If you're trying to create a better world out of just rage and fury and frustration, you'll create change, but it may not be the best change.

But if you can come from seeing the problems but being more centered and creative and aware in yourself, tapping into your own wisdom, I think you're going to create better solutions in the world. So the two go hand in hand, and as you said, it's a matter of balance.

Rick: Sure, and we've seen that many times. There'll be some revolution, like the Arab Spring and people say, "Oh boy, everything is really changing," and then, you know, it'll get even worse.

But I introduced your book earlier by suggesting that we'll be talking about a topic that could be critical to the survival of the human race, and that we're starting to delve into that right now. And I just want to make the point that I think you and I would agree, that everything we see in the world, good or bad, from climate change to genetic engineering – whether that's good or bad, everything else – political systems, as malfunctioning as they are, starvation, AIDS and everything else - is … I mean certainly there are certain viruses and diseases and so on that seem to be beyond our control, but even those are often created by us - everything is a reflection of human consciousness.

Peter: Yes, yes.

Rick: And if an asteroid comes crashing into the planet and a lot of people dies, we won't have to say that that's a reflection of human consciousness, although some would say it is. But at least 90% of the impact that we have on the planet, or the things that impact us, are a reflection of the sort of ambient or collective consciousness.

And I guess that's what the *Global Brain* was about, as I recall, that is created by the 7-odd billion people in the world, each contributing their own little influence.

Peter: Yes, and I made the point in the *Global Brain* of, is it going to become a sane global brain or an insane global brain? And the idea of the global brain was that, and this was before the Internet was actually created, when I was working in computer networking and I saw the future of computers was not growing larger and larger computers, which all the science fiction stories of the time were saying back in the 70s, but it was actually computers networking together to form more and more complex systems, then ultimately forming the same sort of complexity over the planet as we have inside our own brain, and so bringing out the question, "What happens then?"

And you know, we're approaching that, that sort of complexity. But *still*, the human brain is more complex than the Internet, the whole Internet, more complex.

Rick: Sure, even a single brain is.

Peter: Yeah, one single brain. One single brain is more complex than the whole Internet. But then what is behind the function? One human brain can function a certain way, it can be very selfish, almost evil, or definitely evil in some ways, or another human brain can be very compassionate, saint-like, kind. The same brain, or the very similar brain, is functioning in two totally different ways. And I would say it's nothing to do with the brain itself, but it's to do with the value systems behind the brain –what we think is important and what's driving us.

And I think it's the same with the Internet. Are we driven by money? It is at the moment, you know, "How much porn can we sell?" or whatever – that's the old way of thinking. Or can a new way of thinking, can a higher consciousness come in and change our values? And that to me is the hope, that the Internet can actually be a tool for our spiritual awakening, to help us wake up

from this ego-bound mode of consciousness, into what the great sages talked about as the 'liberated mode of consciousness.'

Rick: And it is doing that already.

Peter: It is doing that, you're doing that with your show. You're interviewing, I know, *hundreds* of people who each, in their own way, point to the awakening and their own advice, teaching, or whatever it is, it's all helping that. And there are many, many other people doing what you're doing, just putting out their teachings.

It's fascinating, you know, we are now at a time of global crisis like *never* before, and we have access to spiritual teachings like never before. We can basically access the whole of the world's wisdom, you know, from Tibetan texts written hundreds of years ago, being translated and put out there, to shamans, to people having their own awakening experiences.

Yet 200 years ago all you had, if you were lucky, perhaps was your parish priest – *if* you were lucky that he, or she – no, it would have just been 'he' then - was in any way more than just repeating the doctrines. Today we have access to the world's spiritual traditions throughout history *and* we are honing in collectively on what is that essential truth.

And that's what's fascinating to me, is that *collective* honing in on that wisdom. Less and less are we seeing the differences, but we're coming to that common core, and this, to me, is what we really need. And it's happening faster and faster because there's a positive feedback here, that we're all learning from each other.

I watch other spiritual teachers on the Internet and there are people I love, like Adyashanti, Rupert Spira, these sort of people, and that fuels me. And I may put things out on my own site which fuels other people, and we're all learning from each other. And whenever you have that feedback in a system, you get acceleration.

And so I think just as the technology and the crises are accelerating, at the same time the awakening of humanity is also accelerating - the spiritual awakening.

Rick: Yeah, it's interesting, there's that verse in the Gita, something like, "When dharma is in decay and a dharma prevails, I take birth age after age," you know - Lord Krishna is saying to restore dharma or righteousness, or whatever, and it's interesting because it's kind of happening through this electronic medium.

It would almost seem that, I mean, you could actually postulate that the very emergence of the Internet and everything that it facilitates is in direct response to the severity of the crisis, because only something which could have a global impact could be an adequate antidote to the problems we face.

Peter: Yeah, I think it's one of those immaculate things; it's perfect that it should come at this time, in parallel. Probably inevitable, that it would happen like this.

Rick: Yeah. Just to hammer home the point we've been discussing, I just want to reiterate it one more time, which is climate change, for instance - and you write about it on your website quite a bit, so it obviously concerns you, and I read some of your articles there - there are still corporate

interests spending a lot of money to convince people that it's not happening, because they can make money the next quarter if they do that. But the vast majority of scientists agree, 98% or something of climatologists, that we're cooked unless something really changes. We're pretty much in for at least a 2 degree centigrade rise in temperature, that there's an Arctic ice sheet that is irreversibly melting, which will raise sea levels by about 3 feet, which will inundate hundreds of millions of people in coastal cities. And if we go to 6 degrees - there's no humans on the planet.

So it's a pretty serious problem and a lot of people are really freaked out, who actually understand the problem. We can only hope perhaps that this will trigger an even greater acceleration of spiritual upwelling.

If Gaia is sort of a self-regulating system and we're the agents through which that regulation can occur, then hopefully the severity of this problem is going to result in a true age of enlightenment, which will actually neutralize the threat.

Peter: I think for it to do that, we have to see that it's coming back to our own values and things. And maybe climate change will do that because we can see it has been caused by our own attachment to fossil fuels basically, particularly oil. And yes, its' easy to blame corporations selling us more and more oil, and yet how many of us have given up our gas-thirsty SUVs? Some of us have, but I see many people, wonderfully conscious people talking about saving the environment, but you know, they're driving cars, and thirsty cars at that.

It's like we don't want to give up our own comforts, I think this is the big problem. We're all in this, we're all in a way supporting the system. There are very few people who are *really* living a sort of life which has zero carbon footprint – very few.

Rick: Hmm, but if we all had really efficient solar panels on our roofs and electric cars in the garage, which had really good batteries, and batteries in the house which could store solar energy, then boom! – you have it. So there needs to be a technological innovation.

Peter: Right, and this is the thing, where we need the balance. We need the activity, the activism, the technological changes, *and* the willingness to actually let go of our comforts. And so that's where I think the spiritual things comes in, because I think the basic mindset that rules so much of our lives, which is that 'whether or not I'm happy, depends on what I have and what I do.' And so the belief is 'if I give up this luxury, or whatever it is, I'm not going to be so happy, my life is not going to be so pleasant,' and that's what keeps us attached to having things.

And I think what all the great spiritual teachings are pointing to is, whether or not you are at peace, whether or not you are happy, *doesn't* actually depend upon what you have or do; it actually depends upon how you see things, what your perception is. And that's the shift that needs to happen. But even then, it's one thing to understand that, but it still takes that inner *experience* of letting go.

And what we're coming back to is settling the mind and coming back to realizing, "Oh, that peace that I'm looking for *is* right here, but it's all that thinking, worrying, planning, the whirling of mind stuff, which was actually veiling that natural quality of peace." And I think that people have that experience and they realize, "What I'm looking for is right here. I don't have to go out

and do this, and create this, and have these wonderful things or experiences in order to be at peace; it can be right here," Then our attachment to the things and the whatever it is, the experiences, begins to weaken and drop away.

Rick: Yeah, well I can imagine a society in which spiritual development is more common, even than it is right now, would be a simpler one, just as we see spiritual peoples' lives tend to get simpler. But you know, we're obviously not going to go back to an agrarian society in which we're all wearing loin cloths and tilling the garden; I mean, people are going to always want their comforts.

So whereas simplicity and a lower carbon footprint would be one part of the equation, I see an even more important part of the equation being a continued explosion of creativity, which is going to give us technological breakthroughs that will enable to travel and become comfortable and so on, without screwing things up so badly.

Peter: Yeah, yeah, yeah.

Rick: Al Gore just wrote a great article in *Rolling Stone* about that. It's a very optimistic article about how much actually innovation is really taking place, and it's sort of worth reading.

Peter: No, I haven't seen that yet. I like his writing and look forward to seeing that, yep.

Yes, it's how do we bring the wisdom to move through these times. And I think again, that comes from being clear enough in our own minds to allow the wisdom to percolate through, rather than the conditioning that our society is laying on us about what's right and what's wrong.

Rick: Yeah, I'm glad you said that, because I was just talking about technological advancement, and obviously a lot of that is taking place without enough wisdom to make it really benign and constructive. So wisdom should be the first ingredient, and then if there's enough of that, and enough creativity and intelligence, then we can have technologies which are fundamentally guided by wisdom - not by greed, not by shortsightedness in any way.

Peter: Right, and also I think again is that basic dichotomy between love and fear. The ego-mind that lives in a degree of fear, one way or another – "Am I get the things I need? What's happening? What do people think of me? How is tomorrow going to be? Did I say the right thing?"

There's a fear around, and that fear is something which comes out of that egoic thinking. And again, what so many of the teachers point to is that when we let go of that, not only do we discover a sense of peace that's there, but there's also that quality of love. That unconditional love which isn't loving some *thing* for its own sake, but it's just a quality of love.

And I think as more and more people do this, that love is going to begin to come into the world, we'll be acting out of a quality of love more than coming from a quality of fear - that will begin to shift things.

Rick: Nice. We've talked about consciousness quite a bit, but your book is called *From Science to God*, and I don't know if we've talked about God quite as much as I would like to yet.

Peter: Okay.

Rick: How do you define God?

Peter: Ahh, I don't! I don't define God as some separate being or anything. To me, there is this mystical experience we've been touching on, this what happens when you let go and the mind quietens, you connect with the qualities of – you said – peace, love, there's often a sense of forgiveness, with truth, with wisdom, and I think this experience is universal to the human being. It's there for everybody but our society is directing us out there the whole time. And I think *this* is what we could call the 'experience of the Divine.'

If you everything is conscious, if what we're talking about the universe as a field of being which is essentially aware, then when we drop into these mystical states, we are connecting with the essence of the cosmos, but we're connecting with it in ourselves, on a personal level. So if we're talking about the essence of the cosmos, we could say – and I prefer to use the word 'Divine' rather than 'God'. 'God makes it a *thing* 'Divine' makes it more a characteristic – it is the essence of everything.

And so when we connect with that in meditation or in some mystical experience, we're connecting with that universal essence. And if you are living in a monotheistic culture and you have those experiences, then you'll probably interpret it as some connection with some external Divine Being called 'God.'

And it's interesting, most of the qualities the monotheistic traditions ascribe to God - "God is love," 'The peace of God that passeth all understanding," "The light of God" – all these descriptions actually are equally referred to our own mystical awakening. And so I think that experience is being ascribed to a unity with some external God, rather than recognizing it's actually a reunification with our own essential being. So if I were to define God, I would say it is our essential being.

Rick: Okay, a few minutes ago you quoted, I think it was, Richard Dawkins as having said that, "We look through telescopes, and we look through microscopes, and we didn't find God anywhere, and so we can just toss the notion." I would say that when we did that, God was staring us in the face.

Because you look at anything – I mean if we just sort of take things for granted and just dully go along and not actually pay attention to what we're actually looking at, then fine, it's a pretty mundane world. But if you actually contemplate what you're looking at, it's marvelous! It's incredible!

Just take your fingertip and consider what you're actually seeing here in terms of the anatomical structure, and the cellular structure, and the molecular structure, and subatomic – the whole thing, from top to bottom, every single iota of it is a marvel that is obviously not a random process. It's obviously not some little marbles somehow randomly colliding with one another and producing a finger, or a body, or a world, or a universe.

It seems to me, from my simple perspective, that there is kind of this infinite intelligence governing every iota of creation, from the biggest to the smallest and everything in-between, that to me is God.

Peter: Yeah, then I would add that also, not only is that staring us in the face, but God is that which is staring.

Rick: Exactly. As Muktananda said, "God is within you, as you."

Peter: Yeah, yeah. So God is that which is staring at God staring us in the face.

Rick: Yep, and perhaps Richard Dawkins, if he turned his attention 180 degrees inward, then he could begin to recognize his essential nature as that.

Peter: Maybe, he could in principle.

Rick: Yeah, eventually. But I mean, you know, scientific experiments may take a while. You don't expect every experiment to happen in an afternoon; there are experiments which might take 20, 30 years to conduct, and the search for God could be one of those.

Peter: Yes and I think it is important to recognize, you know, you and I, we've both been on our journey for probably 50 years now! And it's a journey of awakening which has many different stages and phases, and lots to come.

Rick: Yeah, but I mean, talk about anomalies, how do materialists – and you would know this better than I, having really studied science – how do they account for the incredible orderliness of nature? I mean sure… Darwin, okay – random selection and evolution, just fine. But how about the *why* does it happen that way? How about the intelligence behind that?

Peter: Right, yeah, well all these big and fascinating questions, I would say the current side of the worldview, or my interpretation of it is that, complexity arises naturally in systems. And so in evolution it is inevitable that systems, more and more complex systems, will evolve.

Rick: Why? Why should they?

Peter: Why should they? Because systems are always … things are coming together, and if they work better that way, then this is Darwin – that system works better. Other things that don't work better don't stay. And so any system which is in a sense more stable - and I think that's what Darwin was pointing to - its survival is better, that's a more stable system. More stable systems hang on, less stable systems don't.

And if you look at the number of species against the complexity, what has happened in evolution is not that life has got more complex, but there's sort of a graph of the number of species and most species are still the simple cells - the bacteria, that's where the numbers are. Yet the other end of the spectrum is balancing that with some very, very complex species like ourselves. But it isn't that the whole of life has become more complex; it's that complexity arises out of the system, at sort of the tail end of it.

So I would say that the complexity is something that just happens, inevitably, almost statistically. If any more complex system that is going to survive, is going to be more stable, will be there – it just happens like that. But then I think there are more interesting questions around this, like why is the universe stable and here in the first place? And this is what is called the anthropic principle, that lots of parameters like the actual strength of the gravitational field, the charge of the electron, the masses of the elementary particles, there's things called defined

structure constant - all these things, if you tweak them by a tiny percent, the universe doesn't work. How is it that these things are exactly as they should be?

Now the sort of hard scientific approach says, "Well, that's just the way it is. If these things weren't right, the universe wouldn't exist. It's a one-in-a-zillion chance the universe exists and exists long enough for species like us to evolve and observe it." And yet the growing feeling is that, you know, this is coming out of people like Wheeler and physicists like that, that the purpose of the universe is actually to know itself.

And it is actually so structured that it *will* actually evolve into not only living systems, but living systems like ourselves, who can actually look back and reflect upon the universe; that it's actually a self-learning system. And so that to me, although Wheeler doesn't go that far, that actually brings in consciousness again, that if the universe is ultimately consciousness, who is an aware field of being, then you could say that the purpose of being aware is to know. And so as the systems get more complex, so that knowing becomes more complex. And so here we are, perhaps on the edge of knowing the unified field theory, but then equally that knowing can apply to ourselves – the inner knowing.

So coming back to your question, I don't see it so much as a miracle of "how did this happen by chance?" – it's almost *inevitable* that a field of aware being, as it inevitably becomes more complex, the intelligence will come out. The intelligence is there innately, and as the system becomes more complex, that intelligence will shine through more and more.

Rick: Yeah, I think intelligence is the key word. Because a lot of times when we talk about 'being' or 'consciousness,' it has sort of a plain vanilla connotation, or it just seems like flat nothingness, or emptiness or some such thing. But when you actually look at anything closely enough, you see evidence of unfathomably great intelligence, at least I do. And that seems to me would be an anomaly that's really knocking on the door of materialistic science.

You talk about the hard problem - how does consciousness arise? – I also think they should be scratching their heads about *how* in the heck does this piece of paper exist?! I mean, you look at anything, the molecules in it, and what a marvel that they spin around the way they do, and hold together and so on. Who set *that* up? Why shouldn't it all just fall apart?

I don't know, everything to me is evidence of intelligence, but maybe it's just because I have this spiritual orientation. I'm just trying to understand how, if I were to argue with a scientist who had a materialistic perspective, would he end up mopping the floor with me because I'm just naïve in terms of certain understandings? Or would I somehow be able to prevail in a discussion like this?

Peter: Oh the way most of these discussions go, both of you would feel you've mopped the floor for the other one… come away feeling the other person didn't get you; they were stuck in their views. That's what tends to happen unfortunately.

I don't know, I think I'm somewhere in the middle on that, I'm think I'm somewhere in the middle. I see it as intelligence is a natural, emerging quality, where intelligence, life, being aware, all these things are not synonymous, but they're deeply, deeply connected. That's why I say, I think awareness as we know it, which is actually only having a *representation* of the world

- having a picture of the world, experiencing the world – probably comes into being with the level of complexity of the cell.

Rick: Intelligence?

Peter: Awareness.

Rick: Awareness, awareness - if you distinguish awareness from consciousness. I mean, we're saying consciousness is a fundamental thing, but you mean self-reflective awareness or responsive awareness, in some way?

Peter: Yes, I would say having a representation, a picture of the world, having an internal world, put it that way, having an internal world. And again, there's no clear line, I mean a living cell is clearly alive, is DNA alive? Is a virus alive?

These get into gray areas, and as the grayness disappears and life becomes more and more noticeable, at the same time I would say the awareness is becoming more and more noticeable, and I would actually say the intelligence is also beginning to emerge and become noticeable.

Rick: That's in terms of the ability of the thing to somehow respond to stimuli and things like that, but let's take it to the level of a rock. A rock seems pretty rock-like, dull, doesn't have a lot of responsive ability, but if you look closely at it there is this marvelous crystalline structure, and the molecules and the atoms are all kind of behaving in a very orderly way according to certain laws. So I mean, even that, it might not be aware of itself in any meaningful way, but it's a mass of intelligent functioning.

Peter: Umm, I don't know, I would question that. I mean firstly, is it actually functioning? It's stable, there's no processing going on except at the atomic level, the exchange of quarks and protons which are holding the substance together; it's static, it's not actually functioning.

Rick: Yeah, well I don't mean functioning as a tree is functioning or something, a tree has obviously got a little sap flowing and all this, but on a subatomic, atomic, molecular level, there's an orderliness evident.

Peter: Yes, there's an orderliness. I would say yes, there's an orderliness.

Rick: Yeah, which bespeaks some sort of intelligent agency …

Peter: I'm not so sure, I'm not so sure. It's like when a crystalline structure, and basically a rock is a crystal -a crystal structure, and crystal structures emerge as just the most efficient way of packing things together.

Rick: Why should they? Why should efficiency be a quality of nature?

Peter: Well if you take a group of billiard balls and you push them all together by force, you put them into a triangle or something, you know, to fit them all in, there's a certain way in which they fit together, which is efficient, which saves energy, and it's the same the thing with a crystalline structure. There are certain ways you can arrange atoms, and depending upon what the atoms are, they'll fit together into a stable form, and that stable form persists in time. If the atoms aren't bonded into that stable form, then they'll fall apart.

Rick: Yeah, what I'm saying, and pardon my obstinacy, what I'm saying is that there is nothing arbitrary or capricious about that tendency of things to form into a stable form. There is some kind of orderliness inherent in the functioning of creation that would cause such a thing to happen in the first place.

Peter: I differ. I think it's inevitable that things will fall into the most stable, lowest energy state; it's just the way things are.

Rick: Hmm, but is anything really "the way things are?" I mean *why* are things the way they are? It's like the little kid who every answer you give, they say, "Well why?" you know?

Yeah, you know, I'm sort of like you, I have a TM background. And I'm kind of hearkening back to Maharishi's way of thinking, which is that … if you remember the *Science of Creative Intelligence* course, lesson 8: "When existence becomes conscious, then consciousness becomes intelligence and assumes the role of creative intelligence."

So it seems like intelligence is an emergent property of existence, and that from the very foundation of life intelligence emerges at the very first stages of manifestation, and that everything thereafter, as manifestation continues, is a play and display of intelligence. And that we can look at anything, and if we look closely enough, we see that intelligence on display.

Peter: Yeah, well it's funny. I would interpret what he says as slightly different, slightly different. When he says, "When existence becomes conscious," to me, existence *has* the capacity for awareness. When it says "Existence becomes conscious," would be when existence develops awareness, which is when life begins to emerge out of existence, *then* intelligence begins to appear.

But existence is *already,* the very nature of existence of being is to be aware. So existence doesn't develop, doesn't become aware; it is already aware. But what it becomes is aware-ness, which is when the capacity to be aware takes form. So when the capacity to be aware takes form, which I would call 'awareness,' *then* intelligence emerges and creativity emerges.

Rick: So you're talking about the stage at which some form of rudimentary life form has arisen?

Peter: It's probably that stage, where there is some complexity, there's processing of information. So DNA, for example, is static. DNA is a very complex crystal, you could say, it's a chemical molecule. DNA doesn't do anything; it's like a library which the cell consults. The cell consults the library as its own: "I want this protein." The DNA says, "This is how you make it, here's a protein," but it's static. So DNA isn't alive, there's no processing going on.

But processing is within a cell and what we're learning is *incredibly* complex processing, we're discovering. That is the processing of information in which the awareness begins to take form, through that processing of information that awareness takes from. So that is existence, this is the way I interpret it, that is existence becoming awareness. It has always had that potential for consciousness, it is the very *nature* of being to be conscious, that's its very nature.

So existence doesn't' *become* conscious; it is. But it does become an awareness, it begins to have a form. So I would rephrase that to say, when being takes form, then intelligence and creativity arise.

Rick: Yeah, intelligence and creativity arise in some sort of living way, in some sort of biological way. But I mean, it took billions of years before there was any DNA in the universe, if the Big Bang Theory is correct, and in the meanwhile stars were getting formed and exploding again, and all kinds of stuff was going on, all according to laws of nature which *still* are operative in the universe. They were orderly, intelligent, governing principles upon which all this stuff was happening in order for the universe to evolve to the point where DNA could exist.

Maybe it's a matter of semantics here but in my way of thinking, there was as much intelligence in the universe three seconds after the Big Bang as there is now, it just hadn't evolved. The processes hadn't gone on to the point where there were forms like ourselves who could sit and reflect upon it and talk about it, but the whole thing was as much permeated with "God" and contained within God - God is in everything and everything is in God – as it has always been.

Peter: I can see we can continue to differ on this for a long time, which is good. As you say that, I think one of the key things here is when you say the '*laws'* of nature. I don't see the laws of nature as laws that have been laid down … this is how things should happen. What we call the 'laws' of nature are things we have *discovered* about how things inevitably function.

Rick: Right, which worked just fine whether or not we discovered them, I mean gravity was doing its thing long before Newton came along, right?

Peter: Yeah, and you know, the inverse square law of gravity is you go twice as far away from an object, then the gravitational force is a quarter. And this is …it just comes out of the mathematics. And to me, mathematics exists independent of the universe, this is my view.

Mathematics is something we discover, we don't create; it's there already. And I think if we ever discover other extraterrestrial species, we may disagree on what the universe is, but we will agree on the mathematics.

Rick: So it's not independent; it's intrinsic then, you're saying?

Peter: Yes.

Rick: Yeah, you said "Independent of the universe." So you're saying that principles of mathematics are kind of built into the fabric of creation from day one?

Peter: Yes, yes.

Rick: I mean the way gravity worked 13 billion years ago, when the universe was maybe 700 million years old, is the same way it works now. And it could have been understood mathematically then, if there had been anyone around to understand it, that it was working the same way.

Peter: Yes, and to me, physics falls out of the mathematics. Mathematics starts from '1+1 = 2,' and we can have other mathematical systems where '1+1 = 3,' but basically you've got two things. There are two fingers, two, and then that's all you need to actually build up the whole system of numbers, the rational numbers, and irrational numbers, of algebra, calculus, differential equations, systems, set theory, group theory. The whole of modern physics begins to unfold in a logical way from very, very simple assumptions. But this is a whole other focus.

Rick: It is, so all I'm trying to get at with this whole argument is that … well we kind of agreed early on that consciousness is the sum and substance of creation. Everything is conscious, conscious is kind of playing within itself, and all I'm trying to get at is that it appears to me that consciousness has innate, within it, the quality of intelligence, and that that intelligence is virtually infinite, and that from the vast macroscopic to the tiny microscopic there is evidence of it, and that that is God – if we want to use that term, which is of course is a terrible term to use because it's so misunderstood. But that the *whole* show is just the totality, Brahmin, containing everything and just playing within itself, with sort of this infinitely great potential for creativity, orderliness and so on.

I'm dwelling on this point because it fascinates me and because it's the title of your book, you know, *From Science to God*. So if we really want to take that title to its ultimate conclusion, then I don't know, I'm suggesting that what I'm saying here is perhaps on the distant horizon of science as we now practice it.

Peter: Mm-hmm. It may be, it may be.

Rick: And a God-realized soul, someone like Ramana Maharishi or someone like that, you know, is actually perceiving the world in this way. They don't see dead matter; they see the Divine at play in every little bug, every little rock, every tree, everything.

Peter: Yeah, yeah. Perhaps we should wait till we're at that level of being of Ramana Maharishi and flip that

Rick: Perhaps so, but I think talking and thinking about it helps to stimulate it, it helps to enliven it, you know?

Peter: Absolutely yes.

Rick: And again, you know, I'm not talking about a belief here and neither are you; we're talking about something that you can take as a scientific hypothesis that you and I have spent the better part of a lifetime already investigating, and that we'll continue to investigate, and that has exciting implications for us individually and for us as a species, as a society.

Peter: Yeah and you know, all I'm doing is just sharing my current understanding. And one thing I know about my current understanding is that it moves on.

Rick: Yep, because you're not one of those stogy, paradigm-bound characters. You don't have to die to change your paradigm.

Peter: So this is the 2014 view.

Rick: Yeah, there's always a new model. And that's exciting too, I think - and hopefully you don't have to go to the bathroom or something, that I'm not keeping you too long, but we'll wrap this up soon – but I think genuine spiritual investigation tends to kind of lubricate and loosen your rigidities. And you become more adaptable, more open to new ideas, more malleable, you're willing to chuck it all …well, hopefully.

I mean, it's not usually necessary to chuck it all because a lot of it is valid, but there is an openness to change and you don't think, "Well it says it in this book and therefore that's the

way it is," you know, "The universe is 6,000 years old – there's a book that proves it" – you never find a person who is really lively, in a spiritual sense, saying anything like that.

Peter: Yeah, well I think this comes back to this thing about attachment – when we get attached to our ideas, our things, our possessions – because I think underneath is this belief that they're going to bring happiness. And my theories are the "right ones," I feel good about them.

And I think the more we connect with that sense of feeling okay independent of our theories and beliefs and what we do, wherein that sense of being okay is more stabilized in ourselves independent of our thinking, then that loosens the attachment.

Rick: That's a good point, you know, I think we want security, and there's a fear if we don't have security and if we glom on to particular beliefs or possessions or experiences in the hopes of finding that security, then we're always on shaky ground, because you can't find it there. But if you really have begun to find it or have found it in that which, as the Gita says, "Is indeed indestructible by which all this is pervaded," then there's a genuine sense of security. And then you're really comfortable playing about and trying this idea, rejecting that idea, because your security isn't threatened.

Peter: Right, and that which is indestructible is always there as our own being, our own awareness. My consciousness – my consciousness isn't the right word, but being aware is always there. Whatever is happening, I am aware, and that sense of being aware is always the same. And the more I can connect with *that* rather than what I'm aware of, then there's that sense of security, safety, yeah.

Rick: For men may come and men may go, but I go on forever.

Peter: Mm-hmm.

Rick: Well great, this has been a really lively conversation as I expected it would. Is there anything … any stone unturned here that you'd like to unturn and poke around under?

Peter: There's *lots* of unturned stones but nothing that comes up at the moment to turnover, no. I think we've covered a lot.

Rick: Okay, well I've really enjoyed this. It's kind of an ongoing theme for me, in a way; I'm going to interview Bernardo Kastrup in a couple of weeks, who has written a book called *Materialism is Bologna*. And I'm kind of gearing up to hopefully interview Sam Harris one of these days, if he'll agree to it.

I'm just fascinated with this whole them that you presented in your book about the idea of paradigm change, and I feel it has such Earth-shaking implications for our society and our world, that it's something that is really important to better understand.

Peter: Yeah, well hopefully we've done something towards that goal today.

Rick: Yeah, hopefully we have.

Great, well let me just make a few concluding remarks. I've been speaking with Peter Russell and his website is www.peterrussell.com , you can go there and check it out. I'll be linking to

that from his page on www.batgap.com , B-A-T-G-A-P, which is sort of the mother ship of all these interviews – stands for Buddha at the Gas Pump.

If you go there you'll see a number of things. You'll see an 'Alphabetical' index on the right hand side of all the people I've interviewed. Under our 'Past Interviews' menu you'll see a 'Chronological' index and a 'Topical' index. Eventually we're even going to build a geographical one because I get emails from people saying, "Is there anyone in the Warsaw area that I can get in touch with?" So that will be something … we could use a database expert to volunteer for that, if you're listening.

There's a 'Donate' button, which I appreciate people clicking, it makes the whole thing possible, if you feel inclined to do that. There's a place, a tab, to click on to sign up to be notified by email each time a new interview is posted. There is a link to the audio podcast of this, which you can listen on iTunes, or any one of those other podcast readers.

There is a discussion group that crops up around each interview, and Peter will have his own page in that, his own thread, so I'll be creating that. And of course again, a link to Peter's website and a link to his books on Amazon, so that you can purchase them if you wish.

Do you do anything Peter in terms of seminars or retreats or courses or online sessions, or anything else that people can interact with?

Peter: Um, I do occasional lectures, conferences, I have an online meditation course, which people can access through my website, yes, it's called *How to Meditate Without Even Trying*.

Rick: Yep, it's the only way to do it! Okay, and I suspect that you probably … well we won't get into all that, why you're not teaching TM anymore, neither am I. Anyway, it was a good thing but it's awfully expensive.

Good, so a person could actually hopefully learn to meditate by looking at that.

Peter: Yes.

Rick: Or at least give something a try, you know, maybe you can give it a try and see if it works for you.

Peter: Yes.

Rick: Great. And you have a YouTube channel, which I could also link to, which I've listened to a lot of your talks and you even have a guided meditation that you do on there with Shawna Shapiro. So great, so anyway, thank you very much.

Peter: It's been a pleasure, enjoyed it.

Rick: Yeah, I did too. I'll see you at the SAND Conference, you're going this year aren't you?

Peter: Yes, yes.

Rick: So I'll see you down there. Thanks to everyone who has been listening or watching and we'll see you next week.

Peter: Okay, bye for now.

Rick: Bye for now.

{BATGAP theme music plays}