

Keynote Address

THE MYSTERY OF CONSCIOUSNESS

Peter Russell

ABSTRACT

With his characteristic blend of physics, psychology, philosophy and mysticism, Peter Russell articulates a new worldview that bridges both science and spirit. The key is the nature of consciousness. Modern science, which has enjoyed so much success in furthering our understanding of the material world, has singularly failed to account for consciousness. Yet without consciousness there would be no science. As far as the contemporary scientific worldview is concerned, consciousness is one big anomaly. Peter Russell challenges science's assumption about the nature of reality. Rather than trying to account for consciousness in terms of the material world, he proposes a new metaparadigm (the paradigm behind our various scientific paradigms) in which consciousness is as fundamental as space, time, and matter—perhaps even more so. This new view of consciousness leads a new understanding of God—not the Almighty, father-figure God of classical religion, but the God of which the mystics have always spoken, the Godhead shining within us all as the light of consciousness. We are on the threshold of a revolution in worldview even more profound and far-reaching than that initiated by Copernicus 500 years ago. All the pieces for the new worldview are in place. Nothing new needs to be discovered. All that is required is for us to put the pieces together and explore the new picture of the cosmos that emerges. When we do we discover a world in which the worldviews of science and spirituality no longer conflict, but represent two different views of reality. Such a convergence is most needed today, for it is the spiritual aridity of the current times that lies behind the many challenges now facing humanity.

KEYWORDS: Consciousness, physics, psychology, mysticism

Like Elizabeth Rauscher, I've always been a scientist at heart. I was fascinated by physics, and began my academic career as a mathematician. So how is that I am now studying consciousness, almost the very opposite? People often ask me, what changed you? What was the big turning point in your life? For me there was no big "road to Damascus" experience where suddenly I changed track. Throughout my younger years I had always been interested in the human mind—in psychic phenomena, hypnosis, stories of yogis with amazing powers. Rather than suddenly waking up to the "other side" there was a series of turning points that progressively took me to where I am today.

The first came towards the end of my undergraduate years. I was getting more and more interested in the question of how come there was consciousness in the cosmos. According to the current scientific worldview, the material Universe evolved from hydrogen—the simplest of atoms, the most basic chemical element. In stars, hydrogen was synthesized into helium, and later into other elements like nickel and silicon. Then, if the star is a sufficiently large one, it ends its life in a huge explosion called a supernova. In these explosions all the other elements are synthesized. It was the explosion of a star in this region of the galaxy five billions years ago that provided the raw material for our solar system and planet Earth. Virtually every atom in your body today was floating around in the dust left over from that supernova explosion. We are truly made of stardust.

Almost as soon as the Earth was cool enough, life began to form. This is interesting in itself, because if life began that quickly on our own planet, it probably begins equally quickly on other suitable planets, and the universe is probably teeming with life. On Earth, simple cells evolved into more complex cells, which came together to form multicellular organisms. These organisms developed senses and then nervous systems to process the sensory data. Leading eventually to human beings, creatures able to experience the world around them through a variety of senses, and, most significantly, able to think about their experiences.

And this is where the hard question arises. How was I, a creature that evolved out of stardust, able to step back and study the universe. How had this happened? How had hydrogen evolved into a system able to study the physics

of hydrogen? How had conscious experience entered the picture. Nothing in physics predicts this should happen. Nothing predicts that we should have a single conscious experience. Yet here I was, irrefutable evidence of consciousness.

I realized that however much physics I studied I was never going to find the answer to these questions. So after much heart-searching, I left physics and began studying psychology. I thought that this would answer my questions about the origin of consciousness. But, after completing a degree in psychology, I had learned a lot about the brain and its functioning, yet nothing about consciousness. No one seemed interested in where consciousness came from.

By this time I had realized that the people who had really studied consciousness in depth were the yogis and mystics who, over thousands of years, had been exploring their own consciousness first hand. So I went to India to study meditation and Eastern philosophy.

The time in India was also a turning point. It led me into a new understanding of spirituality. In my teenage years, I had completely rejected religion as a load of weird mumbo jumbo which had no relevance whatsoever to the contemporary world. But as I studied Eastern approaches to consciousness, I came to see spirituality in a new light. I realized that the world's spiritual traditions are essentially about the liberation of human consciousness. And this liberation is probably one of the most important and critical things that we need in the world today. I shall come back to that later, but first let us pause to look closer at consciousness itself.

WHAT IS CONSCIOUSNESS?

Perhaps the easiest way to understand consciousness is to consider what we mean by “conscious?” We may say that a person who is awake is conscious. If you are asleep, we say you are not conscious. But you have dreams when you are asleep. Dreams are experiences. We’re still aware, we’re still conscious. We’re just not so conscious of the outside world.

Or we may talk about being conscious in terms of attention. When we are distracted, we may say we were not conscious of what was going on around us. A good example, that I'm sure we've all had, can happen driving along a familiar stretch of road. Suddenly you realize you don't remember the last couple of miles. You think: I wasn't conscious of where I was, I wasn't conscious of the road. Yet you must have been, or you'd have been driving into trees and trucks and who knows what.

Another use of the word conscious, which is very much in vogue these days, is being a conscious person in a spiritual sense. But does this mean that others not interested in spiritual issues are not conscious? What we probably mean is that this person is more conscious of themselves, of their inner processes, or of the bigger picture, but it doesn't mean they are any more aware. They are just aware of things that others may not be so aware of. Someone whose life revolves around the stock market may be very aware in ways that the spiritually aware person is not.

You'll often hear scientists say only human beings are conscious. But do they really believe that? When someone tells me that a dog is not conscious, my retort is "Then why would you bother giving a dog an anesthetic before operating on it?" What they really mean when they say that only human beings are conscious, is that they believe only we are conscious of being conscious; only humans have self-awareness.

Another use of the word conscious, is this capacity for experience, something that is there the whole time. Whatever we're experiencing, whether we are dreaming, lost in some fantasy, playing the stock market, whatever we may be experiencing, awareness itself is always present.

This awareness, can be likened to the light in a film projector. At the heart of the projector is white light. The film filters the light, giving it a particular form, and this appears as an image on the screen. But we forget that it's all just light; we get caught up in the image, in the story of the movie, in emotions we are feeling, the joy, fear, sadness, love, or whatever the movie was designed to produce in you. You forget that what you're watching is just patterned light on the screen.

It's the same with the mind, everything we experience is just an arising in the mind. But we get caught up in our own story, we start getting excited by it, or depressed by it, and forget it's all an experience in the mind.

In this sense everything is in the mind. And by mind, I am not referring to just thinking and reason, mind as opposed to feelings or heart, or intuition. I mean the whole realm of inner experience, including our perceptions, sensations, intuitions, feelings, emotions, memory, imagination. Everything that it is taking place in consciousness—in mind as opposed to matter.

When we perceive something what we are actually experiencing is an image in the mind. We may think we are seeing the world out there, but what's actually happening is the brain is taking in the data, analyzing it, putting it all together, and then an experience arises. Right now this is what's happening to you, you're sitting in this room, your eyes are taking in data, and the brain very quickly (in about a tenth-of-a-second) puts it all together and creates a picture of what is out there. This then gives rise to an image arising in the mind. We have the experience of seeing the room. It doesn't seem that way, of course, it seems like we're experiencing the world directly, but what we're actually experiencing are the images arising in the mind.

NO-THINGNESS

It turns out that the images that arise in the mind are nothing like the thing-in-itself. You may see the color blue. But the light itself isn't blue, there aren't blue photons out there; it is simply light of a particular frequency. The blueness you experience is purely a creation in the mind, it's the way the mind interprets what's out there. The same is true of everything we perceive. My speaking moves air molecules back and forth, but there is no sound there. The sound of my voice is something that appears in your mind.

The same applies to matter. The physical world appears to be made of solid matter. For hundreds of years we thought atoms were little solid balls of matter. Then with the advent of atomic physics, we discovered atoms were composed of various smaller particles—a nucleus with electrons spinning round it. And it turned out that most of the atom was empty space. If you blow up the

nucleus to the size of a golf ball, then the whole atom would be about the size of a football stadium, and the electrons would be like peas flying around the stadium. Almost entirely empty space.

Then, with quantum physics, we realized that even that isn't true. There aren't actually any particles there; just the probabilities of making certain observations. In truth, there's nothing there. No thing, that is. There's no particle. What we call an electron is just an idea we've come up with to describe what we're observing. As the physicist Hans Peter Dürr remarked: "Whatever matter is, it is not made of matter." Just as with color and sound, it turns out that matter as we know it exists only in the mind. In the words of the philosopher Alfred North White realized "The mind perceives qualities which are purely offspring of the mind alone."

THE IMPOSSIBLE PROBLEM

So to come back to the question of where does consciousness come from? This, is a fundamental problem for science. It keeps trying to explain consciousness in terms of the brain. Now it may be true that a particular thought or perception is directly correlated with some activity in the brain, and we may, sometime in the future, understand the precise relationship between the two. But this does not explain why we have an inner experience. Why does any physical activity in the brain ever give rise to an experience in the mind. Why doesn't it all "go on in the dark."

Scientists have explored all manner of possibilities. Perhaps it's something to do with the complexity of the processing in the brain that produces consciousness; maybe it's something to do with quantum effects inside the tiny microtubules in the center of nerve cells; or maybe it's a result of chemical processes. But whatever the approach, no one can explain why a purely physical process in the brain should ever give rise to a subjective experience.

The philosopher Roger Chalmers calls this the hard problem of consciousness. The easy problems (and these are by no means really easy) are understanding the activities that go on in the brain when we have a particular thought or feeling. The hard problem is explaining how something as unconscious as matter can

ever rise to something as immaterial as consciousness. I think it's not a hard problem as an impossible problem. Impossible within the current paradigm.

ANOMALIES AND PARADIGMS

Thomas Kuhn, coined the word “paradigm” as the underlying theory in a particular science. In modern physics, quantum theory is a paradigm. The DNA theory is a paradigm in biology. Paradigms are the deep, underlying models which science works by. And from time to time they change. Two hundred years ago, Newton's Laws were the dominant paradigm in physics. Before Newton, Aristotle's paradigm held sway.

Kuhn's key insight was that paradigms don't change easily. We hold onto our beliefs, more strongly than we hold onto anything else. We can let go of our money, our spouses, our homes, sometimes even our bodies, but changing our deep beliefs about the nature of reality can be very difficult.

When we come across anomalies that challenge the current paradigm, we seldom question the paradigm itself. At first we may ignore the anomaly. Then as evidence for the anomaly builds up, we may try to incorporate it into the existing model. A classic example occurred with the medieval worldview in which the earth was the center of the universe. Plato had argued that since Heaven is perfect, all heavenly motions must be perfect, and the perfect motion was a circle. The sun and other stars appeared to move in circular orbits, but the planets did not. They were an anomaly, wandering back and forth on complicated paths. (Indeed the word “planet” comes from the Greek *planeta*, meaning to wander.) The medieval astronomers tried all sorts of mechanisms—all based on circles—to explain their movement. They had the planets rolling around circles that rolled around other circles, creating irregular paths known as epicycles. As more accurate observations came in they added new epicycles, or adjusted their centers, but nothing seemed to work.

Copernicus came along and suggested something that at the time was totally radical. First he proposed that the earth was spinning, and it was this that made the sun and stars appear to move through the sky. It is hard for us

today to imagine just how radical and counter-intuitive this was. People argued that if the Earth were spinning, then all the oceans would slop up on one side. Left alone, cups and plates would fly across the room. They didn't, so the earth clearly could not be spinning. It is worth noting that even though we today know the earth is spinning, we still see the sun going down.

Copernicus's second, more heretical, suggestion was to explain the anomalous movement of the planets by proposing that they were in fact orbiting the sun. And so was the earth; it was just another planet. This ran totally counter to the worldview of the time, which said that man was the center of God's attention, and the earth the center of the universe. Knowing the trouble he could get into, Copernicus hesitated to publish his ideas until just before he died.

Seventy years later, Galileo developed the telescope and found evidence to support the Copernican view. But the bishops and cardinals refused to look through the telescope because they knew it could not be true. In the end they placed Galileo under house arrest to prevent him propagating his ideas.

Around the same time, Kepler analyzed the planetary orbits more closely and made the other big break from medieval worldview. He suggested that the planets moved not on circles but on ellipses. But as to why it was ellipses, he had no idea. Eighty years later, Newton realized the laws of Earth and the laws of Heaven were the same. The force that made the apple fall was the same force that held the moon in its orbit. And when he did the mathematics he found that the moon and planets did indeed move along ellipses. The paradigm shift was established. But many had been ridiculed, persecuted, and even lost their lives along the way.

As the nineteenth-century philosopher Arthur Schopenhauer said: "Every truth passes through three stages before it's recognized. First it is ridiculed. Second it is opposed. Third it is regarded as self-evident." The physicist Max Planck put it even better. "A new scientific truth does not triumph by convincing its opponent and making them see the light, but rather because it's opponents eventually die." Or, as he is sometimes paraphrased, science proceeds funeral by funeral.

A METAPARADIGM SHIFT

I believe that today we are witnessing a similar crisis in paradigm. In fact it is more than just a crisis in paradigm; I call it a crisis in the metaparadigm. I use the word metaparadigm to refer to the paradigm behind the paradigm. This is the all-encompassing worldview that lies behind all of our science. Quantum theory, relativity theory, DNA, and all our other scientific paradigms, exist within a larger worldview, the metaparadigm. The current metaparadigm says that the real world is the material world; space, time, and matter, are primary.

To most scientists, this metaparadigm seems pretty self-evident. But there is one thorn in its side; an anomaly that will not go away. And that is the very existence of consciousness in the cosmos. It's an anomaly because it cannot be doubted. Indeed the fact that we are aware is probably the one thing that is beyond doubt. On the other hand, it cannot be explained.

Faced with this anomaly, most scientists and philosophers who ponder this problem do exactly what Kuhn predicted. They try to incorporate the anomaly in the existing model. They try to explain how consciousness arises from unconscious matter. They are like the medieval astronomers who, wedded to their assumptions of circular orbits, created more and more complex systems of epicycles. So we find people coming up with increasingly complex suggestions as to how the unconscious matter of the brain can give rise to an experience. Like the early astronomers, they never question their basic assumptions. In this case, the assumption that matter is insentient; that matter itself is not conscious.

The alternative metaparadigm is that everything is sentient; that everything has consciousness. Not just human beings, and other mammals; but all creatures, all things. This means there is no line after which consciousness suddenly appears. The capacity for awareness goes all the way down. Even a simple bacterium has a faint glimmer of consciousness. Nothing like the rich world we experience. It may just have the faintest sense of warmth, almost nothing compared to us, but not nothing at all. In this metaparadigm, consciousness is a fundamental quality of the cosmos, as fundamental as space, time and matter. Perhaps more fundamental than space, time and matter. (Needless to

say, this isn't a new idea; you find it cropping up in many metaphysical and spiritual traditions. It is just that the western science has never taken it seriously.)

What this means is that consciousness did not suddenly appear in the cosmos once a certain level of life had evolved. It was always there. What has evolved are the forms that appear in consciousness, the contents of consciousness. As life grew more complex, so did experience. This is what Teilhard de Chardin called the law of complexity-consciousness. Life has evolved into increasingly complex forms, and as it did, the inner world evolved into richer and more diverse forms of experience.

NO MATTER

A second unquestioned assumption of the current scientific worldview, is that there is a physical reality. Or to be more precise, there is a material basis to the physical world we observe. In this new metaparadigm everything has a physical aspect and a mental aspect. Even an atom has that potential for awareness, we might call it proto-consciousness. Drilling deeper we find electrons, neurons and other atomic particles, and we assume that they too have that mental potential. If they did not we would once again hit the hard problem of how something completely devoid of consciousness could ever give rise to something with consciousness. Drilling deeper, we find that even the notion of particle evaporates, and with it our concept of matter. There seems to be nothing there.

Suppose that is the truth, that at the basis of what we call matter, there is nothing, no thing. If so, it is not completely nothing; the mental aspect would still remain. We then end up with a cosmos that is entirely mental in nature. A universal field of awareness.

Is there anything we can say about this field? One thing is clear, it cannot be an homogenous field, one that is the same everywhere. It's a field which varies in some way from one point to another. If it were completely uniform there would be no distinctions to be observed.

What we perceive are variations in this field. And then the mind creates a mental image to represent the distinctions it notices. It creates color, sound, aroma, and other qualities we ascribe to the material world—including the sense of material substance. What we call the material world is the appearance in the mind. And that is the only place we find matter—as a quality arising in the mind.

When you explore the hypothesis that there is only consciousness, you find that all of physics still works perfectly well. Nothing changes in that regard. All that changes is our assumption about what the laws of physics refer to. We have assumed they are laws governing the functioning of matter. Instead we now see them as the laws governing the functioning of mind. The same laws, just a different essence.

We then arrive at worldview in which consciousness is more fundamental than space, time and matter. This, I believe, is where modern physics is pointing us. But we're so attached to the belief that the underlying essence of the physical must be material—and dead unconscious matter at that—we never notice the truth that may be staring us right in the face.

MATTER FROM MIND

The hard question of how mind emerges from matter is now turned inside out. It isn't a question of how does insentient matter lead to consciousness, because there is no insentient matter in the first place—that is purely the way we imagine it to be. The question becomes the much more fascinating question of how does consciousness manifest into all these forms, and take on the appearance of matter?

This question is not answered through thinking, analysis, or inventing new theories, but by inner experimentation. It's a question which many of the great mystics and inner explorers have looked into. Instead of looking outwards, they have turned their attention around 180 degrees, to look deep inside themselves, watching the mind, observing closely how consciousness manifests, how thought forms arise in the mind.

And they all come to remarkably similar conclusions. Again and again they affirm that the universe is within me. In the old metaparadigm, this makes no sense at all. I clearly am within the universe, at this tiny point that is the center of my world. That's absolutely obvious, just as obvious as the fact that the Earth is still and the sun is setting. What the mystic is saying is that everything we experience, everything we know, is arising in the mind. It is all happening within me. Rather than being caught up in the story of the experience, they have been able to step back and see it for what it is. A bit like stepping back from the movie and recognizing it is all patterns of light on the screen.

WHO AM I?

This leads us into the other great mystery of consciousness, the nature of the self. What do we mean by I? The self? We use the word "I" so much, you'd think we knew what we meant by it. But the more you try to define it, the more it too seems to slip away.

I might say "I am Peter Russell." But that's just a name. "I am British." That's just my heritage, my passport. Or "I'm a writer." But I'm not writing now; it's an activity from my past. "I'm a male." But I could imagine myself being in a female body. I might then have different thoughts and experiences, different attitudes and values, but my sense of "I" would still be there. People sometimes say "I'm not the same person I was ten years ago." When you pause to think about, this is curious. What is the "I" that is not the same? What may have changed is our personality, our values, our habits, but what about the "I" that has the personality, the values, the habits? This sense of I-ness is a thread that runs through our whole life. But what exactly is it?

The physicist Erwin Schrödinger, one of the founders of quantum mechanics, was fascinated by this question. "What is this 'I'?" he asked. "You will on close introspection" (note he was saying introspection, not analysis or experimentation with the brain), "You will, on close introspection, find that what you really mean by 'I' is the ground stuff upon which all experiences and memories are collected." In other words, the feeling of "I" or am-ness is the feeling of consciousness itself. I am consciousness. Period.

That deepest essence of “I,” my beingness, has no particular distinguishing characteristics. What it feels like for me to be “I” is exactly what it feels like for you. We have very different lives, different memories and hopes, different personalities and identities, but deep down the feeling of “me-ness” is the same. And that feeling is the feeling of being conscious.

But because we don't see that, we start creating a sense of identity for ourselves. We start dressing this sense of being with various qualities derived from our experience. I'm smart, I'm funny, I'm ashamed, I'm what I do, what I believe, the roles I play, the way I am seen by others. We start putting on these various psychological clothes, creating a “thing” we can identify with, and present to the rest of the world. This is me. This is who I am. Although in truth, “this” is not what the “I” is; it is not who I really am. Some of you have probably realized this yourself through your meditations. All the great spiritual teachers have realized this. Despite the fact there seems to be a unique, separate, individual self, there's no actual thing we can call the self. What we think of as “I” are the ideas, images and ideals that we like to identify with. It's the opposite to the Emperor with no clothes. In this case, there are a lot of clothes, but there's no Emperor underneath.

I AND GOD

This realization is the doorway to the divine. Thomas Merton said, “If I penetrate to the depths of my own existence, to the indefinable am that is myself in its deepest roots. Then through this deep center I pass into the infinite I am, which is the very name of the Almighty.”

People have come to this realization time and time again, across the world, in all different cultures. When you touch your true essence, you're beginning to touch the divine. The Upanishads of ancient India repeatedly claim, “Atman is Brahman.” Atman comes from the root “to shine.” It is the light of consciousness which shines in all of us, the transcendent self, pure beingness, pure consciousness before it takes on all these different forms. Brahman comes from the root “to spring forth, to arise;” it is that from which everything arises, the source of all things. So Atman is Brahman means that the light of consciousness shining within us is that from which everything springs forth. The light of consciousness is the source of everything.

You could translate that as “I am God.” But here you have to be careful what you say, for it can easily be misunderstood and get you into trouble. The “I” referred to, is not the individual self, an individual person. When the mystic realizes “I am God,” he or she is not saying that this particular individual is God. Instead they have discovered that the essence of their being—the essence of consciousness which you come to know when the mind becomes completely still—that is Divine. That’s where you find the love of God, the peace of God, and the grace of God. It is that eternal, unchanging, omnipresent aspect of your being. And when you know that inner essence you become personally acquainted with the inner essence of everything.

A CRISIS OF CONSCIOUSNESS

These deep spiritual realizations are what the world today dearly needs. We’re living in times of great crisis, probably the greatest dangers humanity as ever experienced. If you look into what lies behind this crisis you find time and again it comes back to human consciousness, to human values, human decisions, and human actions. If we are to navigate our way safely through these critical times, we need to wake up to who and what we truly are. This should be the primary work of society today, exploring ways to liberate human consciousness from the outdated mindsets, self-centered attitudes, and materialistic values that are driving us insane. To take Elizabeth’s wonderful phrase, “How do we drive ourselves sane?”

We need to listen to the wisdom of the great spiritual teachers, and instill it in our own hearts and minds. And I would include in the wisdom traditions, the cutting edge of contemporary Western psychology. We do not always regard psychotherapy as a spiritual tradition, but it is. It is seeking to liberate the mind from dysfunctional patterns, freeing us to be more our true selves—and that is the essence of the spiritual work.

I imagine most of you here have been through some form of counseling or therapy, somebody helping you understand yourself in some way or another. How many of our grandparents had that opportunity? Very few. We today have a deeper understanding of the human mind than almost anybody in our past.

Moreover, we are integrating that growing psychological understanding with the wisdom of the world's spiritual traditions. Never before have we had the ability to tap into what Sufis were teaching 500 years ago, or what Buddha was saying 2,500 years ago. We've access to most the world's spiritual traditions across most of human history. And we're beginning to piece together this great mystery. We're not there yet, but we're coming closer and closer. We're reaching this common understanding of what consciousness is, and how we can free our minds.

Someone once said to me at the end of a talk, "What are you saying that's different from what anybody else is saying?" My response was, "Nothing I hope." If I am saying something different that's a sign I've gone wrong. I go to conferences like this, and I take in what others are saying, I read books, I talk to friends about these issues, and it all gets integrated into my own personal growing understanding. And you are all doing the same. We are all learning from each other. Together, we're honing in on that ultimate truth, that great wisdom which all the great teachers have discovered and proclaimed. What makes this time so special, so unique, is that we are coming to that wisdom collectively. What's happening here at this conference, is another little nexus of that process.

We live in the most dangerous of times, and with the most immense possibilities. We've never had so many spiritual opportunities open to us. We are privileged indeed. Let us take this privilege and make it the seed of the full awakening of our species. Thank you

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