



THE REALITY OF CONSCIOUSNESS

BY PETER RUSSELL

“Consciousness is a fundamental quality of the cosmos and what we call the material world emerges from it

Both of the two great revolutions in twentieth-century physics—Einstein’s Theories of Relativity and Quantum Theory—revealed that observation played an important role. They also challenged the assumption that there is a material reality. Previously, it was thought that the physical reality existed independent of our observation of it. Schrödinger’s wave function and Heisenberg’s uncertainty principle revealed this was not the case. As a result, several physicists of the time—Einstein, Bohr, Schrödinger, Eddington, Pauli—became interested in the role that mind and consciousness played in the cosmos; but this interest faded over time and few contemporary physicists seek to include consciousness in their model of reality.

Most attempts to understand the world of modern physics still assume that the primary reality is the physical reality of mass-energy-space-time (whatever they might actually

be). Consciousness is generally regarded as a product of brain activity, that is, something emerging from the physical reality. In this paper, I argue that consciousness is a fundamental quality of the cosmos, and that what we call the material world emerges from it.

There Is No Such Thing as Consciousness

If we are going to be talking about consciousness, we should first define what we mean. This is not easy, partly because we are using a noun, which makes consciousness a “thing.” In so doing, we set foot on the wrong course. Whenever we add “ness” to a word, we turn an adjective into an abstract noun in order to talk about it. The suffix “ness” means “the state or quality of.” Thus, happiness is the state of being happy. Being happy exists as an experience, but happiness as an independent thing does not exist.

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The same with consciousness; it does not exist as a “thing.” What is true is that I am conscious, as is each and every one of us. It is an essential, ever-present quality of all experience. The noun consciousness simply allows us to talk about the fact in a more generalized way. In this respect, consciousness needs no definition; it is self-evident. I am aware that I am aware. This simple fact needs no argument, reason, or research. It is beyond doubt.

This distinction is essential to any study of the subject. The use of the noun, consciousness, is symptomatic of the materialist approach, which seeks to objectify the world. Consciousness becomes another phenomena to be studied and known. This error is prevalent in most contemporary approaches to understanding the nature of consciousness. When I use the word “consciousness,” I shall be using it in the sense of the quality of being conscious, the knowing of experience, rather than as some phenomenon to be known.

The Faculty and the Forms of Consciousness

A second important distinction is between the faculty of consciousness—being aware of experience as described above—and what we are aware of—the sensations, perceptions, thoughts, feelings, and other phenomena that arise in our experience. I shall refer to these as the “forms” that appear in consciousness.

These forms are clearly dependent upon brain processes. And I am happy to assume, pending contrary evidence, that for every subjective experience there is a corresponding state in the brain. It is commonly assumed that this implies that the faculty of consciousness is likewise a consequence of brain activity. This stems from a conflation of two different questions: Does the brain create the forms of which we are aware? And, does the brain create the faculty of consciousness? The so-called “easy” and “hard” questions

of consciousness. Later I shall argue that the answer to the second question is “No.”

Representations of Reality

Our experience of the world is a representation of reality created by the brain.

Contemporary science has little problem with this statement. In essence, the senses respond to stimuli in their environment, pass that information along to the brain, where it is analyzed and processed, and a model constructed of the world “out there.” This representation of reality then appears in conscious experience as the 3-D, full-color, surround-sound, touchy-feely world that we know.

Yet, the full implications of this construction process are seldom explored. We shall see that it leads to a radically different understanding of the true nature of the “world out there,” undermining the assumption of a material reality.

The Representation Is Not the Reality

We assume that the representation that we experience is much like the world “out there,” what Kant called the “thing in itself.” But it turns out that the two are totally different. Take the color green, for example. In the physical world, there is light of a particular frequency, but the light itself is not green. Nor are the electrical impulses that travel from the eye to the brain. The green you see is merely the representation that appears in consciousness. There is no green “out there.”

The same is true of our other senses—hearing, smell, taste, touch. The phenomena we experience do not exist in the world out there. They exist only in awareness. I’m not suggesting that the physical world does not exist; only that it is very different from our experience of it. We mistake the representation for reality.



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Matter Is Not Made of Matter

The same is true of our concept of matter. Our experience of the world includes that of solid substance. Yet, physics has revealed that this is far from true. More than a century ago, it was realized that atoms were largely empty space. The apparent solidity we experience is due to the bonds binding atoms together in molecular structures and the corresponding forces holding molecules together. The strength of these bonds makes it almost impossible for one physical structure to interpenetrate another, which leads to the perception of solidity.

With the advent of quantum theory it was realized that even sub-atomic particles were far from being the solid “particles” we had imagined them to be. They are more like fuzzy clouds of potential existence. Whatever matter is, it is not made of matter.

Nothing There

In trying to understand physical reality, we take concepts derived from our experience—such as waves and particles—and imagine the world “out there” is similar. We believe the representation of reality we experience is like the reality being modeled. But it turns out they are completely different.

The deeper we’ve studied the physical world, the less evidence we’ve found for anything physical. It sometimes seems as if there’s nothing there—or rather, “no thing” there. The concept of a “thing” as a discrete object is likewise derived from experience. We have to conclude that physical reality is nothing like we imagine it to be, or could imagine it to be.

A Non-homogenous Reality

So, is there anything we can say for sure about the physical world? Yes. It is not homogenous. That is to say, it is not all the same. The part

of the world I call my finger is not the same as the air that surrounds it. One is solid; the other gas. One is opaque; the other transparent.

Looking deeper, the structure of a nerve cell is different from that of a blood cell. At a much finer level, what we call a proton is different from whatever it is that we call an electron. We may not know what the cosmos is made of, but we can say that is highly differentiated, at all levels, from quark to galactic cluster.

A Field of Information

These variations constitute information. We cannot say what an electron is, for that would again be projecting our experience back on to the world. All we know is various bits of information. There are quantities we call charge, spin, and mass. We don’t know what these actually are—the names are once again projections from experience. But we can measure

them—or at least have information about the probabilities of what we might measure.

Perhaps then, all we can say about physical reality is that it is a highly structured field of information. Mathematics describes the way this field interacts with itself, and its unfolding over time.

There are currently seven or so different interpretations of quantum mechanics attempting to describe what is going on, the most popular of which is the Copenhagen Convention. And then there is the school that says, “Shut up and do the math.” We know the mathematics and it works, whatever interpretation is laid on top of it.

The ultimate description of the cosmos must be purely mathematical, devoid of any interpretation drawn from human experience. If we ever do meet another intelligent species that has made its own study of the cosmos, their physics might look very different from ours. But, once we understood



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how they formulated their mathematics, we would find ourselves in agreement.

Experienced Information

Our sense organs respond to changes in this information field. The information is conveyed to the brain, where it is processed into a flow of information that is a reflection of the information in the world “out there.” This flow of information in the brain then appears as information in consciousness. These are the forms we experience—the colors, shapes, sounds, smells, textures we are aware of. This is simply how the information is translated into an experiential form—much like how the information in the CPU of a computer is translated into an image on the screen.

The information has been given form in awareness. We could say, it has in-formed experience. These forms appear to us as the material world. But this material world exists only in our awareness. It is our way of mak-

ing sense of the information. A virtual reality created by the brain.

Matter, as we know it, is all in the mind. The “stuff” of which matter is made is not physical stuff, but mindstuff—that is, consciousness.

Integrated Information

Why do some information processes in the brain give rise to an experience, while others have little effect? The new approach of Integrated Information Theory suggests that what seems to be critical is that there is not only a complex flow of information, but an integration of the information from many different processes across the brain.

This integration is reflected in our experience. When I see a flower, I perceive its color, shape, movement integrated in a single whole. However, this does not mean that the integrated information gives rise to conscious experience itself, only that the integrated in-

formation is responsible for the forms that appear in consciousness.

The Hard Problem

The hard problem of consciousness still remains. Why is there awareness in the first place? How do physical processes in the brain ever give rise to something as immaterial as consciousness? Why doesn't all this activity just go on anyway, without our ever being aware of any of it?

This is a huge conundrum for contemporary science. It is easier to explain how we evolved from simple cells than it is to explain why we are aware.

A test of any scientific theory is how well it predicts the way things are. Yet there is nothing in our current scientific worldview that predicts that any arrangement of physical matter should ever result in an inner conscious experience.

The current materialist worldview is so

deeply engrained in our thinking that we seldom question it. Instead we keep looking for ways to try and explain consciousness in material terms.

Where Do We Draw the Line?

There's a second major problem with this approach. If consciousness emerges from insentient matter, then at what stage in evolution did this happen? Where do we draw the line between creatures that are conscious and those that aren't?

We imagine our pets are conscious beings. Why else would we give them an anesthetic to make them unconscious before an operation? We assume they would experience pain, much like we would. We would probably feel the same about other mammals. What about other vertebrates? A bird? Or a fish? Their nervous systems are structured in similar ways. Or an octopus? Or a spider? Or a worm? Where do we draw the line?



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The problem is that wherever we draw the line, we find ourselves once more up against the hard problem. How is it that on one side of the line physical matter does not produce an inner experience, whereas on the other side it does?

No Line

Our continued failure to explain just how consciousness arises from physical matter suggests that we may need to question some of the fundamental assumptions of the contemporary worldview.

It is assumed that matter itself is insentient—it is totally devoid of any experience. This assumption lies at the heart of the hard problem. An alternative assumption—and one that is being explored by a growing number of scientists and philosophers—is that the capacity for experience is present, to some extent, in everything.

It doesn't suddenly appear out of nowhere,

as if by magic, once some particular arrangement of matter has emerged. Experience is there all the way down the evolutionary tree.

If so, then consciousness is not limited to creatures with nervous systems. Even a simple cell has a faint glimmer of awareness. Nothing like the rich experience we know. Nothing like a thought or a feeling. But not nothing at all.

From this perspective, there is nowhere we can draw a line between conscious and non-conscious entities. Consciousness per se is not a product of evolution. The capacity for experience was always there. What has evolved are the forms that appear in consciousness.

Consciousness Intrinsic to Cosmos

If there is nowhere we can draw a line, then there must be a trace of consciousness, however slight, in molecules, atoms, and even elementary particles.

That may sound strange. But it doesn't

mean that atoms and molecules experience the world like we do. There is probably no representation of the world at this level. For a representation to appear in awareness, there needs to be some integrated processing of information. This probably does not appear until the level of cell, where the chemical systems that maintain the integrity of the living system lead to sufficiently complex information processing.

In this respect, the emergence of life and the emergence of experience are intimately connected; they are two aspects of the same unfolding. But we can't say there is absolutely no trace of consciousness at molecular or atomic scales. Otherwise, we'd once again have to explain how experience could emerge from that which has no experience.

If there is nowhere we can draw a line and the capacity for awareness goes all the way down, then that capacity must be an intrinsic quality of the cosmos.

So, there is one more thing we can say about the world out there. It is not only a highly differentiated field of information, but the field has the potential to be aware.

Letting Go of the Physical

At first sight, this might appear to lead to a dual-aspect model of reality. There is an external physical aspect of everything and there is a corresponding internal conscious aspect.

However, the more we try to discern the physical aspect, the more we find there is no “thing” there. Could this be pointing to the fact that there really is nothing there—that there is actually no physical aspect?

Such a suggestion challenges a major assumption of the current paradigm—that there is a real physical world. This assumption has been challenged for a hundred years now by the advent of quantum physics; but, so far, we have refused to consider where it might lead.



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It does, however, satisfy Occam’s razor. The dual-aspect model carries the assumption that there is a physical essence to the world, despite all the evidence pointing to the contrary. A monism of consciousness involves no such assumption. And so, by the razor, would be the preferred interpretation.

It also obviates any need to identify a relationship between the external physical aspect and the internal conscious aspect. There is no duality.

A Knowing Field Knowing Itself

The monistic interpretation says that the information field is aware. And that is all there is. Sufficiently complex structures in the field respond to the information detected in the field around them and, from that, create their own representation of a physical world. This then appears as a material form in their awareness.

This is happening at all levels—from the

simplest forms of life to the most complex. Each has its own particular representation of the information that it detects. Each experiencing its own particular construction of a material world. The entire cosmos is a vast field of knowing, knowing itself, and creating for itself the appearance of physicality.

Why Matter is Insentient

But, if consciousness is everywhere, and the essential nature of everything, why don’t we see it that way? Why do material objects appear totally devoid of consciousness? Looking for consciousness in the world is a bit like studying a movie, looking for the source of its light. Nowhere would we find it. The light is not in the movie. The movie is made of light.

All we know of the world is the picture of it appearing in consciousness. The picture could be said to be constructed from and in consciousness, but the picture does not itself include consciousness. Consequently, there

is no trace of consciousness in our experience of a material world.

This is why it is so easy to assume that the world out there is insentient—and why the hard problem arises. We imagine the world out there is like our picture of it, that is, devoid of consciousness.

It would seem that the very opposite is true. The world of our experience—the only world we directly know—appears to us as material objects, with no trace of consciousness. The thing-in-itself, which we never know directly, is not made of matter, but is aware.

Recognizing the fundamental role of consciousness turns reality inside out. The essential nature of the cosmos is mind not matter.

Implications

This is not a new idea. Several philosophers and mystics have come to the same conclusion. However, it has never been taken seriously by modern science. But, what happens

if we do?

First, as with most paradigm shifts, the findings of the current paradigm are included in the new. Nothing that we have discovered in modern science changes. Mathematics works just the same. The laws of physics are still valid. All our discoveries in chemistry, biology, and other sciences hold true. What changes is our assumption as to what the laws refer to. They are not laws of the unfolding of the physical world of space, time, and matter. They are the laws of the unfolding of a self-aware field.

Second, it may provide new insights into the perplexing problems in modern physics in which observation seems to play a critical role. We are currently trying to understand these problems from a worldview that focuses on what is observed but does not include the observer. A worldview that includes consciousness as fundamental, rather than seeking to explain it away as a consequence of



“My innermost essence is the essence of everything. In the words of the Upanishads, “I am That.”

brain activity, may offer fascinating breakthroughs in these perplexing areas.

Third, a monism of consciousness has no problem with so-called paranormal phenomena. In a materialist worldview it is difficult, if not impossible, to account for telepathy, clairvoyance, telekinesis, precognition, and such. A worldview that sees everything as the play of consciousness doesn't preclude such phenomena.

And, fourth, it might offer valuable insights into our own inner nature. Science and spirituality are often seen to be at loggerheads. This is largely because we erroneously assume them to be describing the same world. The essence of mysticism is the inner exploration of one's own consciousness, a realm into which science has not ventured. Time and again we find that those inner explorers who have delved into the nature of experience itself are all pointing to the same conclusion. My innermost essence is the essence of everything.

In the words of the Upanishads, “I am That.”

Peter Russell is a self-professed expert in meditation and all things conscious. He is an internationally renowned writer, speaker, mystic, and student of the divine. He is a fellow of the Institute of Noetic Sciences, The World Business Academy, and The Findhorn Foundation, as well as an honorary member of The Club of Budapest. Peter studied mathematics and theoretical physics at Cambridge University (UK). His various writings can be found on his website peterrussell.com. You can also access his online course on Effortless Meditation by clicking here.

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