

Physicalism and Faith

John Launchbury

I want to talk about physicalism.¹ Physical + ism. Physicalism is a philosophy that you may never have heard of. But many of us are likely being affected by it. In particular, anyone educated in science may have inadvertently taken physicalism on board too. And physicalism can be significantly damaging to faith.

But before we can discuss physicalism, we need first to talk about science.

Science

Science is powerful and exciting. It has been incredibly successful, particularly over the last few hundred years. Through science we understand that lightning is a natural electrical discharge (not the wrath of the gods), that diseases have organic origin (not malevolent spirits), that the earth is round (not flat), and so on. Imagine a world without antibiotics, where any infection is cause for serious concern; without long distance communication; or where a round trip to the village five miles away occupies a whole day.

So what is science, and why is it so successful?

Briefly, science is the study of observed events, and the development of analytic models that can predict how things will behave.

When a particular science is in its infancy, the models are descriptive only – they describe what is, and what happens, when, and under what circumstances. As the science becomes more refined, the models become more quantitative. They gain a strongly mathematical flavor, allowing detailed calculations to be performed.

¹ A previous version of this article appeared in T Gaston (ed), *More Reasons*, Willow Publications, 2014

The theory of gravity is an excellent example of this. For thousands of years, people knew that things fall to the ground when dropped. It just happens, but no-one could quite say why. It just did.

By Newton's time, people knew quite a lot about "heaviness" (*gravis* in Latin), including a particularly surprising fact. Newton writes,

It has been, now for a long time, observed by others, that all sorts of heavy bodies... descend to the Earth from equal heights in equal times....²

That had been a surprise. People thought that heavier objects would fall faster, but they didn't. The question was, Why?

Newton invented an explanation. He proposed a law that stated that everything attracts everything else, depending only on their masses and the distance between them.³ With precise calculations, he showed that this simple mathematical relationship explained everything from dropped groceries to the paths of planets and moons. Stunning discovery!

In time, scientists discovered that Newton's law wasn't quite right. The planet Mercury, for example, kept drifting away from what Newton's law of gravity predicted. This issue was ultimately addressed by Einstein. He reformulated gravity, not as an attractive force, but rather as curvature of space-time. Again, he presented mathematical equations to describe it (much more complicated than Newton's). And now the new model – Einstein's equations – matched observations as precisely as could be measured.

This is the strength of science – the willingness to revisit old ideas and reformulate them when discrepancies arise. And in case it's not clear, I'm a big fan of science.

However, the stunning success of science has led many people to go further.

Physicalism

Because science has been so good at providing physical explanations for so many phenomena, it becomes natural to presume that *all things* are going to be explainable in this way,

² Isaac Newton, *Principia*, Book III, 1687

³ Mathematically, $Force = constant \times (Mass1 \times Mass2) / (Distance \times Distance)$

that everything in the universe is (in principle) explainable in terms of matter and forces and so on. This presumption is called Physicalism.⁴ It is the thesis that

“everything is physical”, that there is “nothing over and above” the physical....⁵

Those of you who have been educated in the sciences may be nodding at this point. It seems obvious. Of course everything will have a physical explanation! In fact, physicalism is the unstated assumption of most scientists. It has become the prevailing “acceptable view” in large parts of western society. Anything else is looked down upon as superstition or magical thinking, or as blind and misguided faith that may be okay for children, along with Santa and the Easter Bunny.

But note this: physicalism is not scientifically established.

The thesis of physicalism may seem reasonable because physical explanations have been found for very many phenomena. But no science experiment has been done that demonstrates that *every* phenomenon in the universe is fundamentally physical. Indeed, it seems likely that such an experiment would be impossible to formulate. And until physicalism can be demonstrated scientifically, it remains just an expectation.

That means physicalism is a *philosophy* rather than a scientific theory. It is an assumption, a presumption. It is a belief, a faith. And physicalism is a widely held faith, even though it’s rarely noticed explicitly. To many people it just seems so obvious.

That describes me 20 years ago. Without knowing it, I had fallen into physicalism. I was living with an unstated assumption that everything in the universe was physical: atoms and matter and forces and so on. There didn’t seem to be a need for anything more. And once I couldn’t see the need for anything more, then there didn’t seem to be anything more.

And if there wasn’t anything more, where does that leave God?

Having fallen into physicalism, I struggled to see how anything supernatural could fit in. If the whole universe is just physical stuff, then that rules out a divine spirit being.

So I had started to wonder. Perhaps God was just an idea people made up? Maybe that’s enough for there to be some kind of meaning? But I was stuck. I still loved the scriptures with

⁴ It also goes by *Metaphysical Naturalism* or *Scientific Materialism*

⁵ <https://en.wikipedia.org/wiki/Physicalism>

their teachings and narratives, but I didn't know how to square them with the physicalist assumptions I had silently taken on board.

And I think a lot of people find themselves in this situation. Especially our youth.

This is the danger of physicalism. It is a silent Drainer of Faith. It rules out anything but natural physical explanations *a priori*. In particular, the philosophy of physicalism prohibits the idea of God, in just about any form.

But without empirical evidence.

The strength of physicalism is that it drives people towards finding explanations whenever and wherever they may be found. But the danger is that it claims the whole universe for itself.

Undoing Physicalism

If we found something in the universe that lies outside the explanatory power of physicalism, then physicalism would have to retreat. It could no longer claim to be all-encompassing. It could no longer claim that the universe contains nothing but physical stuff. And if the universe can be shown to contain more than the purely physical, then the potential for meaning and for the divine comes flooding back.

That was my experience, at least.

It turned out that I didn't have to look far afield. There was a counterexample right under my nose all the time. Or, perhaps, behind my nose would be more accurate...

It turns out that the phenomenon of consciousness appears to be beyond any physical explanation, even in principle. And if consciousness – something we all experience – cannot be given a physical explanation, then we each have direct and personal evidence that physicalism is insufficient.

So that sets our agenda. The rest of this article will focus on whether or not consciousness is likely to have a physical explanation in terms of all the fields, forces, particles and so on studied by physicists. Or whether there is something fundamentally different here.

At the outset, however, we should be alert and tread carefully. Understanding consciousness is a very hard problem. As the philosopher Chalmers attests after many years researching the

topic, anyone who claims to have it all sorted out is likely to have fallen into one or more of the innumerable traps for the unwary.⁶

The discussion will necessarily be technical at times, including touching on quantum mechanics. But don't worry. Feel free to skip any details you may not follow and just track the big picture of the argument.

The nature of consciousness

Consciousness has been a challenge to thinkers of every age. Perhaps the most famous slogan of philosophy is about consciousness. *Cogito, ergo sum*, concluded Descartes, *I think, therefore I am*. He identified consciousness as the one foundational experience we have.

What do we mean here by “consciousness”? I'm using the term to mean subjective, first-person experiencing of, well, of whatever we are experiencing. It may be the textured experience of taste, or color, or sadness, or sounds, or love, or even of pain. It's the underlying felt-experience of the present moment, unwrapped from all the analysis our minds tend to place over it. This phenomenon of conscious experiencing can be noticed at any time, and it can be noticed especially well during mindfulness meditation.

The conscious experiencing of the present moment seems to be the one thing that we can absolutely rely on empirically. Everything that we know is mediated through this experience of consciousness. Theoretically, all the rest could be imaginary, a dream. Like prisoners in Plato's cave experiencing shadows on the wall, or a brain in a jar. Or maybe we are all like Neo, wired up to the Matrix and experiencing whatever the computer simulation decides to feed into our brains.⁷

So how about we use science to study consciousness?

Immediately, we hit a problem. On the one hand, we can normally tell whether someone else is conscious – they will be moving, or breathing, or any other number of markers. But on the other hand, all of these indicators and measures are proxies, established by analogy. They do not measure consciousness directly. Instead they work as follows: I know that I am conscious, so by

⁶ David Chalmers, *The Conscious Mind*, 1996.

⁷ The Wachowskis, *The Matrix*, Warner Bros and Australian Village Roadshow Pictures, 1999

analogy, I presume that another creature who shows corresponding physical attributes and behaviors is also conscious.

But it is a proxy. No-one has come up with a test that definitively demonstrates consciousness in others. Consider the following case. Neuroscientist Adrian Owen had a problem. His patient was a woman in a persistent vegetative state.⁸ In this state, a person has lost cognitive neurological function and has no awareness of the environment, but they may retain non-cognitive function, including things like a sleep-wake cycle. Their eyes might even move around, but as far as we can tell, the person is just not there any more.

So Dr Owen, facing his first such patient, decides to do an experiment. He places his patient in an MRI and asks her to imagine playing tennis. Immediately her brain lights up just like a conscious person. When he asks her to stop, it quiets down. So is she conscious or not? It is still impossible to know.

Owen's experiment has since been performed many times on many other patients,⁹ and doctors debate whether the test demonstrates the presence of consciousness or not. Are these patients having subjective, first-person experiences? Or is this just residual brain activity? Even with an MRI machine able to watch neural activity directly, we cannot actually tell whether another human being is conscious or not.

The challenge with consciousness is that we have no way to observe it externally. I can measure how tall you are, how likable your personality is, your IQ or EQ, etc. But I cannot measure the state and nature of your consciousness, other than measuring proxies and extrapolating from that.

This leaves us in a bit of a conundrum. Consciousness seems to be the one phenomenon we can be sure of from a philosophical perspective, and yet the fundamental character of it is largely outside the reach of our current scientific techniques.

First person science

Western scientific study is built upon what can be called *Third Person* perspectives. Whether we study chemical interactions or social structures we do so from the perspective of an *external*

⁸ Adrian Owen, *Detecting Awareness in the Vegetative State*, Science, Sept 2006

⁹ Martin Monti et al, *Willful Modulation of Brain Activity in Disorders of Consciousness*, The New England J of Med, 2010

observer. These are objective viewpoints, where each item of study is an object distinct from the observer.

But consciousness doesn't seem to have an objective view. It appears to be a phenomenon that has to be studied from the *inside*, from a *first person perspective*. Nagel, one of the earliest western researchers to wake up to this perspective, states,

*If physicalism is to be defended, the phenomenological features [of consciousness] must themselves be given a physical account. But when we examine their subjective character it seems that such a result is impossible. The reason is that every subjective phenomenon is essentially connected with a single point of view, and it seems inevitable that an objective, physical theory will abandon that point of view.*¹⁰

His argument is that physics is objective, but the act of *experiencing* is fundamentally *subjective*. It is *something tangible* to be seeing red, or to be feeling pain, or to be experiencing sadness.

These individual subjective elements of the mind are called *qualia*. And the essence of qualia seems to get lost if ever we try to move to a third person perspective of pure physicality. Here is Chalmers again,

*The really hard problem of consciousness is the problem of experience. When we think and perceive, there is a whirl of information-processing, but there is also a subjective aspect. As Nagel (1974) has put it, there is something it is like to be a conscious organism. This subjective aspect is experience. When we see, for example, we experience visual sensations: the felt quality of redness, the experience of dark and light, the quality of depth in a visual field. Other experiences go along with perception in different modalities: the sound of a clarinet, the smell of mothballs. Then there are bodily sensations, from pains to orgasms; mental images that are conjured up internally; the felt quality of emotion, and the experience of a stream of conscious thought. What unites all of these states is that there is something it is like to be in them. All of them are states of experience.*¹¹

The implication of this is that we shall never understand the nature of consciousness simply by looking from the outside. We need a different scientific approach. Fortunately there is a starting point at hand. Since its inception, the core of Buddhism has been to study the nature of

¹⁰ Thomas Nagel, *What is it like to be a bat?*, The Philosophical Review LXXXIII, 1974

¹¹ David Chalmers, *Facing Up to the Problem of Consciousness*, Journal of Consciousness Studies, 1995

consciousness, and it still has some of the most advanced scientific perspectives on it. Here is how the Dalai Lama puts it:

Consciousness is a very elusive object, and in this sense, it is quite unlike the focus on a material object, such as biochemical processes.... Whatever our philosophical views about the nature of consciousness, whether it is ultimately material or not, through a rigorous first-person method we can learn to observe the phenomena, including their characteristics and causal dynamics. On this basis, I envisage the possibility of broadening the scope of the science of consciousness and enriching our understanding of the human mind in scientific terms....

Given that subjectivity is a primary element of consciousness, it will have to be a fully developed and rigorous first person empiricism. There is tremendous potential for contemplative traditions such as Buddhism to make a substantive contribution.¹²

Every scientific discipline needs to be able to hone its instruments so that the observations are real and repeatable. When the “telescope” is the conscious mind viewing itself, the challenges of self delusion are profound. The practices of mindfulness and insight meditation have been developed to permit exactly this kind of study.¹³ Reliable internal observations are repeatable by individual researchers on multiple occasions, and – more significantly – across multiple distinct researchers. These techniques enable a discipline of first person science.

New insights into consciousness

The prominent computer scientist Henk Barendregt, now highly accomplished in Buddhist insight meditation, devotes his research efforts to understanding the mind from the perspective of its processes and components. He says:

No matter how many levels of cognition and feedback we place on top of sensory input in a model of the mind, it a priori seems not able to account for experiences. We always could simulate these processes on an old fashioned computer consisting of relays, or even play it as a social game with cards. It is not that I object to basing our consciousness on outer agents

¹² Dalai Lama, *The Universe in a Single Atom*, Three Rivers Press, 2006

¹³ Bhante Henepola Gunaratana, *Mindfulness in Plain English*, Wisdom Publications, 2002

*like the card players (we depend on nature in a similar way). It is the claimed emergence of consciousness as a side effect of the card game that seems absurd.*¹⁴

As a theoretical computer scientist myself, I share Barendregt's views. I can envision software producing all the cognitive functionality of parsing visual and auditory signals, processing language, generating thoughts and ideas, and so on. But I know of nothing in computer science that could build *experiencing* into software. How would you program the genuine felt-experience of *pain*? I can't even begin to think where to start.

Even if the software were reflective and able to cognitively process its own state, I see no reason why that would make the leap to experiential consciousness, to qualia.

Of course, it's always challenging to argue from a position of *not* being able to conceive of something. If we were asserting that consciousness cannot be an emergent property just because we can't comprehend it, then it would not be a compelling argument. It could just be outside of our experience.

But we are actually arguing something different.

Emergent properties arise as a consequence of attributes that are already present. For example, I might want to build a good-sized business by combining many small sales with small profits. However, if the individual sales made no money at all, then combining lots of them would still make no money. Only if the individual sales had a potential for profit could I build a profitable enterprise.

Here's another (more technical) example. The enzymatic effect of a protein is a surprising emergent property.¹⁵ Just by considering the sequence of amino-acid base-pairs that make up the protein, it is not at all obvious that it would act as an enzyme. However, its enzymatic effect arises as a consequence of the 3D spatial orientation of its atomic charges. Target molecules fit into nooks within the protein and are pulled apart or pushed together by the electrical charges. The charged nooks arise because the amino acids have both a 3D aspect and an atomic charge aspect. So the building blocks for the emergent behavior are already present in the components from which the whole is constructed.

¹⁴ Hendrik Barendregt, *Reflection and its Use: From Science to Meditation*, Spiritual Information, 2003

¹⁵ An enzyme facilitates other chemical reactions by joining or splitting target molecules

The same analysis explains how information-processing aspects of mental cognition may arise. The molecular structures in the neurons of our brains have rudimentary capabilities to process information, so it is not unreasonable to think that intelligent information-processing capabilities could emerge as a combination of those components.

But when we come to consciousness – the *felt experience* of qualia – things are very different. None of the component elements appear to have any subjective aspect to them. The equations of physics do not assign any subjective felt-experience to the atoms and molecules that make up our physical brains. And it seems impossible to create subjectivity through combinations of non-subjective elements. Adding up many zero quantities still yields zero.

So where does consciousness come from? What is it – this apparently non-physical part of our being?

The quantum physicist Henry Stapp argues that consciousness is built into the universe at a fundamental level, and that any understanding of physics that ignores it is doomed to failure.

The ‘Hard Problem’ is the problem of conscious experience: What is it? Why is it present at all? Why is it so different from the other part of Nature, namely the objective aspect of reality? Chalmers asks these questions, and says that right now we have no candidate theory that answers these questions. But we do!

Chalmers suggests that perhaps there is a small loop-hole in quantum theory that might provide an opening for consciousness. But there is not just a small loop-hole: there is a gigantic lacuna, which consists of fully half of the theory, and this hole provides an ideal home for consciousness.¹⁶

Enter quantum mechanics

Stapp worked with the great physicists Pauli and Heisenberg, so he’s been in the field a while! Quantum mechanics, he says, is fundamentally about the *interaction* of consciousness with the quantum potential.

Quantum mechanics models the probabilities of events occurring. These probabilities are called *wave functions*. They express the myriad of possible outcomes that may arise when sub-

¹⁶ Henry Stapp, *The Hard Problem: A Quantum Approach*, Journal of Consciousness Studies, Aug 1996

atomic particles interact. According to the mathematics of quantum mechanics, the universe is a bubbling cloud of all possible outcomes of every interaction of every particle.

But we don't *experience* the universe that way. We don't experience multiple possibilities. We experience specific events. So how do we connect the quantum mathematics of probabilities with the everyday experience of specific physical states?

Something appears to make the probabilities of the wave function keep collapsing down to particular concrete events. There are five distinct interpretations as to how this may work, from particle-wave duality to many-worlds. Stapp points out that all five interpretations require two separate elements: the physical universe, and consciousness.

Searle,¹⁷ when confronted by the suggestion that quantum theory, with its inherent dualistic ontology, is important to the resolution of the mind-brain problem, says that he will wait until quantum theorists come into agreement among themselves about the interpretation of the theory. But that misses the point completely.

All interpretations agree on the need for a dualistic ontology, with one aspect being the quantum analog of matter, and the other aspect pertaining to experiences. Thus the whole debate among quantum theorists is essentially a debate about the mind-matter connection.¹⁸

That's very powerful. According to Stapp, every way we have invented to understand quantum mechanics has mind separate from matter, and the mind-matter connection is a fundamental component of the theory. He claims we cannot understand the mechanics of the universe without addressing the interaction of consciousness with the physical world.

Bohr and Heisenberg, early developers of quantum mechanics, understood this:

In our description of nature the purpose is not to disclose the real essence of phenomena but only to track down as far as possible relations between the multifold aspect of our experience.¹⁹

Quantum theory has led the physicists far away from the simple materialistic views that prevailed in the natural science of the nineteenth century.²⁰

¹⁷ Referring to the philosopher John Searle (en.wikipedia.org/wiki/John_Searle)

¹⁸ Henry Stapp, *ibid.*

¹⁹ Niels Bohr, *Atomic Physics and Human Knowledge*, 1934

²⁰ Werner Heisenberg, *Physics and Philosophy*, Harper & Row Publishers, 1962

At this point, no-one knows how consciousness, the brain, and quantum mechanics all interact.²¹ In fact, the whole area is a topic of very active scientific exploration.²²

However, we don't need to figure out the details to still be pretty confident that the experiential aspect of consciousness is distinct from what we know of the physical structures of the universe.

How does this impact faith?

Let's come up for air. We have seen good evidence that the essence of what it means to be "a being" – that is, to have experiential consciousness – is distinct from the physical world of atoms, forces, and so on. They appear to be intimately connected in the interaction between the physical quantum potentiality and subjective consciousness – and perhaps they even co-define each other – but they are ontologically distinct.

Of course, none of this implies the existence of God – at least, not as far as the revealed God of the Bible is concerned. Hoping for that would be unrealistic. And it is not what we set out to do. But the evidence we reviewed does demonstrate that mechanistic arguments that *deny the existence* of the divine or supernatural are flawed.

When I had unwittingly taken on the assumptions of physicalism, I had struggled to see how God was consistent with "science". But once I recognized that our current physical descriptions don't even include conscious experience, I could let go of physicalism. And now the Biblical accounts no longer trigger the cognitive dissonance I had experienced when I unwittingly held physicalist presumptions.

I would go further. Coming face to face with the nature of consciousness opened new realizations for me in scripture. To explain what I mean, listen to Barendregt again:

Spiritual reflection introduces us to awareness beyond ordinary consciousness, which is without content, but nevertheless conscious. It is called pure consciousness. This phenomenon may be explained by comparing our personality to the images on a celluloid film, in which we are playing the title role of our life. Although everything that is familiar

²¹ Stapp, Penrose (en.wikipedia.org/wiki/Roger_Penrose), and others conjecture that the collapse of the wave function takes place in a holistic and coordinated fashion at the level of the organism, that quantum interactions may involve millions or billions of neurons in each collapse

²² For a current review, see *Putting Ourselves Back in the Equation*, George Musser, 2023

to us is depicted on the film, it is in the dark. We need light to see the film as a movie. It may be the case that this pure consciousness is the missing explanatory link between the purely neurophysiological activity of our brain and the conscious mind that we (at least think to) possess. This pure light is believed to transcend the person. The difference between you and me is in the matter (cf. the celluloid of the film). That which gives us awareness is said to come from a common source: the pure consciousness acting as the necessary 'light'.²³

Paul describes our nature with respect to the divine using comparable language. When debating with the philosophers in Athens, he says,

God... is not far from any one of us. 'For in him we live and move and have our being.' As some of your own poets have said, 'We are his offspring.' Therefore since we are God's offspring, we should not think that the divine being is like gold or silver or stone—an image made by human design and skill.²⁴

That sentence is very powerful: *In [the divine] we live and move and have our being*

Here's an analogy I have found to be helpful. First, I like to think of each of us as if we are waves on the ocean. And just as waves are connected with other waves, so we are always connected to one another, dependent on one another. I'm a wave. You are a wave. So then, what was Jesus? Jesus was the perfect wave – the wave I aspire to be like.

But now, what is God? An even better wave?

No. God is the ocean.

We are ripples on the surface of the divine. In him we live and move and have our being. He is not far from each one of us.

I have come to experience my bright conscious awareness as a tangible connection with the divine. Every time I pause and become aware of my conscious experiencing, I am aware of God, deeply and profoundly.

²³ Henk Barendregt, *ibid.*

²⁴ Paul of Tarsus, *Mars Hill*, Acts 17:27-29, NIV