Is Consciousness Everywhere?
Essays on Panpsychism

Philip Goff and Alex Moran

Introduction

The mind-body problem, broadly speaking, is the challenge of understanding how the conscious mind relates to the physical world. On the one hand, it seems that there is nothing more familiar to us, nothing we know better, than the phenomenon of consciousness. On the other hand, there is much about consciousness that has defied our understanding. In particular, there seems to be a special difficulty when it comes to reconciling the *subjective* and *qualitative* aspects of consciousness with our *objective* and *quantitative*, scientific picture of the physical world. One major task for science and philosophy, therefore, is to find a way to bridge this gap, thereby explicating the place of consciousness in nature.

Historically, two main positions have been defended in answer to the mind-body problem. One is dualism, the view that consciousness lies outside the physical domain, and therefore has a wholly non-physical nature. The other is materialism (or physicalism), the doctrine that since reality is wholly physical in nature, consciousness must ultimately be thought of as a part of the material world. The present volume, however, focuses on an alternative theory, namely, *panpsychism*. Like the dualist, the panpsychist claims that consciousness is irreducible and fundamental, and hence cannot be understood in other, more basic terms. Like the materialist, however, the panpsychist also thinks that consciousness does not lie outside of the rest of nature, but is rather firmly located within the material world. Indeed, the panpsychist makes the radical claim that consciousness is *ubiquitous* in nature, insofar as it is a property instantiated, not just by humans and some animals, but even by the most fundamental constituents of physical reality. The panpsychist thus takes nature to be permeated by consciousness, rather than viewing consciousness as a derivative phenomenon that only emerges at higher levels.

One central thought motivating the panpsychist position is an observation about our understanding of the physical world itself. The key idea is that physics only describes the relational or dispositional properties of matter, not its intrinsic nature: what matter *does* rather than what it *is*. This then raises a question about what the intrinsic nature of matter actually is. According to the panpsychist, the intrinsic nature of basic matter is constituted by rudimentary kinds of consciousness. This then allows us – or so it is hoped – to explicate the more familiar phenomenon of human consciousness in terms of the more basic kind of consciousness instantiated by fundamental physical things. Proponents of panpsychism argue that the theory enables us to make significant headway with the traditional mind-body problem, while avoiding the well-known problems that dualists and materialists face. Its detractors, meanwhile, urge that the theory faces substantial problems of its own. The papers in this volume explore these and related issues, from the perspectives of science, philosophy, and theology. Some papers focus on further motivating and developing the panpsychist position. Others explore various challenges that the panpsychist faces. Collectively, they shed new and important light not only on panpsychism, but on the fundamental question of the place of consciousness in nature more generally.

As stalking horse, many of the papers focus on Philip Goff's book *Galileo's Error: Foundations for a New Science of Consciousness*, which offers an important and accessible defence of the panpsychist view. The volume also includes a response piece from Goff to these various articles.

The Scientists

Our first three papers are by theoretical physicists. Carlo Rovelli has previously defended a relational interpretation of quantum mechanics, according to which quantum mechanics concerns not how physical entities are in themselves, but how they are *in relation to one another*. In his paper, Rovelli suggests that this relational conception of physics is itself a – very mild – form of panpsychism; and moreover that it may help address the intuitions underlying the 'hard problem' of consciousness, as the differences between the mental and the physical are now less stark than they might previously have appeared.

The next two papers share a common focus. Panpsychists believe that consciousness is a fundamental feature of reality. Both of the next two papers (the first by Sean Carroll, the second by Marina Cortes, Lee Smolin, and Clelia Verde), agree that this conviction requires rewriting current physics, as the understanding of the basic physics in brains given to us by the 'Core Theory' (the standard model of particle physics combined with the weak-field limit of General Relativity) does not make reference to consciousness. From this point of agreement, they go in different ways. Carroll infers that consciousness is not a fundamental feature of reality, but rather an emergent property of certain complex systems. Cortes, Smolin and Verde, in contrast, present a new interpretation of fundamental physics in which qualia – as well as the passage of time – play a fundamental role.

The next two papers are by neuroscientists, one pro panpsychism and one opposed. Anil Seth believes that rather than focusing on the 'hard problem' of where consciousness came from in the first place, it is more profitable to focus on the 'real problem' of explaining, predicting, and controlling the various properties of consciousness in terms of physical processes in the body and brain. Moreover, he rejects panpsychism as an untestable and therefore unfruitful hypothesis. Whilst Christof Koch is much more sympathetic to panpsychism, like Seth, he emphasises the importance of experimental science and testable predictions. Koch outlines and defends the integrated information theory of consciousness, a theory which entails that consciousness is ubiquitous in the physical world and hence can be seen as a form of panpsychism. Koch also expresses disagreement with Philip Goff's exegesis of Galileo in *Galileo's Error*.

We often forget that there are philosophical assumptions lying at the bedrock of any scientific worldview. In his work as an experimental psychologist, Jonathan Delafield-Butt has found that dropping the philosophical assumptions of materialism, and adopting in their place panpsychist assumptions, affords deeper insights into the nature and character of autism. In his paper, Delafield-Butt lays out the case for this, with reference to the panpsychist framework of Alfred North Whitehead.

In our next paper, Robert Prentner defends the *interface theory*, which he has developed in collaboration with Donald Hoffman and others. The interface theory has much in common with panpsychism. Both take fundamental reality to be made up of consciousness. However, whereas panpsychism holds that the physical world is also fundamental (because the physical world is made up of consciousness), the interface theory – or 'idealism' as we philosophers have called it for a couple of

hundred years – holds that there is a more fundamental (mental) reality *underlying* the physical world. Prenter pits panpsychism against the interface theory, arguing that the latter offers a more robust, less dualistic theory of consciousness.

Chris Fields has developed a detailed form of panpsychism: minimal physicalism. In his paper in this volume, however, Fields raises some challenges to Philip Goff's conception of the science of consciousness. Fields is skeptical that science can or should be in the business of accounting for the specific character of conscious states, e.g., the redness of a red experience, as opposed merely to accounting for why those conscious experiences exist at all (it is interesting that this approach seems to be the precise opposite of the 'real problem' approach Seth defends in his paper). Fields also expresses his suspicions that the real motivation for the 'consciousness war' between dualists, materialists and panpsychists may be a yearning, on the part of some opponents of materialism, for human exceptionalism.

The Philosophers

The volume includes nine papers by academic philosophers (excluding the response piece from Goff). Two of these papers defend and elaborate the panpsychist position. Luke Roelofs explores the question as to whether, and to what extent, panpsychism classifies as scientific worldview. In addition, the paper offers a nuanced discussion of what exactly it means for a philosophical thesis such as panpsychism to count as scientific in the relevant way. In the following paper, Annika Harris explores a fundamental problem that panpsychists face, which has gained much attention in the recent literature, known as the 'combination problem'. Harris diagnoses the problem as resulting from the conviction that, for any given conscious experience, there exists the 'subject' or the 'self' that has the experience. Once we realise that subjects don't really exist in the first place, she argues, the problem goes away.

Five further papers focus on raising challenges for panpsychism; a couple also promote an alternative, physicalist view. Damian Aleksiev argues that while panpsychists focus on explaining consciousness, they face problems when it comes to accounting for the physical world. In particular, the argument is that if we conceive of the intrinsic nature of matter in terms of consciousness, then several facts about physical reality become difficult to explain. Alyssa Ney, meanwhile, argues that panpsychism is not, contrary to what its defenders maintain, sufficiently well-motivated by its underlying claims concerning physics and the nature of matter. She also argues that physicalists are in just as good a position as panpsychists when it comes to accounting for free will, objective value, and meaning.

The remaining three essays from this grouping challenge panpsychism from a different angle. Again, panpsychists are primarily concerned with explaining consciousness. However, as these authors point out, there is a related explanatory task, concerning, not consciousness, but the sensory qualities of external things (such as the redness of a rose, or the distinctive smell of coffee). Both Keith Frankish and Michelle Lui argue that panpsychists repeat the 'Galilean mistake' of supposing that the sensory qualities are instantiated 'in the mind' rather than by external objects. Frankish then argues that instead, we should deny that *anything* instantiates such qualities, which, he claims, then makes it that much easier to embrace a reductive materialist position. Michelle Lui, by contrast, defends sensory quality realism, i.e., the view external things really possess the full range of sensory qualities they seem to, and criticises the panpsychist for not respecting this position. In a similar vein, Moran presupposes precisely the kind of sensory quality realism that

Lui defends, and then maintains that on this assumption, there is much about the physical world that panpsychists are not in a position to explain. He also claims that while certain nearby positions to panpsychism may be able to meet the challenge he articulates, there is a certain kind of non-reductive physicalism that fares just as well.

The two final papers by philosophers are concerned with connections between panpsychism and the more familiar materialist and dualist positions. While sympathetic to Philip Goff's proposal for a 'post-Galilean' science of consciousness, in which consciousness is taken to be a fundamental feature of reality, Ralph Weir argues that post-Galileans end up being committed to a radical form of dualism known as substance dualism. Pushing in a contrary direction, Galen Strawson urges that panpsychism in fact classifies as a form of materialism, and indeed arguably the most defensible form. Strawson also provides a helpful, detailed discussion of what the doctrine of materialism actually amounts to.

The Theologians

Panpsychism is often assumed to be a spiritual doctrine. However, many contemporary proponents of panpsychism are resolutely secular. They may not believe in a transcendent reality but they do believe that people have experiences – they feel pain, they see colour – and this mundane and everyday reality needs to be accounted for in our overall theory of reality.

Nonetheless, some have argued that there are important connections between panpsychism and spiritual convictions of some form or another. Joanna Leidenhag, in her paper, argues that the motivations that lie behind the arguments put forth in support of panpsychism, if applied consistently, lead to belief in God. The panpsychist demands an intelligible account of how consciousness emerges. But is it consistent to demand an explanation of consciousness without also demanding an explanation of the existence of the universe itself? Leidenhag thinks not, and suggests this line of reasoning can be satisfactorily concluded only by a commitment to theism.

In the final essay of the volume, Sara Lane Ritchie explores the connections between panpsychism, psychedelic experiences, and spiritual flourishing. It is common for the person undergoing a psychedelic experience to feel a connection to *ultimate reality*, however that is conceived of (Ritchie examines a number of options, including panentheism, the view that 'the entire natural world exists within God, but also that God is, in some sense, more than the natural world'). Presumably a materialist must reject these experiences as delusional. However, Ritchie argues that the worldview of a panpsychist may be consistent with the verdicality, i.e. the non-delusional nature, of these kinds of psychedelic experiences.

Replies from Philip Goff

In the final essay, Philip Goff responds to the essays of the volume. He also explores some ideas on what a 'post-Galilean' science of consciousness – one which takes consciousness to be a fundamental feature of reality – might look like.