

# Panpsychism and the Quantum Mechanics of the Conscious Universe

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The field of quantum mechanics is headed towards a massive paradigm shift. What's the big crisis? Consciousness. It's the topic that has puzzled philosophers, psychologists, and now physicists since the beginning of thought. Traditionally, there are two problems when it comes to consciousness. The easy problem asks mechanistic questions like how do our neurons work, how do we focus our attention, or how does the visual system turn waves of light into a clear, coherent picture? Easy problems of consciousness are at the heart of modern cognitive science. Although they are actually difficult to solve, the easy problem of consciousness are called easy because they can be measured using scientific methods and instruments. However, there is also the hard problem of consciousness. The hard problem of consciousness deals with subjective experience. Does a piece of chocolate taste the same to two different people? How can we test this hypothesis? Problems categorized under the hard problem of consciousness avoid the methods of modern science. We know that experience comes from physical mechanisms in the brain, but we have no idea how and why they do. Theories in physics and biology today cannot account for subjective phenomena, making their research programs fundamentally incomplete. However, a group of philosophers have proposed a theory of the universe that can account for the presence of consciousness: panpsychism. Panpsychism is the proposal that mentality is ubiquitous and fundamental in the natural world. Basically, like matter, everything in this universe has a little bit of consciousness. Panpsychism is now new. From pre-socratic philosophers like Thales to Spinoza and ancient Taoist

philosophy, the theory that consciousness is a fundamental part of the universe is a prevalent idea that should be taken as a serious contender for the theory of everything.

Panpsychism tries to solve the mind-body problem by providing a middle way for materialism and dualism. Materialism claims that everything in the universe is purely physical. Subjective experiences are just a byproduct of neurons firing. Materialists believe that after years of scientific research, we can explain consciousness based solely on a physical model. However, describing the whole human experience with physical particles will always leave some fundamental part of subjectivism out of the explanation. Even if we can locate the specific neurons that fire when we taste chocolate, we still would not know if that experience is different than another person's firing neurons. This is why dualists believe humans have a body and a mind. The body is the physical vehicle that contains the immaterial mind that experiences everything. However, there are major problems to this view as well. If the body and the mind are two separate entities, how do they interact? Moreover, if the mind is immaterial, how did it emerge from a strictly material universe? Panpsychism tries to solve these problems by claiming the universe is made up of consciousness. Unlike the materialist view, panpsychism allows for the existence of first-person subjective experience. But, it does not have to deal with the dualist's mind-body problem because they claim matter and consciousness are essentially intertwined. In panpsychism, matter and consciousness are like explanation and prediction: you can't have one without the other. Panpsychism is an attractive theory for philosophy of mind because it does not rely on emergent properties, new entities that arise from the more fundamental pieces. In solving the mind-body problem, panpsychism also solves another problem for philosophers: the problem of other minds. In a strictly materialist or dualist perspective, there is no way we can be sure that other humans have a consciousness like we do. Both of their theories ultimately lead to solipsism. However, with panpsychism, we can be

certain that others humans have conscious properties that allow them to see, hear, think, and feel the way we do.

Panpsychism doesn't just help us understand the nature of our consciousness. It also clears up some issues in the physical sciences. After Galileo, modern physics is mostly based on mathematics and dedicated observation. Although we've made great strides in explaining and predicting the Earth and the universe through these methods, they do not tell us anything about the intrinsic qualities of nature. Like the easy and hard problems of consciousness, physics only shows up the physical and mechanistic workings of the universe. For example, we can know the mass, charge, and position of an electron. But, this only show the dispositional behavior of these physical entities and not the beingness of electrons. Modern physics can be compared to the behaviorist paradigm in psychology. Although it can tell us a lot about how humans behave, it fails to capture the intrinsic nature of humans just as physics fails to capture the intrinsic nature of the universe. Bertrand Russell talked about this problem of physics in his 1927 book *The Analysis of Matter*. Russell created a philosophical movement called Russilian Monosim. These philosophers are interested in the hidden, instrincisc parts of matter that are inexplicable by the relative mathematical concept of physics today. The hard problem of consciousness arises because we think the extrinsic explanations of physics is the full picture of the universe. However, Russellian Monism believes that we can explain the intrinsic nature of matter by prescribing consciousness to it as well. With panpsychism, we can understand the behavior of the electron and why it's behaving the way it is.

Some empirical data in quantum mechanics actually suggests that panpsychism might be true. One famous experiment is the double slit experiment. In the double slit experiment, physicists had an atom gun that shot single particles of electrons through a wall that has two slits on it. The particles landed on a strip behind the slits and were measured to see what kind of

pattern they would create. If the electrons were particles like grains of sand or marble, experimenters could expect the pattern to be in line with the slits. But, the electrons were exhibiting an interference pattern. An interference pattern is created when a wave, like light, moves through both slits but the waves interfere with each other. The pattern shows up more intensely on the parts where the waves didn't interfere with each other and more diminished on parts where they did. That means each electrons did not act like a particle but like a wave. Scientists were very confused by this emerging pattern so they decided to replicate the experiment again, this time with a camera to observe just how the electrons moved through the slits. However, when they checked the results of the pattern again, the electrons exhibited particle behavior, not wave behavior. The only condition that changed in this experiment is the observing camera. However, the electrons were able to change their behavior from wave interference pattern to particle pattern just by experiencing the observer there. This experiment is a big deal for quantum mechanics, physics, and reality in general. If matter is changed by the observer and science is based on our observations, how do we know what we are studying is real? The fact that the electrons were able to change their behavior by sensing there was an observer in the room suggests that they have some form of first-person subjective experience. Although it might not be as complex as thought or emotions, this is still consciousness.

Although all panpsychist agree that consciousness is fundamental, they all have different ideas about how they come about. Similar to panpsychism, there is also panprotopsyism that suggests that it's proto-consciousness that is fundamental instead. Instead of everything having a consciousness, everything has the potential to develop consciousness. This stance gives the philosopher some flexibility in assigning consciousness to objects, but is a weaker stance than panpsychism. David Chalmers, a big proponent for panpsychism, made the distinction between constitutive panpsychism and non-constitutive panpsychism. Constitutive panpsychism claims

that human or animal consciousness are not fundamental but are made up of smaller more fundamental conscious matter. However, non-constitutive panpsychism claims that human and animal consciousness are the fundamental pieces and there are no smaller conscious parts you need to build up to a complex consciousness. Under constitutive panpsychism, there is micropsychism or cosmopsychism. People who believe in micropsychism believe that complex consciousness is built up from smaller, microscopic conscious particles. However, cosmopsychism says that all consciousness is grounded at the cosmic level. Instead of building up to more complex consciousnesses, everything is derived from one big universal consciousness.

Although panpsychism gives us a lot of explanation power, it doesn't come without its faults. One of the biggest problems constitutive micropsychism suffers from is the combination problem. It asks how is it that small conscious particles combine to create a larger, more complex entity like a brain? Particles can only be arranged in certain ways. If the conscious particles that combined to create our consciousnesses are arranged in a certain fashion, how many other combinations of conscious experiences can there be? Another variation of the combination problem is the subject summing problem. This problem asks how is it possible for conscious subjects to combine and create a completely new conscious subject? This problem is mostly for constitutive panpsychism that claims there are no emergent properties of conscious particles. Finally, there is the problem of the incredulous stare. Panpsychism goes directly against our instincts of how the world works. How can electrons, trees, and a coffee mug have first person experiences as humans do? Panpsychism seems like a preposterous theory considering how we think the world works. Although these problems are challenging for the panpsychist, they don't necessarily disprove its fundamental theories. The combination and subject summing problem are open-ended questions that can be answered after some years of

investigation. Meanwhile, the incredulous stare is no reason to stop believing in panpsychism. Just because a theory goes against our intuitions doesn't mean it's false. After all, people believed the Earth was the center of the universe for millennia.

Panpsychism is just the right kind of crazy theory that can change the way we understand ourselves, our universe, and our reality. If every entity did in fact have a consciousness, there are some serious ethical repercussions to the way we live our lives. For example, deforestation considered mass murder, vegans would not be cruelty free, and turning off my conscious computer is depriving it from subjective experience. Although panpsychism has been around since the Ancient Greeks, we finally have the technology and power to see if the theory can hold up in our universe. In fact, the double slit experiment gives us a positive heuristic that panpsychism just might be the theory of everything. If it is, the hard problem of consciousness, the problem of other minds, and the intrinsic nature of the universe will be finally understood. Panpsychism would prove that humans are not special creatures blessed with the gift of consciousness but just another endless variation of life.

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