

About consciousness

We have not agreed on what consciousness is. It is typically thought of as an unsolved problem. I think the reason is that people are referring to different things when they use the term. And because we don't agree on the definition, we can't agree on an understanding.

So, toward that end, I thought I would characterize five possible ways we can think about what is and is not conscious. And then you can identify the one you feel is most valid, or at least be able to discern where a particular theorist of consciousness is coming from.

In order, from most general to most specific, here are five possible perspectives on consciousness:

1. Reactivity. Anything that is able to respond to its environment is conscious. All this necessitates is a something that is a discrete entity as distinguished from what's around it. By this definition, a stone is conscious. It reacts to heat, for example, by expanding. It reacts to a blow by chipping. Even a molecule is conscious, since it reacts to the influence of neighboring molecules. Obviously, this way of looking at things implies that everything is conscious. This is called

panpsychism. Consciousness is simply a property of the universe and everything therein.

This is not such an unlikely way to look at things. In various enhanced states of consciousness, this view powerfully emerges. Consciousness is seen as both the creator and all that is created, the source and very fabric of reality. Consciousness is the first and most basic fact of existence.

2. Choice. In this way of assessing consciousness, anything that can sense the world, and then decide how to react, is conscious. What is necessary is some way to perceive surroundings and then, based on an internal model of the world, choose a course of action.

This doesn't have to be at all complicated. Think of a thermostat. It senses the world through a thermometer, and decides to turn on or off, depending on the state of the environment that it perceives. Hot? Turn on the air conditioning. Cooled down? Turn it off.

Obviously, its internal world model is very limited. The thermostat only understands the world in terms of temperature. Nonetheless, it has a degree of freedom. It can act one way or another depending on its environment.

By this definition, all animals and plants, as well as many mechanical devices, are conscious.

3. Learning. In this way of understanding consciousness, anything that can learn qualifies. Learning involves not only an internal model of the world, however simple or complex, but also the ability to modify that model based on experience.

Therefore, a moth isn't conscious. If it were, it would learn that flying into a hot incandescent bulb singes its wings, and it wouldn't continue to do so until it immolates itself. But it doesn't have enough nervous system to learn.

Most animals and plants clearly do. It helps them stay alive. But what about artificial intelligence? It learns, and probably much better than we do. Since more decision-making capacity – that is, more information taken in and more complex internal decision processes – leads to better performance, AI by this metric is far more conscious than we are. AI already has far more sophisticated models of aspects of the world than we do. We may still be ahead in terms of having an overall, integrated model that enables us to deal with the world in all its complexity. But it's pretty obvious that the day is fast approaching when an AI-equipped robot will be better than human beings at doing anything.

4. Caring. If you read the previous paragraph and are despairing, fear not! We can consider consciousness to be a property of the universe that emerges with life, itself an emergent property. That is, at one point, anyway, the nonliving universe became alive. On this planet, about four billion years ago. Elsewhere, question mark. But here something fundamentally changed. Whatever is alive has to continually operate on the nonliving universe that surrounds it in order to remain alive. That continual preoccupying effort is what I call caring. Every plant and animal has it. It is the basis of everything every living thing does. Life, in all its forms, strives to stay alive.

No matter how capable AI gets, it will never truly have this property. We can program it, or prompt it to program itself, to simulate caring. It can pretend to be alive, to have feelings. It can say the right words and take the requisite actions so that it seems to be preserving its existence. It can be a convincing simulacrum of aliveness in terms of how it functions. But you and I know that it's just putting on a show. It doesn't really care. Caring is a property of mortality. And machines are not mortal. They can be induced to pretend to be so. But it's pretense. By this definition, only life really cares, and only life – all life – is conscious.

5. Self-reflection. This is the definition of consciousness I think most of us intuitively adopt. We consider that in order to

be conscious, one must have an ongoing sense of self, and ongoing knowledge of what that self is going through. Though it is a circular definition, this view of consciousness is that it is present life experience. No matter what I'm experiencing, there's a me that is registering what's happening.

Are we conscious when we're asleep? Most of us would say no. We have to have an awake, aware viewpoint – a present self. Are we conscious when we're dreaming? No, unless we are lucid enough in our dream to know we are dreaming. Yes, in sleep our body is still taking in information and making decisions. We feel uncomfortable and turn over. But we are not conscious of that process.

This view asserts that only living beings with a sense of self are truly conscious. We clearly are, except when we're unconscious. What about animals and plants? I don't know about plants, but I suspect they are in a way that is experientially quite different from human experience. As for animals, I think it's quite evident that some more complex animals do have a sense of self and an ongoing monitoring of what they are experiencing and how they are doing.

My dog, for example, feels elated when I praise her, and seems ashamed when I berate her (hopefully not very often!). She seems to me to have an inner life, just as I do. It may not

be filled with words, but it is filled with sensory images, memories and expectations. And an ongoing awareness of herself.

So, that's my take on what consciousness is. Now I'd like to stick my neck out a little bit and talk about the *hard problem of consciousness*. You may be familiar with it. "How can a three pound lump of physical substance, the brain, produce the non-physical internal world in which we live? How can matter produce experience?"

Here is where I get bold. I don't think it's a problem at all. I think consciousness is simply the brain doing what it is doing. It is just how the brain functions, how interconnected brain areas work together. It is not different – somehow above – the physical workings. It *is* the physical workings.

Consider what you're experiencing now. You're having a visual display of the part of the world you're looking at, thoughts in words about it, maybe feelings, maybe memories or anticipatory images. These are just physical parts of your brain working together. Your ongoing, conscious sense of self is your brain's integrating function, the way your brain puts together the various inputs and activities to give you, at this moment, the world model that best serves you.

In other words, consciousness is just the ongoing assembly of some of its many functions, constructed to give you a perception of yourself and your world at this moment.

The brain does more, of course. It monitors and adjusts the body. For this, you don't need to be conscious. You breathe whether you're aware of it or not. And you don't generally want or need to exercise any choice. This is the case for most of your body functions. The brain just regulates them without your awareness.

This is predominantly what the brain is doing. It's spending a lot more processing power keeping you alive and moving than on your conscious self. But the conscious self helps in deciding how to best navigate the world, which way to turn and what to do next.

I assert that we needn't ask how consciousness somehow miraculously arises from our brain. We need only discover how our brain works to produce what we experience. Consciousness is not some extra-material factor, some mysterious addition to physical reality. It is simply an aspect of physical reality, the living brain, doing what it naturally does.

Spencer Sherman, PhD, August 2026