

# **BRAIN SCIENCE PODCAST**

*With Ginger Campbell, MD*

## **Episode #5**

### **A Discussion of Consciousness: A Brief Introduction to Philosophy of Mind**

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## **DISCUSSION**

This is the *Brain Science Podcast*, Episode 5, “Consciousness,” and I’m your host Dr. Ginger Campbell. The question of consciousness has long fascinated philosophers, but until fairly recently it was considered off limits for science. It was considered the last mystery. As recently as 1994, Francis Crick, who is famous for being one of the co-discoverers of DNA, wrote a book which he called, *The Astonishing Hypothesis*, because he proposed that the brain was the source of consciousness—what he called “neural correlates of consciousness.” And that was still considered a radical idea in 1994.

Now growing scientific evidence that the brain is the sole source of consciousness threatens to make some of the standard philosophical questions obsolete. Since consciousness is what makes us who we are, it’s a very fascinating area. Before I talk about some of the brain science and how it relates to the question of consciousness I’m going to introduce you to some of the philosophical questions.

The most obvious question is: What is consciousness? We could spend hours just debating this question. Is consciousness the same thing as awareness? If so, then what does the phrase ‘conscious awareness’ mean? The famous

philosopher, Descartes, argued that animals were not conscious and therefore couldn't suffer. Obviously this defies common sense, and now it has even been clearly disproven by what we know about animal nervous systems. The next question, then, would be: At what level of awareness is a living being conscious?

The question of what is consciousness is both a philosophical and a scientific question. I am going to tend toward the scientific use of the term 'consciousness' and I am going to use the working definition, which is that consciousness is an awareness of ourselves and the world around us. Arguments about the definition of consciousness are also deeply embedded in arguments about the possibility for artificial intelligence, and whether a conscious computer could exist. But this is not a topic we will have time to talk about today.

One of the age-old philosophical questions about consciousness regards the nature of the mind. Is the mind physical? There is a philosophical position called dualism, which argues that the mind is somehow separate from the physical and separate from the body. This is related to the philosophical position of idealism vs. materialism. Idealism is the idea that there is some aspect of reality that goes beyond what we can detect with our senses, whereas materialism is the position that the laws of energy and matter discovered by physics describe the entire universe. So, if you take the position that the mind is somehow separate from the body, this is dualism.

In the philosophy of consciousness there is debate over the existence of something that is called "the hard problem." This problem was defined by David Chalmers, who is a self-proclaimed dualist. Basically, it's how do physical processes create subjective experience? Chalmers argues that since there's something subjective—that is, what it's like to be us—there's a subjective quality of experience that can't be explained by the physical brain processes. He calls these subjective qualities 'qualia.' He has been quoted as saying, "To be conscious is to have qualia."

This position is also well described in a famous paper by Thomas Nagel called, “What Is It Like to Be a Bat?” He claimed that we can’t know what it’s like to be a bat, even if we believe that there is something that it is like to be a bat. So, that is the position that says qualia exist. On the other end of the argument Daniel Dennett, who is a well-known materialist, argues that qualia do not exist, and also that the hard problem doesn’t exist. In other words, he’s arguing that once we explain all the physical processes of the brain, that’s all there is.

Now, philosophers like to use thought experiments to argue for different viewpoints. Sometimes I think that philosophers are more like lawyers than they are like scientists, because scientists like to find the facts and prove or disprove things. Philosophers like to argue, and they love a beautiful argument irrespective of whether it proves anything.

An example of a thought experiment in favor of the so-called hard problem was invented in 1982 by Frank Jackson. This is the famous story of Mary the color scientist. In this thought experiment Mary is a person who lives in a black-and-white world, but she has studied everything there is to know about color and color vision. And then at some point she gets to leave this black-and-white world and go out and actually see color. The argument is: When Mary goes out and sees color, will she experience something she didn’t already know?

Another thought experiment on the issue of consciousness was invented by Chalmers in 1996, when he invented what’s known as the “philosopher’s zombie.” He says, “A zombie is just something physically identical to me, but which has no conscious experience. It’s all dark inside.” So, Chalmers seems to be arguing that, since there is something about consciousness that can’t be described by the physical function of the brain, you could make a robot—or zombie—that did all the physical stuff but still wasn’t conscious.

Another famous thought experiment is John Searle's so-called "Chinese Room" argument, which is used against strong artificial intelligence. I mention this for completeness, but I don't really have time to describe it today. We'll come back to this one in a future discussion on artificial intelligence.

So, that's the hard problem: Is there something else besides the physical description of what our brain does to make consciousness? And, as I said before, philosophers can't agree on whether the hard problem exists. Scientists tend to not even understand what the philosophers mean by the hard problem. Or, if they do, they wonder why the philosophers are asking this instead of concentrating on solving how the brain works.

Another important philosophical question related to consciousness is: Does free will exist? And there are a lot of findings in brain science that are relevant to this. So, those are a few of the philosophical questions that have existed for a long time. Now, what does brain science have to say about these questions? Well, first of all, on the issue of dualism, I think most scientists would agree that the evidence is wholly against dualism. However, the idea doesn't seem to want to go away, which is shown by someone like Chalmers who is still an admitted dualist.

I just recently listened to a lecture by John Searle, who is one of the well-known philosophers of the mind who opposes dualism. And you can listen to this. It's the January 22<sup>nd</sup> episode of *The Philosopher's Zone*. They even have the transcript available at the website. I'm going to put a link for this in the Show Notes. This is a good discussion of why dualism is a bad idea, aside from the obvious fact that it doesn't fit what we know about how the brain creates consciousness.

Most of what has been argued over the centuries to be something that can't be done by the brain has been shown to be done by the brain. So, to me it doesn't seem unreasonable to assume that the things that we haven't found yet will also

be found. But that shows, of course, that I have a bias. I am pretty much a materialist, and a non-dualist.

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Some people might argue that the hard problem is more interesting, and ask whether the hard problem will disappear the more we know about how the brain works. An example that might argue for the idea that the hard problem will disappear would be what we've discovered about emotion. 30 years ago—and maybe even more recently—emotions were seen as separate from the mind and separate from consciousness. Over the centuries various philosophers have thought that emotions did not have causal effects. And even when I was in medical school, physicians were still ignoring the effects of emotions on health.

Then came the discovery of the neurotransmitters in the early 70s and the fact that some of these neurotransmitters cause emotions. We have learned that it's a two-way communication between the brain and the body, and that we have perception, both conscious and unconscious, of emotions as a result of these neurotransmitters. It is now becoming clear that emotions are not only part of what the brain does, but deeply embedded in the brain's functions.

Some parts of the brain that are involved in emotion are very old. We've inherited them from our pre-human ancestors. Of course, there's still a preexisting prejudice about the superiority of logic over emotion. The first response of researchers tends to be that the higher centers of logic must override the lower emotional parts of the brain. But the emerging picture is much more interesting. Researchers like Antonio Damasio have shown that we actually need the emotional centers of our brain to make good decisions.

Not surprisingly, philosophers, being human, seem to be reluctant to give up the old ways of looking at consciousness. That is the reason why I argued in my

recent discussion of philosophy and science on my [Books and Ideas](#) podcast that it's important that philosophers keep up with the science in order for them to be able to make relevant contributions. Because we need the philosophers. They help us to think up the big questions.

Now, when it comes to the hard problem—that is, is there something about subjective experience that can't be explained by brain function—I find myself wondering whether some people might be attached to the hard problem because they want to cling to the idea that consciousness is mysterious. For one thing, if everything about consciousness is explained by brain functions, it has implications about the question of free will. But I'm not going to try to get into free will today, because that's just beyond what I can do. I'm going to save free will for a future podcast, because we have to get into a lot more details of that research to talk about it.

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This was just a brief introduction to some of the philosophical questions about consciousness and, hopefully, how they could be relevant to looking at the science about the brain. This subject is a very complicated and, of course, interesting one. I'm going to be coming back to it on numerous occasions in the future.

On the website at [brainsciencepodcast.com](http://brainsciencepodcast.com) I will post some references, including some of the books that I've read. If you haven't read anything about consciousness, Susan Blackmore has written several books that are good introductions to the subject. And I will put some links on the website to the philosophers that I talked about today.

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As always, I would really like to have your feedback. You can write to me at [docartemis@gmail.com](mailto:docartemis@gmail.com), and visit the website at [brainsciencepodcast.com](http://brainsciencepodcast.com). I've

put a page on the website called 'How You Can Help,' which has links to iTunes so you can put a review, and to Digg, [Podcast Pickle](#), and some of the other directories. Anything you can do to help me get more listeners is very much appreciated.

Also, the website has an RSS feed. And if I had some subscribers to the RSS feed I could begin to add some daily content. But I'm not going to do that until I know someone is actually going to be seeing the content.

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On the next episode of the *Brain Science Podcast* I'm probably going to be talking about emotion. This is a subject I've alluded to over the last several podcasts but haven't really gotten into in any detail yet. If you have any ideas or suggestions about topics you would like to hear about, be sure to write me at [docartemis@gmail.com](mailto:docartemis@gmail.com).

I look forward to talking to you in a couple of weeks.

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Transcribed by [Lori Wolfson](#)

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