

## **Consciousness: The Lack of Consensus About Feelings of Being**

From [Marc Bekoff, Psychology Today / Animal Emotions](#)

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*An update on how brains create subjective experiences.*

I recently read an informative update about how the human brain, a relatively small squishy tofu-like organ, makes sense of the most baffling problem in the science of the mind—consciousness. Here are some wide-ranging questions and a summary of different views about them.<sup>1</sup>

### **How can we define consciousness?**

Researchers generally agree that consciousness incorporates all kinds of subjective experiences. These include feeling joy, sadness, and pain, recognizing friend and foe, and knowing that you are you.

However, experts disagree on general and specific details, often while considering the same data. While some believe that humans don't have the cognitive capacities to solve what consciousness expert Columbia University's professor David Chalmers calls the "[hard problem of consciousness](#)"—how to explain why and how we have subjective experiences at all—others disagree.

The "easy problem" is to explain the brain processes responsible for consciousness, and many people think this is solvable. While there are those who believe that we can't really learn about how brains generate consciousness and eventually people will stop trying to figure it all out, others argue that as we learn more about the easy stuff, we'll be better able to deal with the hard stuff.

### **How many states of consciousness are there?**

The simple answer is we don't really know. The theory that "consciousness is on" when you're awake and "it's off" when you're asleep doesn't hold water. That's because when we dream we can have subjective experiences, and there's no reason to think the same isn't true for other animals. Furthermore, some people who have been diagnosed as being in a persistent vegetative state show brain activity that's indicative of some awareness. Many researchers feel that consciousness is multi-faceted and multi-dimensional, but right now we don't know what the dimensions are.

### **Can physics explain consciousness?**

As in other discussions about what consciousness is all about, experts disagree. For example, Tufts University's Daniel Dennett and Princeton University's Michael Graziano maintain that when we have a better understanding of how the brain creates the world in which we live we'll have a good idea about the nature of subjective experiences.

### **What about consciousness in other animals?**

Different behavior patterns indicate consciousness. Most researchers and others agree that a wide variety of nonhumans behave in ways that suggest they have inner lives. Many also want to know how nonhumans' inner lives and subjective experiences differ from our own.

Of course, it will also be interesting to learn about the similarities between humans and nonhumans. In the 2012 [Cambridge Declaration on Consciousness](#) in which [a handful of scientists concluded animals are](#)

conscious despite this being quite clear for centuries, they agreed that there are many similarities between humans and other animals.<sup>2</sup>

There's also are what researchers call "levels of consciousness," with humans placing ourselves on top of the hierarchy. I've always felt uncomfortable about such a view, and in an essay called "[Dimensions of Animal Consciousness](#)," London School of Economics philosopher Jonathan Birch and his colleagues argue it would be better to consider five different elements of conscious experience.<sup>3</sup> Birch and his colleagues note, and I completely agree, that asking if one animal is more or less conscious than another doesn't make much sense because some might score high in some areas and low in others.

### **When did consciousness evolve?**

The question considered here is whether or not there is a common ancestor across the animal kingdom. Researchers disagree, but some feel that at least among vertebrates, there was a common ancestor, but among invertebrates such as honeybees and spiders, consciousness evolved independently.

### **Could we ever know if a machine were conscious?**

Suffice it to say, experts disagree.

### **Why did consciousness evolve?**

Many books have been written on why consciousness evolved—what's it good for—and many biologists agree that it allows individuals to display flexibility in behavior that allows them to adapt to changes in their social and non-social environments. As a result, instead of reacting in hard-wired ways to a given situation, conscious animals can make decisions that help them adapt to changing conditions. I agree with this view and it's important to note the seminal and courageous work of Donald Griffin, who put forth similar ideas in three extremely important books.<sup>4</sup>

### **Where Do We Go From Here?**

While some people might be frustrated because it seems as if we really don't know much about consciousness in humans and nonhumans despite the incredible amount of interest in this topic and because experts disagree on what different data mean, I find discussions and debates to be fascinating and thought-provoking.

There is still much to ponder and learn and I'm glad that people haven't given up on trying to figure out what makes you, you, among human and nonhuman animals.

## **References**

### **Notes**

- 1) The essays aren't available online, but I can provide information for interested readers.
- 2) In the Cambridge Declaration we read: "The absence of a neocortex does not appear to preclude an organism from experiencing affective states. Convergent evidence indicates that

non-human animals have the neuroanatomical, neurochemical, and neurophysiological substrates of conscious states along with the capacity to exhibit intentional behaviors. Consequently, the weight of evidence indicates that humans are not unique in possessing the neurological substrates that generate consciousness. Non-human animals, including all mammals and birds, and many other creatures, including octopuses, also possess these neurological substrates.”

3) The abstract for this essay reads: "How does consciousness vary across the animal kingdom? Are some animals ‘more conscious’ than others? This article presents a multidimensional framework for understanding interspecies variation in states of consciousness. The framework distinguishes five key dimensions of variation: perceptual richness, evaluative richness, integration at a time, integration across time, and self-consciousness. For each dimension, existing experiments that bear on it are reviewed and future experiments are suggested. By assessing a given species against each dimension, we can construct a consciousness profile for that species. On this framework, there is no single scale along which species can be ranked as more or less conscious. Rather, each species has its own distinctive consciousness profile."

4) The Question of Animal Awareness: Evolutionary Continuity of Mental Experience; Animal Thinking; and Animal Minds: Beyond Cognition to Consciousness.

Bekoff, Marc. [Consciousness: How a Squishy Brain Connects to Make You, You.](#)

\_\_\_\_\_. ["The First Minds" Investigates the Origins of Consciousness.](#)

\_\_\_\_\_. [Animal Consciousness: New Report Puts All Doubts to Sleep.](#) (A thorough summary of what we know shows skeptics ignore solid scientific data.)

\_\_\_\_\_. [Scientists Conclude Nonhuman Animals Are Conscious Beings.](#)

\_\_\_\_\_. [Insect Brain Capable of Conscious Subjective Experiences.](#)

\_\_\_\_\_. [Animals are conscious and should be treated as such.](#) New Scientist, September 19, 2012.

\_\_\_\_\_. [Do Animals Dream? Science Shows Of Course They Do, Rats Too.](#)