

## What is Consciousness? Part I: The Hard Problem

### 1. Conscious experience

Conscious experience is *qualitative*...

- Experience presents *qualities*: sounds, colours, shapes, textures, smells, light and dark, pains and pleasures, comforts and discomforts.
- The qualities are *structured*: this noise is over here, this colour is over there, etc.

Conscious experience is *subjective*...

- Conscious experiences are *had by subjects* (e.g. me, you).
- They give a subject a *point of view* on the world and on its own body.
- This point of view *cannot be fully understood or known* 'from the outside'—only 'from the inside' (see Nagel 1974).

The subjective, qualitative character of conscious experience is summed up (but not defined) in the phrase 'what it's like'. When you have a conscious experience, there is 'something it's like' to be you.

### 2. The easy problems and the hard problem

The question of how conscious experience relates to the body and brain is an old problem in philosophy. Recently, consciousness has also become a major research focus in neuroscience and cognitive science.

**Overarching Q:** Why does brain activity give rise to conscious experience?

Chalmers (1995) suggests we should break this question down into the 'easy' problems of consciousness and the 'hard' problem.

The *easy* problems are those of explaining functions/abilities associated with conscious experience, such as the ability to discriminate and categorize environmental stimuli and the ability to report one's own perceptions. They are 'easy' only in the sense that, because they are questions about *abilities* and *functions*, we can see how they might be approached using the standard methods of neuroscience and cognitive science.

The *hard* problem is the problem of explaining why any of these brain functions give rise to *subjective, qualitative* experience:

Why doesn't all this information-processing go on 'in the dark', free of any inner feel? Why is it that when electromagnetic waveforms impinge on a retina and are discriminated and categorized by a visual system, this discrimination and categorization is experienced as a sensation of vivid red? We know that conscious experience does arise when these functions are performed, but the very fact that it arises is the central mystery. (Chalmers 1995, p. 203)

### 3. Avoiding the hard problem

Neuroscience has made significant progress on the 'easy' problems. But have we seen any progress on the hard problem?

One important recurring theme in the neuroscience of consciousness is that experience *depends on the cerebral cortex* and involves the coordinated activity of different cortical areas.

Francis Crick, Christof Koch (1990): Conscious experience is associated with 35-75Hz 'gamma oscillations' (brainwaves) in the cortex.

Yeah but... why do 35-75Hz gamma oscillations in the cortex give rise to *conscious experience*?

Bernard Baars (1988), Stanislas Dehaene (2013): Conscious experience consists of a 'global workspace'.

Yeah but... why is information in the 'global workspace' *consciously experienced*?

Another important theme is that conscious experience consists of a *special kind of internal 'image', 'map', 'model' or 'representation'*.

Prinz (2012): Conscious experience consists of 'attended intermediate representations' ('AIRs').

Yeah but... why are these special representations *consciously experienced*?

Feinberg and Mallatt (2016): Conscious experience consists of internal 'maps' of body and world (which are present in even very simple animals such as lampreys).

Yeah but... why are these internal maps *consciously experienced*?

#### 4. Denying the hard problem

The analogy with life:

The easy problems of life include those of explaining the following phenomena: reproduction, development, growth, metabolism, self-repair, immunological self-defence . . . These are not all *that* easy, of course, and it may take another century or so to work out the fine points, but they are easy compared to the really hard problem: life itself. We can imagine something that was capable of reproduction, development, growth, metabolism, self-repair and immunological self-defence, but that wasn't, you know, *alive*. The residual mystery of life would be untouched by solutions to all the easy problems. In fact, when I read your accounts of life, I am left feeling like the victim of a bait-and-switch. (Dennett 1996, p. 4)

#### Primary reading:

Chalmers, David J. 1995. Facing up to the problem of consciousness. *Journal of Consciousness Studies* 2:200-19.

#### Further reading:

Dennett, Daniel C. 1996. Facing backwards on the problem of consciousness. *Journal of Consciousness Studies* 3:4-6.

Hardcastle, Valerie G. 1995. The why of consciousness: a non-issue for materialists. *Journal of Consciousness Studies* 3:7-13.

Nagel, Thomas. 1974. What is it like to be a bat? *Philosophical Review* 83:435-50.

Seth, Anil. 2016 The real problem. *Aeon Magazine*, 2 November 2016. <https://aeon.co/essays/the-hard-problem-of-consciousness-is-a-distraction-from-the-real-one>

#### Other references:

Baars, Bernard. 1988. *A Cognitive Theory of Consciousness*. Cambridge University Press.

Crick, Francis and Koch, Christof. 1990. 'Toward a neurobiological theory of consciousness', *Seminars in the Neurosciences*, 2: 263-75.

Dehaene, Stanislas. 2014. *Consciousness and the Brain*. Viking Press.

Feinberg, Todd E. and Mallatt, Jon M. 2016. *The Ancient Origins of Consciousness*. MIT Press.

Prinz, Jesse J. 2012. *The Conscious Brain*. Oxford University Press.

**Next time:** Materialism vs dualism about consciousness.

**My office hours:** 2pm-4pm, Tues. 10<sup>th</sup> October and Tues. 17<sup>th</sup> October, LAK 4.05. Book via LSE for You.