

Getting the Measure of Consciousness

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The hard problem of consciousness is to explain the experience of qualia. But everything gets easier once we realise that what has to be explained is not how qualia can exist as objective entities but rather why the conscious subject should *believe* that they exist. This essay lays out a programme for doing this. It makes radical proposals as to how the “qualia illusion” is created, and why sustaining this illusion is biologically adaptive.

No one doubts that our experience of phenomenal consciousness — the felt redness of fire, the felt sweetness of a peach, the felt pain of a bee sting — arises from the activity of our brains. Yet the problem of explaining how this can be so has seemed to many theorists to be staggeringly hard. How can the wine of consciousness — the weird, ineffable, immaterial *qualia* that give such richness to subjective experience — conceivably arise from the water of the brain? As Colin McGinn has put it, it is like trying to explain how you can get “numbers from biscuits, or ethics from rhubarb”.¹⁾ Jerry Fodor has recently claimed “The revisions of our concepts and theories that imagining a solution will eventually require are likely to be very deep and very unsettling. There is hardly anything that we may not have to cut loose from before the hard problem is through with us”.²⁾

If you smell theoretical panic, you would be right. But are the scientific answers really so far out of reach? Have people been beguiled by the truly marvellous properties of consciousness into asking for the moon, while what is at issue is really much more down to earth? Everybody says they are waiting for the Big Idea. But perhaps the big idea should be that consciousness, which is of such significance to us subjectively, is scientifically not such a big deal at all (though, as you will see, I think there would have to be several subsidiary big ideas contained within this).

It all depends on asking the right questions at the outset. Let me show the difference between good questions and bad ones in this context, with a familiar example. The picture below (Fig. 1) shows a solid wooden version of the so-called impossible triangle.

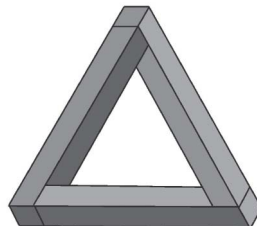


Fig. 1.

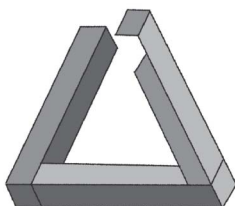


Fig. 2.

Consider what you might want to explain about the experience of looking at this object. Since it is at first sight so surprising and impressive, any one of us who did not know what was going on here might very well innocently ask the (bad) question: “How can we explain the existence of this triangle as we perceive it?” Only later — indeed only once we have turned over the page, seen the object from a different viewpoint, and realised that the “triangle as we perceive it” is an illusion (Fig. 2) — will it occur to us to ask the (good) question: “How can we explain the fact we have been tricked into perceiving it this way?”

Now, no one wants to think that consciousness is likewise some kind of trick (in fact, as I will argue later, it is probably important that we do not do so). But let us nonetheless see where the analogy may lead. The standard philosopher’s example of how hard the problem is, is the case of what it is like to see red. So, now, suppose you were to be looking at a ripe tomato: what might you want to explain about the extraordinary qualia-rich red sensation that you are having?

Since the qualia are indeed so up-front and remarkable, and since no one knows what this is really about, we are all, most probably, going to start off by asking what *may* be a bad question: “How can we explain the existence of these qualia as we experience them?” So here again it will only be if we undergo a radical shift in perspective and realise that the “qualia as we experience them” *could be a mental fantasy*, that we shall move on to asking what may be the good question: “How can we explain why we have the impression that such fantastic qualia exist even if they do not?” But, now, here is why it is likely to be so difficult to make this move: in the case of consciousness we cannot simply turn over the page to see the solution. We are all innocents, no one has ever seen qualia from a different viewpoint, we are stuck with the first-person perspective. So, the result is we persist with questing for the qualia as such.

Yet if consciousness *is* a trick, then of course this quest is a fool’s errand. It will make no more sense to try to explain the existence of qualia than it would to explain the existence of the impossible triangle. What we should be doing instead is trying to explain just how we have been *set up* — and why.

Well, *is* it a trick? The only way to find out, I would say, will be to take the idea of its being a trick quite seriously and think through what further questions would follow at a scientific level. And, though I realise I should not go overboard with the analogy, I believe the impossible triangle can continue to show the way.

A philosophical term of art may come in useful here. When people perceive, think, believe, and so on, these mental states are called “intentional states”, and whatever it is the particular state is *about* — the percept, thought, belief — is called the “intentional object”. So, with the wooden triangle, when we look at it from the special position, the triangle as we perceive it, that is to say the impossible triangle, is the “intentional object”. Meanwhile, the wooden thing we are actually looking at can be called the “real-world object”.

So, now, with phenomenal consciousness, let us see if we cannot make a similar distinction. Suppose that, when we are conscious of having a sensation, when we say *it is like something*, this thing it is like is the “intentional object of consciousness.” Then, if this is in any way similar to the case of the triangle, there will be a corresponding real-world object — presumably something going on in the brain — which is what we are actually engaging with and commenting on (whether we realise this or not; of course we mostly do not).

In which case, there will indeed be a series of questions to ask further.

1. What exactly is the real-world brain activity that we are engaging with when we say it is like something?
2. Why does this activity have the — tricky — properties it has, such that our experience of it is as if of something so strangely private, not-of-this world and indescribable in common terms?
3. What makes this trick work? How is it done?
4. What is the point? Why was it designed like this? What can have been the evolutionary advantage of our having these marvellous experiences?

I believe we can already propose plausible answers to each of these questions — although they are all quite radical. Here they are.

The real-world brain activity is the activity that I have called, in my earlier writing, “sentition”.^{3),4)} In response to sensory stimulation, we react with an evolutionarily ancient form of internalised bodily expression (something like an inner grimace or smile). We then experience this as *sensation* when we picture to ourselves — by monitoring the command signals — just what we are doing.

Sentition has been subtly shaped in the course of evolution so as to make our picture of it have those added dimensions of phenomenality. Sentition has, in short, become what I call a “phenomenous object” — defined as “something that when monitored by introspection seems to have phenomenal properties”.

I do not pretend to know yet how this is done, or what the neural correlate of phenomenous sentition is. For what it is worth, my hunch is that re-entrant circuits in the brain are creating complex attractor states that require more than the usual four dimensions to describe them — and that it is this that makes these “states of mind” seem to have immaterial qualities.*) But you do not need to understand what I have just said to get the message. Creating something that *gives the illusion* of having weird and wonderful properties need be no great shakes, certainly much easier than creating something that actually has them, especially when it is possible

*) If the time course of the activity in the re-entrant circuits is described by a delay differential equation, it will typically have a hyper-dimensional attractor.

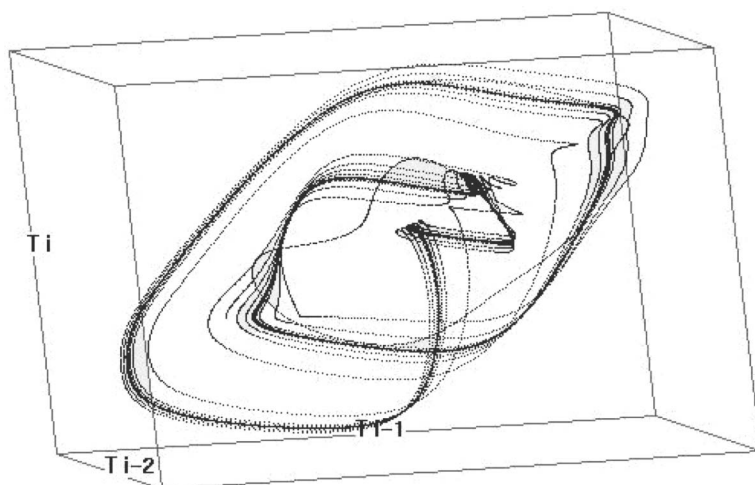


Fig. 3. A typical discrete delay differential attractor.⁶⁾

to restrict the point of view. (If you want a demonstration of how to make an impossible triangle with paper and scissors, there is a lovely one online.⁵⁾

There is every reason to think the truth will eventually be discovered by scientific investigation. Even so, I would flag a potential difficulty in getting there. If sentience appears phenomenal only when observed from the specific first-person viewpoint, this is bound to create major difficulties for those neuroscientists who hope to find the neural correlate of consciousness (the NCC) by studying the brain from the outside. For the reality will likely be that the NCC seen from outside will strike the observer as nothing special, merely an oddity — just as would happen if we were to come across the wooden triangle lying on a bench, without realising what it has been *designed* to do. Figure 4 illustrates the problem, the lack of correspondence between the third-person and first-person points of view.

The final challenge is going to be to explain the biological purpose of all this. We can surely assume that the kind of development I have sketched above will not have happened accidentally. It must be the result of natural selection favouring genes that underwrite the specialised neural circuits — whatever they turn out to be — that do indeed sustain the illusion of qualia, giving rise to the magical mystery show for the first-person. And it is axiomatic that this will only have happened if those lucky enough to be spectators of this show have somehow been at an advantage in terms of biological survival. Yet, how can this be, if, as is widely assumed by theorists, the phenomenal richness *of consciousness is of no practical value whatsoever?*

Fodor has stated this aspect of the problem bluntly: “There are several reasons why consciousness is so baffling. For one thing, it seems to be among the chronically unemployed. What mental processes can be performed only because the mind is conscious, and what does consciousness contribute to their performance? . . . As far as anybody knows, anything that our conscious minds can do they could do just as well if they were not conscious. Why then did God bother to make consciousness?”⁷⁾

Fodor is undoubtedly asking the right question: “Why did God — *or natural*

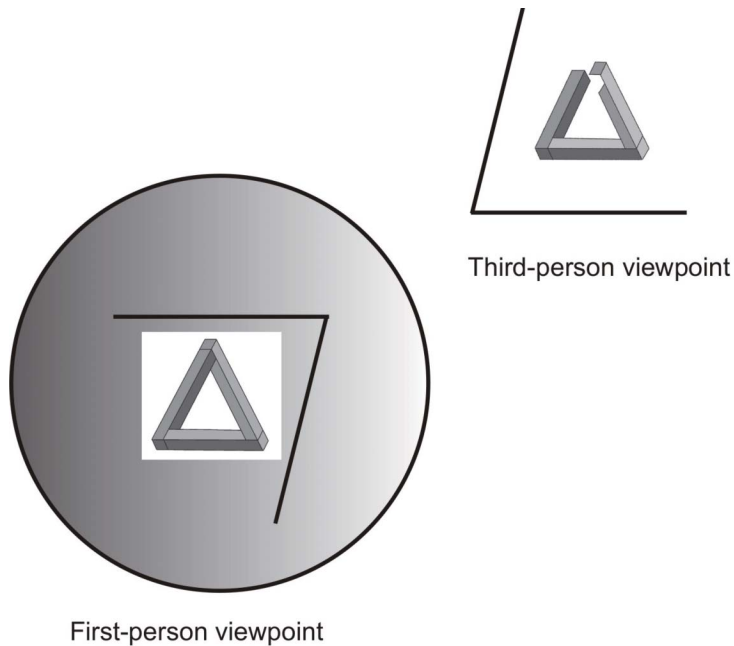


Fig. 4. The problem for neuroscience: the ineluctable ordinariness of the third-person viewpoint.

selection — make consciousness?” Yet, I would suggest the reason he finds it all so baffling is that he is starting off with completely the wrong premise. For he has assumed, as indeed almost everyone else does, that phenomenal consciousness must be providing us with some kind of new *skill*. In other words, it must be helping us do something that we can do *only* by virtue of being conscious — like, say, a bird can fly only because it has got wings, or you can understand this sentence *only* because you know English.

Yet I want to suggest the role of phenomenal consciousness may not be like this at all. Its role may not be to *enable* us to do something we *could not* do otherwise, but rather to *encourage* us to do something we *would not* do otherwise: to make us *take an interest* in things that otherwise would not interest us, or to *mind* about things we otherwise would not mind about, or to *set ourselves goals* we otherwise would not set.

To test this idea we will need evidence as to how being phenomenally conscious changes our world-view. What beliefs and attitudes flow from it? What changes occur in the way conscious individuals think about who and what they are?

These are empirical questions, that can be answered only by careful fieldwork in the realm of conscious creatures. What is needed is a thorough-going natural history of consciousness. And it must be a programme of research in which we are ready to consider all sorts of possibilities — not just those we would expect to find discussed in the science or philosophy section of the library but perhaps those that belong in the *Self-Help* section, *Mind and Spirit*, or even the *New Age*.

Regrettably, this area of consciousness studies has been neglected by scientists

(although artists have been involved with it since art began). I cannot claim to be more than an amateur myself. All the same, I will not hold back from telling you my own main conclusion from a life-time's interest in what consciousness *does*. I may shock you by what may seem the naivety of my conclusion (I have shocked myself): I think the plain and simple fact is that consciousness — on various levels — makes *life more worth living*.

We like *being* phenomenally conscious. We like *the world* in which we are phenomenally conscious. We like *our selves* for being phenomenally conscious. And the resulting *joie de vivre*, the enchantment with the world we live in, and the enhanced sense of our own metaphysical importance has in the course of evolutionary history turned our lives around.

Acknowledgements

An earlier version of this paper was published in SEED magazine, January 2008.

References

- 1) C. McGinn, in *Consciousness*, ed. M. Davies and G. W. Humphrey (Blackwell, Oxford, 1993), p. 155.
- 2) J. Fodor, *Headaches have themselves* (London Review of Books, 24 May, 2007), p. 9.
- 3) N. Humphrey, *A History of the Mind: Evolution and the Birth of Consciousness* (Chatto and Windus, London, 1992).
- 4) N. Humphrey, *Seeing Red: a Study in Consciousness* (Harvard University Press, Cambridge, Ma., 2006).
- 5) http://www.metacafe.com/watch/290588/impossible_object_or_is_it/
- 6) Figure taken from <http://chaos.phy.ohiou.edu/~thomas/chaos/mackey-glass.html>
- 7) J. Fodor, *You can't argue with a novel* (London Review of Books, 3 March, 2004), p. 31.