

1. PANDORA'S BOX; SHOULD CONSCIOUSNESS BE EXPLAINED?

This first section of the second chapter is one in which Dennett informs the reader of the obvious (consciousness is one of the few remaining mysteries in science and philosophy) and then, essentially, apologizes for attempting to explain it.

This desire on Dennett's part to reassure the reader that things will be all right when consciousness is de-mystified isn't just a quirk, though I think Dennett takes this desire to quirky extremes on occasion—his latest book, *Breaking the Spell*, spends about half of its pages on such an exercise, much to the book's detriment. He feels the need to present such assurances because part of his over-all project is to reconcile our self conception as moral beings with worth and meaning with what science has to say about us. But for some, to de-mystify is to desecrate (p.22).

He writes, "If conscious experience were 'reduced' somehow to mere matter in motion, what would happen to our appreciation of love and pain and dreams and joy? If conscious human beings were 'just' animated material objects, how could anything we do to them be right or wrong? These are among the fears that fuel the resistance and distract the concentration of those who are confronted with attempts to explain consciousness. I am confident that these fears are misguided, but they are not obviously misguided." (p. 25)

2. THE MYSTERY OF CONSCIOUSNESS

Dennett describes a time when he had been sitting in his rocking chair with a book and found himself gazing out the window while a recording of Vivaldi played in the background. He devotes a full page to describing various aspects of this experience: the streaming golden sunlight, the glimpses of a maple tree's branches through the haze of green buds, the way the imperfections in the window glass created a moving distortion as he rocked back and forth, the way his rocking had unconsciously been synchronizing with the music, and how once he noticed this he began to wonder about what sort of unconscious brain processes would have been responsible for this synchronization. His muse concluded with the thought that modeling the unconscious processes is much easier than modeling what must have happened when he became conscious of what he had been doing. The point here is to categorize the various things that go on in a conscious state (more on that in the next chapter), and then wonder:

How could any combination of electrochemical happenings in my brain somehow add up to the delightful way those hundreds of twigs genuflected in time with the music? How could some information-processing event in my brain be the delicate warmth of the sunlight I felt falling on me? For that matter, how could an event in my brain be my sketchily visualized mental image of. . .some other information-processing event in my brain? It does seem impossible. (pp. 26-27)

That, in a nutshell, is the mystery of consciousness as Dennett views it.

3. THE ATTRACTIONS OF MIND STUFF

In this section, Dennett ticks off four intuitions that make belief in "mind stuff" so compelling. When he uses this expression, it should be noted that he's being more or less neutral about whether "mind-stuff" is viewed as traditional dualism from the Judeo-Christian tradition, its more sophisticated cousin "property dualism" from modern philosophy, or any other view which holds that consciousness requires some ingredient over and above what you find in the zoology of things physicists talk about.

Imagine a purple cow, Dennett asks the reader.

Now imagine a future neuroscience of such comic-book power that a scientist could scan your brain and tell which shade of purple it was, which direction it was facing, whether its udders were visible to you, and whether it was chewing its cud (we can already use brain scans to tell if you are currently viewing a face versus an object, so this possibility is no longer as outlandish as it seemed in 1991).

This brain reading scanner is measuring all kinds of properties, but we can be assured that none of them is the color purple (remember- it's dark inside your skull). When you imagined the purple cow, something happened, but you did not thereby bring something with the color purple into being. "The imagined cow must be rendered not in the

medium of brain stuff, but in the medium of . . . mind stuff. What else could it be?" (p. 28) That's the first intuition.

Here's another: For a thought to happen, someone (some mind) must think it, and for a pain to happen, someone must feel it, and for a purple cow to burst into existence "in imagination," someone must imagine it. And the trouble with brains, it seems, is that when you look in them, you discover that there's nobody home. No part of the brain is the thinker that does the thinking or the feeler that does the feeling, and the whole brain appears to be no better a candidate for that very special role. (p.29)

The third is more complex to describe. First imagine a very sophisticated computerized machine that analyzes the chemical properties of wine and issues some sort of output with a description of what it has found. We could build it so that its output was very dry—a simple list of all the elements and compounds in their proportions. But that would be boring. Why not do a little research and find out what chemicals in wine are responsible for the characteristics used by professional wine tasters, such as those in "a flamboyant and velvety Pinot, though lacking in stamina" (p. 30). Now the machine's output would be more interesting—and it could in time perform as well or better than any human wine tester according to whatever standards the industry used.

This machine isn't really tasting the wine, though, or so it seems. It's just analyzing the components and "mindlessly" outputting phrases copied from the literature of wine tasting. Even if we were to add new features to the machine that mimicked to perfection the functional structure of a real wine taster's memory systems, his goals, his likes and dislikes etc.—even if we essentially had a perfect A.I. replica of the wine taster, but made of silicon instead of meat—it still seems that something would have to be missing. It's just a fancy machine.

But of course the brain is a machine of sorts, an organ like the heart or lungs or kidneys with an ultimately mechanical explanation of all its powers. This can make it seem compelling that the brain isn't what does the appreciating; that is the responsibility (or privilege) of the mind. . . . So the conscious mind is not just the place where the witnessed colors and smells are, and not just the thinking thing. It is where the appreciating happens. (p. 31)

Lastly, we come to moral responsibility. An unconscious sleepwalker is not going to be held responsible for acts he or she performs (p.31). Because she is not conscious, she is not the "author" of her acts, but a "mere" bundle of reflexes. Nowadays, no one gets mad at Vesuvius for an eruption that kills a loved one (p. 32). The eruption of Vesuvius is also a bundle of mere chemical reactions without an author to hold responsible. But "No part of the brain, it seems, could be where the buck stops, the ultimate source of moral responsibility at the beginning of a chain of command." (p. 32)

An account of consciousness that does not involve "mind stuff" in any of its various forms has to deal with, among other things, these four motivations for believing in it.

4. WHY DUALISM IS FORLORN

Dualism is "deservedly in disrepute today", so Dennett's goal will be to "account for every mental phenomenon using the same physical principles, laws, and raw materials that suffice to explain radioactivity, continental drift, photosynthesis, reproduction, nutrition, and growth." (p. 33) But what is wrong with dualism, exactly?

The primary problem has been known for a long time, certainly by Descartes: if there is physical stuff and mind-stuff (or mind-properties, if you will), they have to have some means of interacting. The brain obviously does something important, and at some point there has to be a way for whatever the brain does to make it into the mind-stuff where it can become conscious. And if the self, the commander in chief, consciously initiates some act for the brain to perform, (and if the self is made of mind-stuff or has mind-stuff as the component that makes it a conscious self), the hand-off has to go in both directions.

But "A fundamental principle of physics is that any change in the trajectory of any physical entity is an acceleration requiring the expenditure of energy, and where does this energy come from? It is this principle of the conservation of energy that accounts for the physical impossibility of 'perpetual motion machines,' and the same principle is apparently violated by dualism. . . . How can mind stuff both elude all physical measurement and control the body? A ghost in the machine is of no help in our theories unless it is a ghost that can move things around. . . . but anything that can move a physical thing is itself a physical thing (although perhaps a strange and heretofore unstudied kind of

physical thing).” (p. 35)

With that last sentence, Dennett does indeed open the door for a revolution in the sciences to revise our ontology, says so in the next page, and even gives a nod to Roger Penrose. But even Penrose thinks such a revolution would make the mind more open to scientific investigation, not less, and “It is surely no accident that the few dualists to avow their views openly have all candidly and comfortably announced that they have no theory whatsoever of how the mind works—something, they insist, that is quite beyond human ken. There is the lurking suspicion that the most attractive feature of mind stuff is its promise of being so mysterious that it keeps science at bay forever.”(p. 37)

Therefore it is the “fundamentally antiscientific” nature of dualism that Dennett sees as its “most disqualifying feature”—dualism, in his view, is “giving up”. (p. 37) (This is strikingly similar to the way Intelligent Design offers no theory and simply “gives up” explaining the appearance of biological design in the biosphere by invoking a miracle beyond scientific investigation.) Dennett makes no claim to be able to prove that dualism is wrong; it is rather “forlorn”, as this section describes it, for those reasons.

But dualism has left traces in the approaches scientists and philosophers take to consciousness studies, in the metaphors and language they use. One consequence Dennett sees is the following:

Almost all researchers in cognitive science. . .tend to postpone questions about consciousness by restricting their attention to the “peripheral” and “subordinate” systems of the mind/brain, which are deemed to feed and service some dimly imagined “center” where “conscious thought” and “experience” take place. This tends to have the effect of leaving too much of the mind’s work to be done “in the center,” and this leads theorists to underestimate the “amount of understanding” that must be accomplished by the relatively peripheral systems of the brain. . .the exclusive attention to specific subsystems of the mind/brain often causes a sort of theoretical myopia that prevents theorists from seeing that their models still presuppose that somewhere, conveniently hidden in the obscure “center” of the mind/brain, there is a Cartesian Theater, a place where “it all comes together” and consciousness happens. (p. 39)

Arguably, showing how a theory of consciousness can do without a Cartesian Theater in any of its many forms is the primary goal of *Consciousness Explained*. In later chapters, we will see how this trace of dualism in otherwise naturalistic accounts of the mind makes an appearance, and how Dennett’s own theory provides an alternate means of interpreting the evidence.

5. THE CHALLENGE

In this concluding section of Chapter Two, Dennett sums up some ground rules of methodology.

Because dualism is forlorn, rule number one is: No Wonder Tissue allowed. That means nothing that even remotely looks like dualism is permitted—no appeals to “inexplicable or unknown forces, substances, or organic powers.” (p. 40) Everything must be done using the tools of currently known and understood science. Appeals to future revolutions in order to prop up a weakness in the theory are prohibited.

The next rule is No feigning anesthesia. Dennett is no eliminative materialist and no behaviorist, though he often describes himself as a “deflationist” in the sense that he thinks some of the things we believe to be part of conscious experience are in fact illusions. Nevertheless, he accepts that in these cases the burden is upon him to show that they are illusions and explain how they arise, not just assert it. It seems to me that most of his critics feel his failures occur here.

Lastly we have No nitpicking about empirical details. Dennett doesn’t want to limit himself to “facts that have made it into the textbooks,” because he wants to be able to include exciting new findings, if that’s indeed what they are. (p. 40) And given that at the time of the book’s writing, Nobel prize winning findings and conclusions regarded as fact for decades were being “unraveled”, he’s doomed to end up “purveying some falsehoods” anyway. (pp. 40-41) So, as a philosopher “concerned to establish the possibilities (and rebut claims of impossibility), I will settle for theory sketches instead of full-blown, empirically confirmed theories. . .Such a sketch is directly and explicitly vulnerable to empirical disproof, but if you want to claim that my sketch is not a possible explanation of a phenomenon, you must show what it has to leave out or cannot do; if you merely claim that my model may well be

incorrect in many of its details, I will concede the point.” (p. 41).

It should be noted that in the “Appendix for Scientists” at the end of the book, Dennett does indeed venture to make some empirical predictions based on the theory he presents, some of which have been subsequently verified. I’ll address the specifics in the last chapter summary.

In the next chapter, Dennett will address the kinds of things a theory of consciousness is supposed to explain. I will probably wait an additional week before posting the summary, as one chapter a week may be moving too fast for some of the more causal lurkers and participants.

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