

Is consciousness an epiphenomenon? I think not!

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I am prompted to write these comments in response to John Pickering's review of my book *Understanding Consciousness* (Routledge/Psychology Press, 2000) in the previous issue of *Network*. Let me first thank him for his many kind remarks. I can hardly complain about comments like "All in all it is an ideal text for student and scholar alike and is bound to become a landmark in this rapidly expanding field"! Towards the end of his review, though, I started to think that he had been reviewing a different book - or, at any rate, that he had deeply misinterpreted my intent. Some of the issues at stake are really important ones. So let me try to clear things up.

Pickering writes,

"In what he terms 'reflexive monism' the author aligns himself with those who, while they take consciousness to be integral with the physical world, see it as essentially epiphenomenal. That is our sense of being intentional is an illusion. The sense of freely chosen flow of intended actions is actually following rather than leading the events that make the choices. As Spinoza centuries before him, the author takes it that the natural order proceeds as it must, consciousness notwithstanding. Other contemporary figures have somewhat similar views, Chalmers, Reber, and Hameroff are examples, but the author is careful to distinguish his position from them, mainly by denying the notion of supervenience, which would restore the common folk-psychology view of consciousness as the growing tip of a flow of freely-chosen action.

This sobering stance is argued through with meticulous care. For readers of this review, radical epiphenomenalism is an anathema and it will make the book a provocative read. This is yet another reason to commend it as a boon to teachers who want to provoke discussion on this, the most central of issues in the science of mental life. However, for those who feel that consciousness is more than a mere post-hoc entailment of physics events, there will be plenty of loopholes in the last section to give them purchase. If, as the author puts it in last few sentences of the text: ". we participate in a process whereby the universe observes itself ." then to espouse epiphenomenalism, even though it may be a triumph of logic, also seems like a failure in imagination." (*Network*, 74, 2000, p58).

Strong words! Indeed, I agreed with Pickering so completely that my immediate response was to look up "epiphenomenalism" in the index of *Understanding Consciousness* to find out what "the author" had actually written. There are two early references to epiphenomenalism (p21 and p69) pointing out some of the problems that it shares with dualism. A fuller analysis of the case for and against is given in Chapter 9: "Consciousness and human information processing." Here's the relevant section (in square brackets):

"The Causal Paradox" I believe that we cannot resolve the conceptual muddle surrounding the causal interactions of consciousness and brain unless we recognise the very different senses in which mental processing has been claimed to be "conscious." . Yet, once we do face up to this problem in a non-question-begging way, we are left with a paradox. If one examines human information processing purely *from a third-person perspective*, i.e. from the perspective of an external observer, consciousness does not seem to be necessary for any form of processing. The operation of minds and brains seems to be explainable entirely in functional or physical terms that make no reference to what we experience. For example,

once the processing within a system required to perform a given function is sufficiently well-specified in procedural terms, one does not have to add an "inner conscious life" to make the system work. In principle, the same function operating to the same specification could be performed by a nonconscious machine. Likewise if one inspects the operation of the brain from the outside, no subjective experience can be observed at work. Nor does one need to appeal to the existence of subjective experience to account for the neural activity that one can observe.

The experimental and introspective evidence summarized above regarding how phenomenal consciousness *actually* relates to so-called "conscious processing" in humans deepens this puzzle. The detailed operations of most processes that we think of as "conscious" are not available to introspection. And, if one examines the *timing* of the experiences which do accompany "conscious processing" (in reading, speaking, thinking and so on), the experiences seem to come *too late* to affect such processing. Given this, something else must be going on in the brain at the time that experiences arise. What is common to the complex processes that enable one to read, think, speak and so on is that they operate, and "become conscious" only if they are at the focus of attention. Consequently, a number of cognitive theories have associated consciousness with late-arising aspects of focal-attentive processing such as information integration and dissemination (of what has been read, spoken or thought, etc.). However, this *still* does not solve the puzzle of what phenomenal consciousness does. Conscious experience of given information may *correlate* with integration and dissemination of that information throughout the brain, but, given that we have no conscious experience of carrying out such operations in our own brains (nor any conscious knowledge about *how* such operations are carried out), it is difficult to envisage any sense in which these operations are carried out by consciousness!

When I first presented a similar analysis in Velmans (1991a), I concluded that, viewed from a third-person perspective, consciousness appears to be epiphenomenal. Certain kinds of processing in the brain (the late-arising aspects of focal attention) appear to cause or correlate with the conscious experiences reported by subjects. But conscious experiences do not, in turn, seem to cause or carry out the processes that one can observe or infer from an external observer's point of view. As my review had considered all the main phases of information processing (in more detail than the analysis above) I suggested that this conclusion applies to *all* forms of human information processing (viewed from a third-person perspective).

If one accepts that one cannot dismiss the *existence* of consciousness (that experiences provide psychological data), this conclusion is devastating for functionalism. If consciousness does not have a function that is specifiable in third-person information processing terms, how can it be a function that is specifiable in those terms? This conclusion is also damaging for physicalism - unless one is prepared to accept that consciousness is a physical state of the brain that plays no causal role in the brain's activities!

Given this, it is hardly surprising that my original analysis met with considerable opposition. Accounts of functioning in cognitive psychology are, traditionally, third-person accounts. Consequently, many commentators on my target article took it for granted that if consciousness does not have a function that can be specified in third-person information processing terms, then it has no function at all. In spite of my repeated denials, some also accused me of being an epiphenomenalist. Why do I reject epiphenomenalism? Because I do

not believe that one can give an exhaustive account of the nature or function of consciousness from a third-person perspective!

Viewed from a first-person perspective, it seems absurd to deny the role of consciousness in mental life. If one examines one's own psychological functioning, consciousness appears necessary for the analysis of novel or complex stimuli, choosing what to attend to or do, and most forms of learning and memory. It also seems necessary for most novel or complex cognitive transformations and output - how, after all, could one think, plan, be creative, give a lecture or write a paper if one were not conscious? Given this, it is hardly surprising that over the last twenty-five years or so, phenomenal consciousness has been thought to play an important role in every major phase of human information processing ranging from input (the analysis of novel or complex stimuli, selective attention), storage (working memory, learning), transformation (thinking, problem solving, planning, creativity), and output (speech, writing, novel or complex adaptive adjustments to the environment).

As David Bakan has argued, we rightly take the causal efficacy of conscious mental states for granted in everyday, practical life:

"Do practical men believe that mental states affect physical conditions? Do practical men concern themselves with mental states, or do they just regard them as epiphenomenal? Judges concern themselves with the mental state of the accused. They are interested in whether there was an intention to murder or not. A United States Supreme Court decision on discrimination ruled that disproportionality itself could not be taken as discrimination. The court ruled there had to be evidence of intention to discriminate. Lawyers are concerned with the mental states of judges and juries. Politicians concern themselves with the mental states of their constituents and others. Military commanders are particularly concerned with the mental states of those against whom they are warring, as well as the mental states of those on whom they spy. The mental events in the minds of Einstein, Fermi, Szilard, and other physicists, in connection with atomic energy, were of no small moment with respect to the physical world. Deceivers are very concerned with the mental states of those whom they deceive and vice versa. Lenders are concerned with the mental states of those who borrow. Salesmen and advertising agents are concerned with the mental states of potential and actual customers. Everybody has an interest in the mental states of motor vehicle operators." (Bakan, 1980, p127)

In short, consciousness presents a *Causal Paradox* (Velmans 1991b, p716). Viewed from a first-person perspective consciousness appears to be necessary for most forms of complex or novel processing. But, viewed from a third-person perspective consciousness does not appear to be necessary for any form of processing. I submit that it does not make sense to reject either perspective. An adequate theory of consciousness needs to resolve the Causal Paradox in a way that *neither* violates our intuitions about our own experiences, *nor* the findings of science." (Velmans, 2000, pp217-219)

I would have thought that this made my position pretty clear. Resolving the *Causal Paradox* is, of course, a tall order - and the whole of Chapter 11: "What consciousness does," is devoted to it. In it I try to show how first- and third-person causal accounts relate to each other, how these both have something important to say about "the nature of mind," and how to understand the differences between conscious and nonconscious mental processing. I go on to show why it is that our experienced thoughts, feelings, percepts, volitions and so on seem truly to affect our actions (these experiences are usually accurate representations of what is going on, not illusions). This leads, finally, to a perennial view about the difference

phenomenal consciousness makes to existence (I don't want to give away the end to those who have not read the book - but I follow a modern route to an ancient place). It will also be of interest to readers of *Network* that three of the earlier chapters of the book provide an extensive critique of materialist reductionism.

To add a twist to the tale, the book also argues that all phenomena, in science or everyday life, result from observer-observed interactions and cannot therefore be observer-free. It follows that all observed phenomena are part of the contents of consciousness of given observers. So, how could consciousness be something less than a phenomenon - that is, a mere epiphenomenon? This would require the whole to be less than its constituent parts! A universe might exist, unknown to itself, without consciousness, but in such a universe there would be *no* observed phenomena. And life would be like nothing.

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