

Alva Noë: *Out of our heads*

Why you are not your brain, and other lessons
from the biology of consciousness

Hill and Young, New York, 2009, 214 pp.

Where is our consciousness? The immediate suggestion is that it is in everybody's respective heads. But is it, really? Where exactly? If we could open up our head and dig inside, do we expect to discover an inner space full of elfin thoughts, images, feelings and wishes, all pushing each other around? Surely not; we are not so stupid to think *that!* The next suggestion is that, as consciousness is in fact some kind of brain activity, then it must be in the head because that is where the brain is. But is this suggestion any improvement? Is consciousness really an activity of the brain?

Many people hold this view as so self-evident that they may fail to understand why anyone might want to question it; it would appear to go without saying. (For example, when you open Francis Crick's classic *The astonishing hypothesis* (Crick 1990), you see that no alternative would even cross the author's mind.) However, the philosopher Andy Clark has already produced the thesis that *mind*, in fact, is *not* in the head; but Clark is not willing to say the same about *consciousness*. Yet now Alva Noë, in the present book, has taken the further step, and is keen to defend this mind-boggling thesis: according to him, consciousness cannot be seen, reasonably, as being in the head.

To explain, let us start with the mind. What does Clark mean when he denies that it is in the head? Well, imagine that somebody asks you whether you can multiply. "Of course," your answer would be. "But can you multiply also very long numbers?" "Sure, there is an algorithm which I know, and knowing it I can multiply numbers of *any* length." "But can you do it with your head alone?" "Well, if the numbers are long, I may need a pencil and a sheet of paper, or something like that." "Hence is it so that multiplication ceases to be, as numbers get longer, a mental activity?" "Well, not really, it is the same algorithm all the time, only ... the mind needs some aids."¹

¹ In Dennett (1996) D. Dennett uses the following motto taken from a book by B. Dahlbom and L.-E. Janlert (*Computer Future*; but it seems that the

Clark's idea, which he developed especially in his books *Being There: Putting Brain, Body, and World Together Again* (Clark 1997) and *Supersizing the Mind* (Clark 2008), is that looking at the mind as a bundle of dispositional properties, it is reasonable to see it as extending not only from the brain into the body, but even further, beyond the boundaries of the body into the environment. To *be able to multiply* is a mental capacity, but it requires, and essentially and constitutively so, not only the brain but also hands and some external aids. However, Clark is not willing to extend this claim from the mind thus conceived to consciousness. His reason, as he writes in his recent article, is that

whereas EM [the hypothesis of 'extended mind'] was concerned only with the vehicles of non-conscious mental states such as states of dispositional believing, ECM [the hypothesis of 'extended *conscious* mind'] makes the even more striking claim that the local material vehicles of some of our conscious experiences might include more than the whirrings and grindings of the brain/CNS (Clark 2009, 967).

Alva Noë thinks otherwise, and the current book is his attempt to explain why he does so, in a way that is accessible not only to professionals within cognitive science or philosophy of mind. The essence of his view is a kind of a 'pragmatic' theory of consciousness: *being conscious*, according to it, is a kind of *doing*.

This is less outlandish than it might at first seem. Cognitive scientists and philosophers of mind have been convincing us that the mind and consciousness are, first and foremost, a matter of manipulating representations.² Noë denies that the mind is a dispatcher of representations; indeed he claims that the idea of a mind being crowded with representations is little more than a chimera. What the mind does, according to Noë, is not producing and maintaining representations, but rather securing the availability of resources. Hence his idea is that my mind does not furnish me with, say, a picture of the park in which

book never appeared): "Just as you cannot do very much carpentry with your bare hands, there is not much thinking you can do with your bare brain."

² *Viz.* especially the celebrated representation theory of mind of Fodor (Fodor 1975; 1981; 2008); but the conviction that representations have a key role within mind is almost universal.

I happen to be walking, but rather upholds and maintains the state in which whatever detail of the park I might happen to focus upon, will be made immediately available to me.

The point of departure of one of the arguments he uses to elucidate his standpoint is the famous discussion of 'brains in a vat' (which has even its own entry in the *Stanford Encyclopaedia of Philosophy*). How do we know, so the story goes, that we are people living in the world we think we live in, and not merely brains in a vat which a depraved scientist stimulates so that their receptors receive the very empirical stimuli that they would receive if they really had bodies and lived in the world? Noë wonders why the idea of a brain living and functioning without a body is accepted as so unproblematic:

My own view is that the suggestion that cells in a dish could be conscious – or that you could have a conscious brain in a vat – is absurd; it's time to overhaul our starting assumptions about what consciousness is if they lead us to such a conclusion. (p. 12)

Why?

Consider, first of all, that the vat, or Petri dish, couldn't be a mere dish or bucket, as Evan Thompson and Diego Cosmelli have discussed in an essay. It would have to supply energy to nourish the cells' metabolic activity and it would have to be capable of flushing away waste products. The vat would have to be very complicated and specialized in order to control the administration of stimulation to the brain comparable to that normally provided to a brain by its environmentally situated body. If you actually try to think through the details of this thought experiment – this is something scientists and philosophers struck by the brain-in-a-vat idea almost never do – it's clear that the vat would have to be, in effect, something like a living body. But then, it would seem, the thought experiment teaches us what we knew already: not that we are our brains but rather that living animals like us can be, well, conscious.

In this way, Noë sees a great deal of contemporary philosophy of mind and cognitive science as misconceived – as based on an uncritical acceptance of certain received wisdoms that are, as a matter of fact, totally mistaken. Noë's ambition is to approach mind and consciousness in an unprejudiced way, and what he reaches is a picture very different from the standard one, a picture that is, as we have already noticed, deeply pragmatic.

Noë's notion of consciousness can perhaps best be illustrated by his exposition of vision (the discussion of which occupies a large part of the book). Here is why he rejects the picture of seeing (and perceiving more generally) as something passive, something that more *happens* to us than is *done* by us:

Traditional approaches to vision have tended to suppose that vision happens in us. It is a phenomenon of the retina and structures in the brain... I want to point out what ought to be entirely obvious anyway, namely, that seeing is, in many ways, a bodily activity. Seeing involves moving the eyes and head and body. More important, movements of your eyes or your head or your body actively produce changes in sensory stimulation to your eyes. Or, put differently, how things look depends, in subtle and fine-grained ways, on what you do. Approach an object and it looms in your visual field. Now turn away: it leaves your field of view. Now shut your eyes: it is gone. Walk around the object and its profile changes. In these and many other ways, there are patterns of dependence between simple sensory stimulation on the one hand and your own bodily movement on the other. It should be clear that a central task for any perceiving organism is to master these dynamic patterns of sensory stimulation and movement. (pp. 59 - 60)

Later in the book, this picture of seeing is fostered further by contrasting it with what Noë sees as the received wisdom concerning the working of vision:

We have been considering the ways in which, it seems, the end product of the brain's visual activity is a rich detailed image of the world. Scientists lay great emphasis on the richness of our seeing, on its detail and dazzle. The question of vision science boils down to explaining how we can enjoy uniformly detailed, high-resolution, brilliantly colored images of the world when really we see so very little. (p. 137)

Noë's notion, in contrast to this is, leads him to the following conclusion (141 - 2):

[O]ur ability to sustain perceptual contact with the environment over time is not just a matter of there somehow being a picture of the scene in our brains; rather, it is a matter of access. And this, in turn, is a matter of skill. For example, seeing requires a practical understanding of the ways that moving one's eyes and one's head and one's body changes one's relation to what is going on around one. ... The conscious mind is not inside us; it is, it would be better to say, a kind of ac-

tive attunement to the world, an achieved integration. It is the world itself, all around, that fixes the nature of conscious experience.

Throughout the book Noë tries to be duly provocative; sometimes his enthusiasm for his novel and amazing view of consciousness perhaps sweeps him further than is reasonable. For example, discussing the enterprise of playing chess, he not only claims that an individual does not face the challenge of the computational complexity of the game in the way computers do, but he goes on to claim that there is no such challenge:

From the standpoint of the intellectualist conception of the mind, this is an impressive fact, for chess presents a daunting computational challenge. The chess player must select, from among an astronomically large number of possible legal moves, the single move that most optimally serves to realize the goal of victory. To do this, the player must, in effect, form an accurate representation of the state of play and then work out or calculate the consequences of possible moves; he must then evaluate those consequences in light of their overall desirability, and he must do this under time pressure. Moreover, the problem arises in a more or less new form every move! To play chess, or at least to play it well, one would have to be a computer! ... We human players of chess don't need to select the good moves from among the nearly infinite possible moves. For anyone who understands chess will know that very few moves are even relevant to the play at a given configuration. On top of that, much of the time the position on the board forces our moves. Even if there are alternative ways of responding to an opponent's move, most of the time there will be, at most, only one or two moves worth considering.

Well, but how do we, who "understand chess", know which moves are the relevant ones? I do not mean to claim that we test every possibility every time, as a standard chess computer program would, but this does not diminish the astounding challenge of choosing an optimal move "from among an astronomically large number of possible legal moves", which we face just as much as the computer. There is no quarrel about the fact that the more experienced we are as players, the more moves we may disregard simply "as a matter of habit", but this does not compromise the "daunting computational challenge". The difference – as far as I can see – is that we do not deal with the entire challenge always when contemplating a move, because

parts of its solution are being continually embodied into our habitual ways of playing chess.³

Another example of an issue that I find hard to swallow is Noë's appealing to the support of his more famous colleague John Searle. At first sight they might indeed look like natural allies: both talk about a gap between people and computers. But I am afraid that their proximity is a mere illusion, indeed that they argue at cross-purposes.

Noë argues that we are not computers because if not only our mind alone, but consciousness itself, is a matter of our interaction with the environment, then nothing short of our possibilities of interacting with the environment can be very similar to us. But were we to put a computer into a robot having a body similar to our own, then Noë's reason for claiming it could not be like us ceases to be obvious. Although Searle also rejects the idea that we might be computers, and indeed the idea that a computer might be conscious, he does so for very different reasons.⁴ No computer, he claims, can possess intentionality, for intentionality can be produced only by biological matter. Hence, whereas Noë's notion of consciousness is basically pragmatist (as we have already noted) and interactionist, Searle's notion differs radically: according to Searle, consciousness is something that merely "happens" in the brain, as a matter of its biological nature.

But despite these problems, Noë does a wonderful job of undermining the reader's initial conviction that the thesis which he presents us with is absurd. I think that on finishing the book, the reader may well have difficulty in finding reasons which had led him to the conviction. So why, then, not embrace Noë's astounding proposal, and settle with a world full of consciousness? To conclude, let me mention some of the disputes the thesis of "embodied consciousness" raises,

³ In a sense, the problem transmutes into the question of how we are able to readily disregard all possible moves save for the "one or two worth considering"; in this sense it parallels the problem concerning parsing of natural language sentences, which Steven Pinker (Pinker 1994) sums up as follows: "How do people home in on the sensible analysis of a sentence, without tarrying over all the grammatically legitimate but bizarre alternatives?"

⁴ See, e.g., Searle (1984).

and why some philosophers disagree with it. They are taken from Clark's already quoted paper.⁵

Opponents of the view Noë puts forward stress that when there is something without which consciousness could not exist, we must still distinguish between "instrumental dependency" and "constitutional involvement". The argument is that there might be something without which we could not be conscious, but nevertheless it would remain unreasonable to think about that something as *constituting* consciousness in the sense that it would 'do' consciousness, that is, to think of it as being its direct 'vehicle'. It might be a mere instrument that makes the emergence of consciousness possible, without taking part in it. Opponents would thus argue that, though there is a sense in which we could not be conscious without some help from our bodies, it is merely a case of "instrumental dependency". But this is a discussion that goes far beyond the boundaries of the present review.

Anyway, Noë's book is interesting and as duly provocative as a philosophical book ought to be. Despite some possible simplifications, the arguments in favour of "embodied cognition" are worth considering.

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⁵ Clark (2009).