New Blackfriars

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Comment: *The Extended Mind Thesis*

In his provocative book *Supersizing the Mind: Embodiment, Action and Cognitive Extension* (2008), Andy Clark, Professor of Logic and Metaphysics at the University of Edinburgh, defends, with David Chalmers, what they call the 'Extended Mind Thesis' (EMT). On their view, the distinction between mind and world is less cut and dried than you might think. On the contrary, there are external physical objects that are really ingredients of your inner mental life. For example, the notebook in which you keep addresses and telephone numbers is as much a part of your mind as your memory of your own address and telephone number. In relation to the rest of your life, doesn't the notebook function in exactly the way that your memory does? Similarly, according to Professor Chalmers, his iPhone is a part of his own mind — *literally*. And so forth. All this has a certain hilarious plausibility in a world in which most younger people are self-absorbed the whole time in their iPhones.

In 'Where is my mind?', a highly entertaining review in *The London Review of Books* (12 February 2009), Jerry Fodor, doyen of cognitive science, who teaches at Rutgers University, mocked the whole idea — asking sarcastically if his new robotic vacuum cleaner would count as an extension of his mind. Such devices, Fodor argues, cannot form parts of the physical system that constitutes a human mind (which is what it is, as he and Clark agree). For Fodor our minds do not extend that far.

In response, Professor Clark cited the case of a Californian spiny lobster one of whose neurons was deliberately damaged and replaced by a silicon circuit that restored the original functionality: namely, rhythmic chewing. Suppose now, a little more elaborately, an agent who performs simple division using only her neural resources (in Clark's phrase). Let us say that, following damage, she has an external silicon circuit implanted in order to restore the functionality. Isn't it obvious that she will divide as successfully as ever, except that now the performance is distributed across her neurons and the silicon circuit? In other words, the mental process, which division is, is now supported by a bio-technological system.

Such a case, according to Professor Clark, is enough to establish the key principle of the Extended Mind Thesis. Spelling it out: if connected appropriately into processes running in the brain, a non-biological device can form part of a larger circuit that counts as

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genuinely cognitive in its own right. Now, if we gradually complicate the picture so that the device does not just restore some lost function but introduces a new one, you would soon find yourself faced with much more interesting cases of 'extended cognition'.

Of course there would be much more to say, as Professor Clark allows, about ways that non-implanted devices (iPhones and the like, if perhaps not vacuum cleaners) might (or might not) count, in respect of enabling some functionality, as fully integrated, as he would put it, into our overall cognitive profiles.

Of course there are other ways of doing away with the epistemological gap between mind and world. Thomists would be interested in whether EMT is motivated, in part at least, by a desire to remove the gap that philosophers have often supposed to exist between the world outside and what is going on inside one's head. How can we be sure, they have asked, that things out there are really as they are represented in our minds? Perhaps, at one time or another, most people have suspected that appearance and reality do not coincide — in some religious traditions that they never do is taken for granted. Actually, removing the supposed mind/world gap seems to be of little interest to Extended Mind theorists.

For Thomists, when the intellect comes to know some object, the form that makes the object what it is comes to reside in the intellect itself. Moreover, it isn't that a 'likeness', pictured as a kind of object, floats before the mind's eye, as if replicating the thing out there; rather, it's that one and the same thing, the object's form, exists simultaneously in the intellect and in the object known. In a neat phrase, Professor John Haldane has called this the 'mind-world identity theory': 'the soul is in a way all things', *anima est quodammodo omnia*, as Thomas Aquinas says in his commentary on Aristotle's *De Anima*. But this is a very different view from EMT. Far from the mind's extending itself bit by bit into the world, the mind is informed by the world, and the world is taken into the mind. The next step that Professor Clark foresees in the mind's integration with technology is the development of what he calls cognitive prosthetics, or electronic brain enhancements (EBEs). It may not be impossible, but it would be a challenge to reconcile such advances in the integration of the brain and robotic devices with traditional ideas about the place of the mind in the world.

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