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Knowing Out of Your Head?

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Unless you are a very radical kind of subjectivist, you’ll agree that not just any old belief deserves the title of *knowledge*. Knowledge–for example, your knowledge that what is in front of you is a cup of coffee–makes certain demands, both from you and from the world. The bit from the world is *truth*; you know the cup is in front of you only if *it actually is* in front of you. But a philosophical point as old as Plato is that not all true beliefs count as knowledge.

Suppose, for example, that there *really is* a cup of coffee sitting right in front of you. However, you’re blindfolded, and your nose is plugged. You can’t see it (or smell it). No one has told you what is in front of you, either. You simply really *want* a cup of coffee, and so you believe there is one. In this case, *you’re right!* You formed a belief, and the world fortunately cooperated–things were just as you believed they were. But nonetheless, sitting there blindfolded, you surely didn’t *know* a cup was in front of you. It was just wishful thinking, which happened to be right.

A popular idea both inside, as well as outside of [epistemology](http://plato.stanford.edu/entries/epistemology/)–the philosophical theory of [knowledge](http://plato.stanford.edu/entries/knowledge-analysis/)–is that to know some proposition is true, your belief must be not only true, but you must be additionally *justified*, in a way that lucky guesses fail to be. But what is it that makes a belief *justified*? What separates justified from unjustified beliefs?

A very natural thought is that justified beliefs differ from unjustified beliefs in things like this: evidence, good reasons, facts about the reliability of the method generating the relevant belief, and so on. But a deeper question concerns whether *these things* need to be such that we can have *reflective access* to them. In other words, does the kind of justification that matters for knowledge require not just that our beliefs have various properties of epistemic merit (i.e., evidence, good reasons, being well-formed, etc.) but, additionally, that we are or can become *aware* of this by *introspectively* examining the contents of our minds?

Answering the above question in the positive leads to what philosophers call [epistemic internalism](http://plato.stanford.edu/entries/justep-intext/), according to which justification is thought of as entirely dependent on a person’s mental life—and, specifically (as most, but not all, proponents of the view would further add) a person’s *conscious* mental life. Recent thinking in the philosophy of cognitive science, however, may cast doubts on this otherwise popular view. To wit, it would be convenient for epistemic internalism if, as Descartes as well as most people would concede, human cognising were to take place entirely within the skull. But there might be good reasons to deny this. According to [*active externalism*](http://www.oxfordbibliographies.com/view/document/obo-9780195396577/obo-9780195396577-0285.xml) (e.g., Clark & Chalmers 1998; Clark 2010), for example, human cognition can literally *extend* outside an individual’s skin and skull to include parts of the world the individual is interacting with.

This might initially sound implausible, but it might seem much less so if we consider some concrete cases. Take, for example, a now classic thought experiment, due to [Clark & Chalmers](http://analysis.oxfordjournals.org/content/58/1/7.full.pdf+html?sid=d0cce886-ade2-411e-a54d-300b4d1a58f1) (1998). Compare Inga and Otto:

Inga: Inga has a normally functioning biological memory. When she learns new information, she stores it in her biological memory (as is typical and familiar) and it is her biological memory which she consults when she needs old information.

Otto: Otto suffers from Alzheimer’s disease, and like many Alzheimer’s patients, he relies on information in the environment to help structure his life. Otto carries a notebook around with him everywhere he goes. When he learns new information, he writes it down. When he needs some old information, he looks it up. For Otto, his notebook plays the role usually played by a biological memory (1998, 8).

One important thing to notice here is that Otto’s notebook is playing the same *functional* role as Inga’s biologically constituted memory, with respect to information encoding, storage and retrieval. The material realisers of Inga’s memory processes of encoding, storing and retrieving information happen to be located entirely within her skull. Obviously, the same is not true for Otto, but the question is whether this should really matter. Clark & Chalmers’ argument is that so long as Otto’s notebook functions as a process which, were it to go on in the head, we would have no hesitation in accepting as part of the cognitive process, then the notebook is (literally) part of the cognitive process. Anything less is unprincipled ‘bio-prejudice’.

Here is not the place to adjudicate whether this or any other approach to active externalism is correct—though, increasingly, philosophers of mind and cognitive science (including the present authors) have been receptive to the idea (e.g., Carter et al 2014; Carter 2015; Palermos 2011; 2014a; 2014b; 2015). Rather, the principal project in the [paper we discuss](http://link.springer.com/article/10.1007/s10670-014-9670-5) is to assess whether internalism in epistemology could possibly fit together with active externalism about the nature of cognition, or whether these theses are simply incompatible with one another. Put more crudely: given where the philosophy of cognitive science is headed, will prevailing philosophical theories of knowledge and justification be simply left behind? Or, conversely, could popular epistemological views put the brakes on recent advances within philosophy of mind and cognitive science?

The conclusion we reached in [the paper](http://link.springer.com/article/10.1007/s10670-014-9670-5) was that, despite initial appearances to the contrary, epistemic internalism is actually *compatible* with the view that cognition may extend beyond the brain—at least in principle. The key to appreciating this compatibility is to view the demands that epistemic internalism makes on epistemic justification, but from the perspective of active externalism. Consider, for example, the most popular version of epistemic internalism according to which an individual is epistemically justified in holding some belief, only if she can reflectively and consciously access the factors that render her beliefs epistemically justified. Of course, ‘reflection’ and ‘consciousness*’* are traditionally presupposed to reside within the agent’s head, so there should be no wonder that a demand like this leads, almost automatically, to epistemic internalism.

But let’s think a bit outside the box. If, as active externalism tells us, cognitive processes such as memory can be partly realised outside one’s brain by elements of the world (i.e., a notebook, in the case of Otto), then there’s no *in principle* reason to think that the cognitive process of *reflection* must itself take place entirely within the brain. After all, cognitive science has so far found nothing special about a *cognitive* process, in a way that would require that it be materially realized in its entirety by biological processes.

Of course, one might object that even if the cognitive processes of memory encoding, storage and retrieval can be possibly realised by elements outside the brain, *reflection* is an [*introspective*](http://plato.stanford.edu/entries/introspection/) process that *necessarily* involves looking inward, at one’s own mental states. As such, we can’t possibly expect an introspective process to be realised by parts of the world, even if *some* cognitive processes (e.g., such as memory) can be. If this line of thinking is right, then the prospects for supposing that active externalism can be reconciled with the epistemic internalist’s claim that justification must be accessible *by conscious reflection* look dim.

Again, though, we encourage a further thinking outside the box. From an etymological point of view, introspection means looking inward to whatever is internal to one’s mind. Therefore, in so far as introspection involves a kind of ‘self-scanning’ of one’s mental life, Otto might indeed count as reflecting in a way that involves scanning the contents of his *notebook-cum-his-memory*. Of course, you might say, *that’s not reflecting* or introspecting, but rather, just forming a belief by perception. But why so? After all, if we take active externalism seriously and we grant that Otto interacts with the contents of the notebook in a way that is functionally analogous to the way Inga interacts with the intracranial contents of her biological memory, then we should be prepared to allow that Otto might engage in a genuine kind of *extended* *reflection* or *extended introspection*.

If this is right, then we can see at least one way in which it’s simply a mistake to presuppose that active externalism in the philosophy of cognitive science is *incompatible* with internalist thinking in the philosophy of knowledge. The main point of [‘Active Externalism and Epistemic Internalism’](http://link.springer.com/article/10.1007/s10670-014-9670-5) was to consider how such a compatibility could work for several kinds of epistemic internalism as well as several kinds of active externalism. But we also wanted to make a wider philosophical point: In so far as our prevailing theories of human knowledge and justification are premised upon the old Cartesian picture of cognizing, according to which all mental operations take place in the head, our epistemological views really do risk being left behind or, at least, being out of sync with contemporary philosophy of mind and cognitive science. But, as we hope to have shown, this *needn’t* be the case. Even the most internally oriented views in epistemology, such as the one we have here considered, can be reimagined ‘outside the box’ in new ways.

Given that the influx of new technologies provides ever further ways of outsourcing our cognitive tasks to our gadgets and environment, on our part, we expect that more epistemologists will come to agree that what matters for human knowledge and justification are processes, which may crisscross the boundaries of brain, body and world.