

A Narrow, Extended Mind

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Andy Clark and others have argued that our mind loops out into the world and is not bound by our brain¹. This active externalism is what Hurley calls a type of 'how externalism' which is more controversial than 'what externalism' such as content externalism which, though still controversial, just says that some dispositional states are dependent on external content². Kobes claims that Clark's version of active externalism is implausible since the external vehicle is not integrated in the same, and important way that other biological vehicles are integrated into our mind³. Specifically as it relates to knowledge, Kobes says that we lack the meta knowledge of external vehicles, such as an inscription in a notebook, that we have for biological vehicles. I will argue that these criticisms of Clark's active externalism do undermine Clark's broad view of active externalism which casts too broad a net for external vehicles as knowledge, but fail to undermine the weaker claim that some cognitive processes loop outside of the physical boundaries of the self. I will not be arguing against other criticisms Kobes has of active externalism, only that these particular points fail to undermine the claim that the mind extends into the external world.

Externalism can be segmented into at least two main types. They are (1) content (passive) externalism, and (2) active externalism. In the first section I will give a rough explication of these types of externalism. In the second section, I will sketch out Clark's argument for active externalism and then in the third section I will give Kobes's two main objections to Clark's primary example: the Otto case. I will give some more reasons to doubt Clark's conclusion, and, in the fourth section, I will show how it is still plausible to accept a narrower view of active externalism.

§1: Content (Passive) Externalism and Active Externalism

Content externalism might be considered the most intuitive form of externalism⁴. Content externalism is the theory that content outside of our bodies can be part of our dispositional states. A frequently cited thought experiment demonstrating this is that of Putnam's Twin Earth⁵. Putnam asks us to imagine an earth identical to ours in an identical universe. He then asks us to imagine that there is one difference. Even though on both Earth and Twin Earth most of the inhabitants in North America speak English, and on both they refer to the liquid in the oceans, rivers, and lakes, and rain and snow as 'water', there is one small difference. On Earth, as we know, water is made up of H₂O, but on Twin Earth what they refer to as 'water' is made up of some other molecular structure which we will call XYZ. Suppose it is the 17th century and I do not know the molecular structure of water. If I were to travel to Twin Earth, as Putnam suggests, then when I arrive and say "look the ocean is filled with water" my belief that the ocean on Twin Earth is filled with water is incorrect. This is because the content of my belief, i.e. water, doesn't exist on Twin Earth. This seems to suggest that some of our dispositional and occurrent beliefs rely on content outside of ourselves.

Active externalism differs from content externalism in that active externalism's cognitive vehicle does not passively reside outside of our mind, rather the vehicle is an active part of our cognitive process. Consider the belief about water presented by Clark. He says,

if I happen to be surrounded by XYZ right now (having been abruptly teleported to Twin Earth while typing this sentence), my beliefs still concern standard water, courtesy of my history. The external features that matter are...visibly passive and play no role in driving the cognitive process in the here and now.⁶

Active externalism, on the other hand, plays a role in cognitive processes as they happen. For instance, if I am using a pen and paper to figure out a complicated math problem, the pen and

paper are active vehicles in my current cognitive process according to active externalism and are not just passive, historical content.

§2: The Extended Mind

Clark and Chalmers presented the following case of what they considered an example of extended cognition in “The Extended Mind”⁷. First, they ask us to consider Inga who wants to go to the Museum of Modern Art (MoMA). She thinks about it, recalls that it is on 53rd Street and then walks there. We do not hesitate to say that Inga believed that the museum was on 53rd Street even before she recalls it and that it is an occurrent belief. Her belief “was sitting somewhere in memory, waiting to be recalled”⁸.

Now consider the case of Otto. Otto has Alzheimer’s and so stores much of the information he needs in a notebook, which he carries with him at all times. Otto also want to go to the MoMA and so he opens his notebook, reads the inscription that says the museum is on 53rd Street and then walks there. Clark and Chalmers then say

[c]learly, Otto walked to 53rd Street because he wanted to go to the museum and he believed the museum was on 53rd Street. And just as Inga had her belief even before she consulted her memory, it seems reasonable to say that Otto believed the museum was on 53rd Street even before consulting his notebook.⁹

This seems to be counterintuitive, but Clark and Chalmers think that the judgment that it is counterintuitive is one made too hastily. Clark and Chalmers say that, were we to follow Otto around, we would find it natural to say that the information stored in his notebook are beliefs of Otto in the same way Inga holds beliefs¹⁰. It seems that Clark and Chalmers expect the intuition that is keeping us from accepting their claim is merely that we do not want to allow external

vehicles to be a part of mind. But as I will show later, the worry seems to be more about what it is to believe or know something and not simply that the 'memory' is stored externally.

Clark and Chalmers acknowledge that their view may lead to questions of where the extended mind stops. Is my iPhone a part of my mind? My textbook? The Internet? Clark and Chalmers say

We do not think that there are categorical answers to all of these questions, and we will not give them. But...[f]irst, the notebook is a constant in Otto's life - in cases where the information in the notebook would be relevant, he will rarely take action without consulting it. Second, the information in the notebook is directly available without difficulty. Third, upon retrieving information from the notebook he automatically endorses it. Fourth, the information in the notebook has been consciously endorsed at some point in the past, and indeed is there as a consequence of this endorsement.¹¹

Memory is not the only type of vehicle of the extended mind. In fact, Clark and Chalmers begin the paper with examples of human problem solving. The examples they list include

the use of pen and paper to perform long multiplication (McClelland et al. 1986, Clark 1989), the use of physical re-arrangements of letter tiles to prompt word recall in Scrabble (Kirsh 1995b), the use of instruments as a nautical slide rule (Hutchins 1995), and the general paraphernalia of language books, diagrams and culture.¹²

They then go on to qualify how an action qualifies as part of the cognitive process. First, a distinction is made between pragmatic action, altering the world for its own sake, and epistemic action, altering the world so as to aid the cognitive process. Clark and Chalmers go on to describe what they call a Parity Principle which states that

if, as we confront some task, a part of the world functions as a process which, *were it done in the head*, we would have no hesitation in recognizing as part of the cognitive process, then that part of the world *is* (so we claim) part of the cognitive process.¹²

§3: Problems with knowledge

Clark thinks that we have a “skin-and-skull based prejudice” for cognitive processes¹⁴. To draw out this prejudice, Clark asks us to suppose there is a Martian with a biological process that allows her to store certain information as a bitmap¹⁵. When the Martian retrieves that information and interprets it, it is surely a cognitive process. However, Clark jumps from the claim that it is a part of the Martian’s cognitive equipment, indeed biological memory, to the claim that Otto’s case must be accepted as active externalism. Recall that Clark does not just ask us to accept that the inscription in the notebook is memory, he makes a stronger assertion, i.e. that Otto *knows* the information inscribed in the notebook. He says the inscription is a dispositional belief of Otto, such that if someone asked Otto if he knew where the MoMA was, Otto ought to reply “yes”.

Kobes points out a problem with Clark’s assertion. The problem is that Otto’s notebook is not integrated into his mind in some important ways that biological memory is normally taken to be integrated¹⁶. Namely, Otto lacks the meta knowledge (he does not know that he knows) of the inscription in the notebook that Inga has for her memory¹⁷. I think a related concern (perhaps it’s the same concern, just less refined) is that a competent speaker would not say that Otto knows, or believes, where the MoMA is based on the inscription in the notebook. Even if the competent speaker were to follow Otto around for awhile, as Clark and Chalmers suggest, it still does not seem like the relationship between Otto and his notebook has the right properties for a competent speaker to say that Otto knows where the MoMA is located.

To illustrate what a competent speaker expects I will use an example provided by Kobes¹⁸. Kobes asks us to consider the players on Jeopardy. When a player hears the question that Alex Trebek asks them, she presses the button before she has even recalled the answer, and sometimes before Trebek has finished stating the question. This is an example of the meta knowledge that Kobes says is a requirement for knowledge and something that I take to be a requirement for a competent speaker to claim that someone knows something. And whether the competent speaker knows what precisely the requirement, in this case meta knowledge, is or not, I take it that they recognize some important requirement for knowledge missing when, for example, meta knowledge is not present in cases like Otto and the Martian. Otto has to examine the notebook before he knows if he knows where the museum is and the Martian has to retrieve the bitmap and interpret it before she knows the contents of her memory.

I take Kobes argument to be a strong reason to object to Clark's claim that we should consider Otto's inscription to be an external vehicle for his dispositional belief. It is not just, as Clark claims, that we have a "skin-and-skull based prejudice", but that when we ask if someone knows something we have a set of criteria as competent speakers that must be met for us to be satisfied that the person knows that thing. I think Clark is right that a competent speaker would agree that the bitmap that the Martian stored is indeed memory and even part of the mind, skin-and-skull prejudice notwithstanding. However, accepting that claim does not commit us to accepting the claim that the Martian has a dispositional belief whose vehicle is the bitmap. And if Clark cannot show that the Martian has that dispositional belief then Otto's case seems much harder to accept. For the Martian at least has the memory stored within her skin-and-skull.

§4: Successful Active Externalism

Now let's consider active externalism as it pertains to the example of using pen and paper as part of a cognitive process. We can try out the 'competent speaker problem' and see if it sticks. First let me set up the example. Let's suppose I am reading John Stuart Mill and am having a hard time following one of his arguments. I decide to use pen and paper to begin to sketch out Mill's argument using symbolic logic. Further suppose that without the pen and paper I could not have followed Mill's argument at all, but by using the pen and paper I can understand the argument clearly.

In this case it does seem like I came to the understanding of Mill's argument on my own. After using the pen and paper to clarify the problem, I then understood Mill's argument. There does not seem to be any clear reason a competent speaker would disagree that coming to understand Mill's argument was a cognitive process that included the pen and paper. Joe H. offers us an analogy of a cleaning process¹⁹. When we use a vacuum cleaner in the cleaning process, we do not deny that the vacuum cleaner is a part of the cleaning process.

Kobes agrees with the claim that the pen and paper are part of the cognitive process but he denies that the pen and paper are part of the mind²⁰. I don't think the distinction between a cognitive process and the mental process is entirely clear though. Indeed, Clark seems to assume that if something is part of the cognitive process it is part of the mind²¹. One way to think of the vacuum cleaner analogy is to say that it is a clear example of how the vacuum can be part of the process, but not become part of ourselves. In this interpretation our body is the mind and the vacuum is a tool used to aid cognition. I take this to be the interpretation of Joe H. But that does not seem right. When we are finished cleaning, we are content in saying that *we* cleaned. In the same way when we finish figuring out Mill's argument via pen, paper, and symbolic logic,

we are content to say that *we* figured it out. Granted the vacuum does not become part of our body, but nor are we making the claim that the pen and paper become part of the brain. I take the correct view of this analogy to be where the body is the brain and the vacuum is the pen and paper. In my interpretation the mind loops out to include both brain, and pen and paper in the cognitive process. To have this analogy serve as a rejection of the extended mind theory, as Joe H. hopes, one would have to assume that the mind is restricted to the brain. But this is just begging the question. So, the analogy does not add anything to the objection.

Instead of counting against it, the view from the competent speaker seems to count for the extended mind theory in the pen and paper case. In fact, we frequently use terms that indicate that we view using items, like pen and paper, as part of our cognitive process. For instance, when someone asks us to add up a long list of numbers they are not surprised when we reach for a pen and paper. Of course this relies on the assumption that a cognitive process just is a mental process i.e. part of the mind. But as we saw, Kobes wants to say it is not. If Kobes is right that we can have cognitive processes that are not part of the mind, then it seems trivial to say that the pen and paper can be a part of our cognitive processes. But if cognitive processes really are part of our mind as I, and Clark, take them to be, then the extended theory seems true in the pen and paper case. It does seem like our minds loop out into the world!

§5: Conclusion

Clark's broad view of active externalism seems wrong, at least in the case of knowledge. It does not seem consistent with what a competent speaker would expect of what it is to know something, viz. knowledge is not just something that is stored in biological, or any other type of, memory. At the same time, active externalism seems to be consistent with what a competent

speaker views as what it is to solve some problem using a pen and paper, or some other tool. It does seem like our minds loop out into the world.

Still some problems remain. I take Kobes's view that cognitive processes are not necessarily a part of the mind to still be an open question. I suspect Kobes's reason for accepting that view is that it seems intuitively plausible. I did not intend to provide a decisive argument against his view in this paper, but the arguments I presented are meant to chip away at the foundation of his view of cognitive process and mind as distinct.

Furthermore, I did not explore a similar view to Kobes's that is presented by Clark in *Supersizing the Mind*. There Clark outlines Robert Rupert's claim that the external vehicles are not part of our cognitive process, and hence not part of our mind²². Instead, he claims, they are tools or scaffolding upon which our cognitive process can leverage. I agree with Clark that both Kobes's view and Rupert's view are appealing only because of the skin-and-skull prejudice. Having set this prejudice aside, I think the arguments presented in this paper support the case for a narrow view of the extended mind theory.

1. Andy Clark and David Chalmers, “The Extended Mind”, *Analysis* 58: 1 (1998): p. 7-19 and Andy Clark, *Supersizing the Mind* (Oxford Press: 2008)
2. Susan Hurley, “Varieties of Externalism”, <http://www.bristol.ac.uk/philosophy/hurley/papers/externalism.doc>
3. Bernard Kobes, lecture and emails from Philosophy of Cognitive Science, Fall 2008.
4. Susan Hurley, “Varieties of Externalism”, <http://www.bristol.ac.uk/philosophy/hurley/papers/externalism.doc>, (p. 7)
5. Hilary Putnam, *Mind, Language, and Reality* (Cambridge University Press: 1979) (p. 223)
6. Andy Clark, *Supersizing the Mind* (Oxford Press: 2008) p. 79
7. Andy Clark and David Chalmers, “The Extended Mind”, <http://www.philosophy.ed.ac.uk/staff/clark/pubs/TheExtendedMind.pdf>
8. Andy Clark and David Chalmers, “The Extended Mind”, <http://www.philosophy.ed.ac.uk/staff/clark/pubs/TheExtendedMind.pdf>, (p. 11)
9. Andy Clark and David Chalmers, “The Extended Mind”, <http://www.philosophy.ed.ac.uk/staff/clark/pubs/TheExtendedMind.pdf>, (p. 11)
10. Andy Clark and David Chalmers, “The Extended Mind”, <http://www.philosophy.ed.ac.uk/staff/clark/pubs/TheExtendedMind.pdf>, (p. 12)
11. Andy Clark and David Chalmers, “The Extended Mind”, <http://www.philosophy.ed.ac.uk/staff/clark/pubs/TheExtendedMind.pdf>, (p. 17-18)
12. Andy Clark and David Chalmers, “The Extended Mind”, <http://www.philosophy.ed.ac.uk/staff/clark/pubs/TheExtendedMind.pdf>, (p. 3)

13. Andy Clark and David Chalmers, "The Extended Mind", <http://www.philosophy.ed.ac.uk/staff/clark/pubs/TheExtendedMind.pdf>, (p. 4)
14. Andy Clark, *Supersizing the Mind* (Oxford Press: 2008) p. 91
15. Andy Clark, *Supersizing the Mind* (Oxford Press: 2008) p. 91
16. Bernard Kobes, lecture and emails from Philosophy of Cognitive Science, Fall 2008.
17. In fact, Clark and Chalmers never make it clear whether Otto knows the information is in the notebook or he just looks in the notebook on the chance that he had written it down. If the former is true then it does not follow that he has meta knowledge of the location of the museum rather he just knows where that information is stored. The meta knowledge that Otto has in that case is that he knows that he knows where to find the address of the museum.
18. Bernard Kobes, email regarding Philosophy of Cognitive Science, Fall 2008.
19. Joe H. (classmate), discussion in Philosophy of Cognitive Science, Fall 2008.
20. Bernard Kobes, lecture, private conversations, and emails from Philosophy of Cognitive Science, Fall 2008.
21. Andy Clark, *Supersizing the Mind* (Oxford Press: 2008) ch. 6
22. Andy Clark, *Supersizing the Mind* (Oxford Press: 2008) ch. 6