

## The Extended Self

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**Abstract** The extended-mind thesis says that mental states can extend beyond one's skin. Clark and Chalmers infer from this that the subjects of such states also extend beyond their skin: the extended-self thesis. The paper asks what exactly the extended-self thesis says, whether it really does follow from the extended-mind thesis, and what it would mean if it were true. It concludes that the extended-self thesis is unattractive, and does not follow from the extended mind unless thinking beings are literally bundles of mental states.

**Keywords** Bundle theory · Dualism · Extended mind · Life · Personal identity

### Extended Mind, Extended Self

According to the extended-mind thesis, mental states and processes can reach beyond the skin into what we ordinarily think of as our environment. Clark and Chalmers imagine a pathologically forgetful man called Otto who must often look up information he has written in his notebook in deciding what to do. (In a more up-to-date story it would be a portable electronic device connected to the internet; but the notebook is simpler and the point is the same, so I will stick with it.) If Otto wants to visit a museum, he has to look up its address in his notebook; if he wants to find his umbrella, only his notebook will tell him where it is. And so it goes. If Otto relies on his notebook to a sufficient degree, if he trusts the information it supplies, and if it is generally ready to hand, Clark and Chalmers say that it is literally a repository of his beliefs. Even though he may have no 'internal' memory of where the museum is, if the notebook says it's in Bloomsbury, that's what he believes.

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His belief is not merely that the museum is wherever the notebook says it is, but that it's in Bloomsbury.

Clark and Chalmers go on to say that the extended mind entails what they call the '*extended self*'—that the beings that are in such mental states also extend beyond their skin:

Does the extended mind imply an extended self? It seems so....The information in Otto's notebook, for example, is a central part of his identity as a cognitive agent. What this comes to is that Otto *himself* is best regarded as an extended system, a coupling of biological organism and external resources. To consistently resist this conclusion, we would have to shrink the self into a mere bundle of occurrent states, severely threatening its deep psychological continuity. Far better to take the broader view, and see agents themselves as spread into the world. (Clark and Chalmers 1998: 18)

So Otto's notebook is as much a part of him as his brain or his feet.

It is the extended-self thesis that I want to explore. (The merits of the extended mind will not concern me.) I have three questions. First, what does the thesis say? Not merely that Otto extends beyond his skin. His job is only to illustrate a general principle about the boundaries of thinking beings. What is that principle? Second, does the extended self follow from the extended mind? More precisely, what premise, if any, would you need to add to the extended mind to get the extended self? Third, what would it mean if the extended-self thesis not only followed from the extended mind, but were actually true?

### What the Extended-Self Thesis Says

What the extended self amounts to, and whether it follows from the extended mind, depends in part on what the extended mind amounts to. The extended mind says that mental states and processes can be 'extended' or 'external' in the way that some of Otto's memories are supposed to be. But what way is that? And which mental states and processes can be external?

The memories stored in Otto's notebook would extend beyond his brain and his body. But is that what makes them external? Imagine that Dave can store memories on a small electronic device that he plugs into a socket in his head like a USB stick, enabling him to recall the information at will in a manner phenomenologically indistinguishable from ordinary remembering. These memories play a very different role in Dave's psychology from that of Otto's notebook-based memories. If this means that they are not external, then extending beyond one's body is not sufficient for being external. Or imagine that Jenny, though otherwise just as forgetful as Otto, has a photographic memory for visual images. She writes the information she needs in a notebook just as Otto does, but never needs to consult it: instead she calls up a mental image of its pages and reads off the information with her mind's eye. She uses the mental image of the notebook much as Otto uses the notebook itself, even though in this case all the relevant mental states and processes are located within her

brain. If this counts as external cognition, then extending beyond one's body is not necessary for being external.

Someone might suggest that external mental states are those extending beyond the boundaries of their *subject*—the being they are states *of*. But in that case the extended mind, far from entailing the extended self, is actually incompatible with it: Otto's having external mental states in his notebook would entail that he himself does not extend into the notebook.

Otto's supposed notebook-based memories would appear to be 'external' in two different senses: they extend beyond his skin; and in order to access them he has to look them up, giving them both a different phenomenology from ordinary memories and different causal relations to the rest of his mental goings-on. Dave's plug-in memories would be external in the spatial sense but not in the causal and phenomenological one; with Jenny's 'photographic' memories it is the other way round. So there are at least two different extended-mind theses, one concerning spatially external mental states and the other concerning causally and phenomenologically external ones. Seeing as only the spatial extended mind appears to be relevant to the extended self, however, we can ignore the causal and phenomenological version.

For present purposes, then, external mental states are those that extend beyond the brain or body or skin ('the skin' for short). We need not take these states to be literally located there. Even if mental states have no location at all, things located beyond the skin may be 'directly involved' in them, forming part of their physical basis or realization. So we can think of external mental states as those at least partly located or realized beyond their subject's skin.

That settled, different versions of the extended-mind thesis differ about which mental states could be external. One is that there could be beings, some of whose mental states were external. A stronger claim is that it is possible for *us* to have external mental states, and stronger still that some of us actually have them. Yet another is that necessarily *any* thinking being could have external mental states—there could not be a thinking being incapable of having them. (Or at least none with the right sort of cognitive sophistication. Even if beetles have cognitive states, it is hard to imagine one using anything like Otto's notebook.)

To each of these corresponds a different extended-self thesis. Here are some likely candidates:

1. There could be a psychological being that extended beyond its skin.
2. It is possible for a human person to extend beyond her skin.
3. Any psychological being could extend beyond its skin,

where a psychological being is a subject of mental states or a bearer of mental properties. The most important of these appears to be 3, and that is the one I will focus on. (I will henceforth take 'the extended mind' to refer to the principle about mental states analogous to 3—that any psychological being could have mental states extending beyond its skin—though I will consider a variant in "[A Relativistic Extended Self](#)".) But my remarks will apply equally to the weaker claim 2, and many will apply to 1, which is weakest of all.

The extended self has an important mereological corollary. Clark and Chalmers' remark that Otto would be 'a coupling of biological organism and external resources' suggests that he would have both the organism and the notebook as parts: he would be a disconnected or 'scattered' object. This follows from the general principle that a thing is located where and only where its parts are: nothing can literally be located in a place where it has no parts.<sup>1</sup> Or at least this is so for macroscopic parts. Perhaps a solid object takes up not only the spaces occupied by its atoms but also the 'empty' spaces in between—otherwise it would occupy only a tiny, discontinuous region. But a table made entirely of wood cannot be located at a place where it has no wooden parts. Seeing as the extended self concerns only macroscopic parts, we can ignore this detail. Given this connection between a thing's location and its parts, the extended self implies this:

Any psychological being could have parts located beyond its skin.

Or perhaps: every psychological being is such that it could have something as a part at some time that is located beyond its skin at that time.

So if Otto extends beyond his skin because some of his beliefs are located in his notebook, then the notebook is a part of him. Or at least parts of it are. Its covers and its blank pages might not be, or the blank bits of paper between the words or the scribbles he makes in trying to get his ball-point pen flowing. Which parts of the notebook would be parts of Otto according to the extended self depends on how much of the notebook his beliefs take up. Though that is a question that must have an answer given either extended mind or extended self, I will not pursue it.

### **Does Extended Mind Entail Extended Self?**

Turn now to the second question: does the extended self follow from the extended mind? Suppose that Otto has mental states extending beyond his skin. Why infer from this that Otto himself extends beyond his skin? It can only be because a psychological being must extend as far as its mental states extend. If the extended mind were true but not the extended self, it would have to be possible for a being's mental states to extend not only beyond its skin, but beyond its own boundaries, wherever they may lie. It would be possible, in other words, for a mental state to be realized at least partly in things that are not parts of the being *in* the state.

So the link between extended mind and extended self is the principle that wherever a being's mental states are located or realized, there that being itself is located (though it may be located elsewhere too—nothing yet suggests that a psychological being must be located *only* where its mental states are). For short,

A being's mental states can never extend beyond its own boundaries.

We might call this *mental-state internalism*, as it says that a being's mental states must be located entirely within it. It is another corollary of the extended self—or at

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<sup>1</sup> Given that everything is a part of itself, this needn't prevent a thing without proper parts from having a location, though in such cases the principle becomes trivial.

least it is if extended self follows from extended mind. ‘Externalism’ about the subjects of mental states entails ‘internalism’ about mental states themselves.

Mental-state internalism is a principle of some metaphysical interest. It is no truism. At any rate many philosophers reject it. Those who accept the extended mind but reject the extended self certainly do (e.g. Wilson 2004, 141f.; Baker 2009). So do traditional substance dualists. They often accept that memories are stored in the brain, or that certain mental states are at least partly located there. (Descartes himself held such a view.) These would be mental states extending beyond the boundaries of their subjects—in this case immaterial substances.<sup>2</sup> Internalism is a claim in need of an argument. It is odd that Clark and Chalmers apparently find it too obvious even to mention.

*Is there any argument for it?* Someone might say: The extended mind tells us that mental states can extend beyond the skin. In other words, the *mind* can extend beyond the skin. But how could someone fail to be where his mind is? The sensible view is that one *is* one’s mind. Isn’t a mind a thinking thing? And surely Otto’s mind is not *another* thinking thing in addition to Otto. If Otto’s mind is just Otto, and it is partly located in the notebook, then so is Otto. He must be located wherever his mental states are:

1. Otto’s mind extends as far as his mental states extend.
2. Otto = Otto’s mind.
3. Thus, Otto extends as far as his mental states extend.

But the argument is sophistical. The problem is with the slippery word ‘mind’ (careless use of which is responsible for more than its fair share of philosophical confusion). Insofar as the extended-mind thesis implies that Otto’s mind extends beyond his skin (premise 1), the phrase ‘Otto’s mind’ is an abbreviation for ‘Otto’s mental states’. Insofar as a mind is a thinking thing, however—that is, insofar as it’s natural to say that Otto *is* his mind (premise 2)—‘Otto’s mind’ means ‘the subject of Otto’s mental states’. There is no single interpretation of the phrase ‘Otto’s mind’ that makes both premises attractive. The argument says in effect: Otto’s mental states extend beyond his skin; therefore the subject of those states extends beyond its skin. That doesn’t follow—not unless mental-state internalism is true, anyway; but that’s what the argument was supposed to tell us.

## The Extended Self and the Organism

I will revisit mental-state internalism later. Turn for now to the third question: what it would mean if the extended-self thesis were true.

I take the extended self, or at least the story that goes with it, to imply that Otto’s notebook was not always a part of him. He was once confined to his skin. When he began using the notebook, he gained new parts. If he were to give up using it, he would shrink once more to the boundaries of his skin, or wherever he was located before. If the notebook had always been a part of him, even before he began storing

<sup>2</sup> Chisholm’s ‘Lilliputian materialism’ is another example: see (Chisholm 1989; Olson 2007, 176f).

memories in it, his boundaries would have nothing to do with the location of his mental states and there would be no connection between extended self and extended mind.

This has a momentous implication: Otto is not a biological organism. If he is any organism at all, he is the one we might call his body, *O*. There is no other organism he could be; *O* is the only one in the story. But Otto could not be *O*, because *O* does not get bigger when Otto takes up the notebook or smaller when he stops using it. Even if the notebook becomes a part of Otto, it always belongs to *O*'s surroundings. You can't make a biological organism bigger by getting it to use a notebook as Otto does, or smaller by taking the notebook away. So although the notebook comes to be a part of Otto (on the extended self), it never becomes a part of any organism. It follows that Otto is not an organism. He was not an organism even before he began using the notebook. He then had the property *having a notebook as a part at some time*—a property that no organism ever has. And nothing can both be an organism and have a property that no organism ever has. Not only is Otto not *essentially* an organism. He is not even accidentally or temporarily an organism, for nothing that is even accidentally or temporarily an organism has the property of having a notebook as a part at some time.

This result can be generalized: if (owing to the truth of the extended-self thesis) Otto's possession of external mental states implies that he is never an organism, then no one who has external mental states at some time is ever an organism. Having external mental states at some time and being an organism are incompatible properties. In fact, none of us is an organism. Even if I never actually have any external mental states and remain always confined to my skin, I *could* extend beyond it by using a notebook like Otto's. I have the property of *possibly* having a notebook as a part. And no organism has that property. There is no possible world in which an organism that takes up the use of a notebook like Otto's expands by acquiring it as a part. The organism would always remain the same size as before. Because each of us has a property that no organism has, we are not organisms.

Someone could resist this last conclusion by denying that there are any such modal properties as possibly having a notebook as a part, and adopting instead a counterpart-theoretic account of modal predication (Lewis 1971). In that case the extended-self thesis would not imply that every psychological being has a modal property that no organism has. That might make it possible to endorse the extended self without accepting that we are all non-organisms. But even this proposal implies that no one who in fact has external mental states at some time is an organism, even at times when all her mental states are internal. So even if being an organism is compatible with having mental properties, it is incompatible with having external mental states at some time. That would be important enough.

## Mind-Life Dualism

What would it mean if we were not organisms? For one thing, it would seem to raise a problem of 'too many thinkers' (Olson 2003). We should expect a normal, mature human organism in normal circumstances to be capable of thought. If so, then the

organism we call my body is capable of thought. More precisely, it ought to be psychologically indistinguishable from me, so that whatever mental property I have, the organism has too, and vice versa. (This will be so whether or not I ever have external mental states.) But if I am not an organism and my animal body is something other than me, and that organism thinks just as I do, then I am one of *two* beings thinking these thoughts and writing these words. More generally, there are two thinking beings wherever we thought there was just one: a person who is not an organism and an organism that is (presumably) not a person.

If that's not bad enough already, I ought to wonder which of these two beings *I* am. I may believe that I am the person and not the organism. But if I were the organism, it seems, I should still believe that I am the person, and I should have the same grounds for that belief as I actually have, though it would be false. Nor would this be any farfetched sceptical scenario—half the world's intelligent beings would actually be in this situation. So for all I could ever know, I *am* making that mistake: I am an organism and not a person. I have no way of knowing whether I am a person. Even if I knew that taking up the use of a notebook like Otto's would cause the person thinking these thoughts to extend beyond his skin, I could not infer from this that it would have any such effect on *me*.

The extended-self thesis is not the only view that rules out our being organisms: many claims about personal identity over time have the same consequence. As a result, the problem of too many thinkers is well known (see for instance Shoemaker 2008). But further problems arise when our not being organisms is combined with the extended self.

The extended self implies that *O*, the organism associated with Otto, is not a subject of the external mental states located in Otto's notebook. They are Otto's beliefs but not *O*'s. They could not be *O*'s because they extend beyond his boundaries, and mental-state internalism, which is a corollary of the extended self, rules out any being's having mental states extending beyond its boundaries. So although Otto believes that the museum is in Bloomsbury, *O* does not: at most *O* may believe that the museum is wherever the notebook says it is. Yet we should expect *O* to share Otto's 'internal' mental states, since *they* all lie within *O*'s boundaries. So it looks as if Otto and *O* are psychologically identical apart from the beliefs in the notebook.

But *O* uses the notebook exactly as Otto does, and the beliefs located there play the same role in explaining his behaviour as they play in explaining Otto's. Any reason to say that they are Otto's beliefs should equally be a reason to say that they are *O*'s—yet according to the extended self they cannot be. To put it the other way round, any explanation of why they are *not* *O*'s beliefs would equally explain why they are not Otto's, undermining both extended mind and extended self.

Friends of the extended self will want to avoid saying that *O* is psychologically just like Otto apart from lacking Otto's external beliefs. What can they say about *O*'s psychological status, then? If *O* doesn't come to have external beliefs when he takes up the notebook, what does happen to him? He might cease to be a subject of any mental states at all. But it is hard to believe that simply taking up the use of a notebook could extinguish a being's entire mental life.

The only remaining possibility is that *O* never had any mental life to begin with. So he does not lose it when he takes up the notebook, or come to differ only slightly in his psychology from Otto. And if *O* never has mental properties, no human organism does. More generally, no biological organism of any sort could ever have any mental property. (It could hardly be the case that some organisms can have mental properties but human organisms cannot.) An organism may be the *body* of a conscious, thinking being, but it is metaphysically impossible for an organism itself to think or be conscious.

There is another reason why friends of the extended self have to say this (unless, as explained in the previous section, they endorse modal counterpart theory). According to the extended self, every psychological being has the property of possibly having a notebook or other inorganic accessory as a part. But the extended self is not supposed to be only a contingent truth: it doesn't just happen to be the case that all the psychological beings that in fact exist could have a notebook as a part, in the way that (I suppose) all psychological beings that in fact exist weigh less than a million tonnes. It ought to be *necessary* that psychological beings have this property, if it is the case at all. Yet it is impossible for any organism to have that property. It follows that no psychological being could be an organism: there could not be an organism with mental properties.

That no organism could ever have mental properties is a metaphysical principle of enormous interest. On the one hand, it would resolve all the worries about the extended self that we have so far considered. It would do away with the problem of too many thinkers: our not being organisms would not imply that each of us shares our thoughts with an organism distinct from us. And it would block the conclusion that *O* differs mentally from Otto only in lacking his external beliefs. On the other hand, it would be a sort of mind–body dualism.

This is no mere dualism of properties, distinguishing mental from physical or biological properties. Nor is it merely the claim that psychological properties or descriptions are somehow irreducible to physical ones. It is full-on substance dualism: a dualism of psychological and biological beings. It may not be the Cartesian view that no thinking thing could ever be a physical or an extended thing. It may be compatible with the existence of material thinkers. What it denies is that a thinking thing could ever be a *living* thing. Psychological properties are incompatible with biological properties, or at least with any property that entails being an organism. It is a dualism not of mind and matter, but of mind and *life*. Whether it is any better than Cartesian dualism is of course a large question. But it would be astonishing if it followed from the extended mind.

### The Extended Organism?

I have argued that if the extended-self thesis is true, and if it follows from the extended mind, then Otto's notebook comes to be a part of him but not a part of the organism we call his body, *O*. From this it follows that Otto is something other than *O*. And since there is no other organism that Otto could be, he is not an organism at all. Further, when Otto acquires external beliefs, *O* does not—otherwise *O* would



have beliefs extending beyond his boundaries, contrary to the extended self. So they must differ psychologically. It could be that they differ only in that *O* lacks Otto's external beliefs; but any reason to attribute those beliefs to Otto is a reason to attribute them to *O* as well, if he is a psychological being at all. For this and other reasons, friends of the extended self will want to deny that *O* is ever a psychological being. And the only principled way of generalizing this is to deny that any biological organism could ever have mental properties. Thus, the extended self implies the incompatibility of mind and life.

The linchpin of this reasoning is the claim that the extended self rules out Otto's being an organism. This is where those unhappy with its conclusion are most likely to resist. One way of doing so is to question the inference from Otto's being numerically distinct from *O* to his not being an organism at all. Another is to suggest that when the notebook comes to be a part of Otto, it becomes a part of *O* as well, so that Otto might be *O* after all. These suggestions in fact come to much the same thing.

Consider the second one first. Suppose that *O* really does get bigger when Otto begins using his notebook. This would mean that it is possible for a biological organism to increase in mass and bulk by assimilating a paper notebook—not by devouring and digesting it, but simply by using it as Otto does. The usual view is that an animal's boundary lies roughly at the skin, because that is the extent of the self-maintaining biochemical processes that make it a living thing—what Locke called its *life* (see van Inwagen 1990, §9). Its metabolism, its immune system, and its capacity for growth and repair extend to the skin and no further. Or if the extremities of hair, hoof, and horn are parts of an animal despite not being caught up in its life, they at least bear an important relation to it: if nothing else, they were originally created by that process.

But perhaps this traditional view is mistaken. Someone might be inspired by the doctrine of the extended phenotype to conjecture that items contributing to an organism's reproductive success not only play an important role in evolutionary explanations, but are literally parts of the organism. So the boundary between a typical human animal and its surroundings might lie well beyond the skin, perhaps at the extremities of its clothing or even its house or its car. And if an animal's parts can include shoes and socks, why not notebooks and pens? In that case the extended self may not imply that Otto differs from *O*, allowing him to be an organism.

I don't know whether anyone actually holds this view, but it is little help for the extended self. Even if something deserving to be called an organism does come to have Otto's notebook as a part, there is surely also something deserving that description that never extends beyond its skin. We might call the first entity the 'extended organism' and the second the 'core organism'. It is the existence of core organisms that makes it true to say that you cannot make an organism bigger just by getting it to use a notebook. And even if the extended self allows Otto to be an extended organism, it rules out his being a core organism: Otto gets bigger when he takes up the notebook but the core organism does not. So the extended self implies that Otto's external beliefs are not beliefs of the core organism, raising the same awkward questions about the psychology of the core organism that arose earlier in relation to the organism *simpliciter*. The likely conclusion is that it is impossible for

any core organism to have mental properties—another version of the mind-life dualism the proposal was intended to avoid.

The other suggestion was that although Otto is something other than *O*, he is still *an* organism, at least until he takes up the notebook. We can see now that this is merely a redescription of the proposal just considered. It would mean that there are two organisms in the story: Otto, who gets bigger by assimilating the notebook, and *O*, which doesn't. We might call them the extended and the core organism as before. And then the same questions arise yet again about the psychology of the core organism.

### A Relativistic Extended Self?

Another proposal for resisting mind-life dualism involves replacing the extended self and extended mind as I have characterized them with more complex variants. The original extended-mind thesis said that Otto comes to have beliefs located or realized in his notebook. The variant says that he acquires external beliefs relative to one perspective but not relative to another (Chalmers 2008, xiif.). For the purpose of explaining Otto's large-scale behaviour—his finding his way to the museum, for instance—the notebook-based states count as his beliefs. For the purpose of explaining his interactions with the notebook, however, all his beliefs are internal: he believes that the museum is wherever the notebook says it is, but not that it's in Bloomsbury. (Relative to this perspective, the notebook-based states are presumably not beliefs at all.) And there is no saying what Otto believes absolutely. Psychological ascriptions, or at least ascriptions of external mental states, are always relative to a perspective: their form is not 'x believes that *Q*', but rather 'relative to perspective *P*, x believes that *Q*'.

This might suggest a variant of the extended self that would allow organisms to have mental properties. Suppose that when Otto starts using the notebook, he acquires external beliefs relative to one perspective but not relative to another. Does he get bigger by acquiring the notebook as a part, or not? Well, maybe he does relative to the first perspective but not relative to the second, and there is no saying whether the notebook is ever a part of him *simpliciter*. Ascriptions of parthood, at least in cases like this one, would always be relative to a perspective; their form would not be 'x is a part of y', but rather 'relative to perspective *P*, x is a part of y'.

And maybe the same goes for *O*: he acquires the notebook as a part relative to one perspective but not relative to the other. The inclination to say that Otto gets bigger while *O* does not would be due to a shift in perspective rather than to any difference between those beings: somehow the word 'organism' or the name '*O*' makes the second perspective the relevant one. No organism—not even a 'core organism'—fails to expand into the notebook relative to any perspective at all. In that case the story would not imply that Otto differs from *O* or rule out his being an organism, averting the dualism of mind and life.<sup>3</sup>

<sup>3</sup> Note that the relativity of psychological ascriptions has now disappeared, replaced by relativity of parthood. At any rate it is the relativity of parthood that does the work.

No metaphysician that I know of would accept this.<sup>4</sup> It may be that metaphysicians are unimaginative and hidebound, but the reason for their resistance in this case is plain enough. Suppose I attach a set of drawers to my desk. Have I made the desk bigger and heavier by giving it new parts, or have I only changed its surroundings? We may indeed doubt whether this question has any absolute answer. If the desk needs moving to another room, someone who is unable to detach the drawers might say that it's bigger, while someone with the right tools might say that it's the same size as before and the drawers are merely attached. And maybe neither would be mistaken. But it would be extravagant to account for this by saying that the object has one mass relative to one set of human abilities and another mass relative to another. There is a far more obvious and mundane account, to do with a shift in reference. There are two distinct objects, one of which got bigger and one of which did not. (Before the drawers were attached the two objects coincided, perhaps by sharing their temporal parts located then.) Both are legitimate candidates for the reference of the term 'my desk'. The first mover is talking about the first object, the second mover about the second. Both are right because each says something true of the object she is referring to. But no one object has got bigger relative to one perspective and stayed the same relative to another.

Likewise, it may be that the name 'Otto' refers in some contexts (or relative to some perspectives) to an object that acquires the notebook as a part, and refers in other contexts to an object that never has the notebook as a part. In that case there are two different candidates for the reference of the name 'Otto', one that gets bigger (absolutely speaking) and one that doesn't. And on any version of the extended self, these beings must differ psychologically, putting us back on the road to mind-life dualism. Otherwise one of them would have—relative to some perspective at least—mental states extending beyond its boundaries, blocking the inference from extended mind to extended self.

## Minimalism

What if the extended self really does imply that no biological organism (or at least no 'core organism') could ever have mental properties? I described this disparagingly as a form of substance dualism. But would it really be as bad as it sounds? I will devote the remainder of the paper to this question.

Friends of the extended self will have a desperate need to explain *why* organisms cannot have mental properties. What prevents a normal, healthy human organism from using its brain to think? Are not many such beings—those that are the bodies of people lacking external mental states—physically indistinguishable from those people? How could physically identical things, in the same surroundings, and with the same history and the same behavioural dispositions, differ psychologically to the

<sup>4</sup> Two come close, however. On Geach's notorious relative-identity thesis, Otto and *O* might be different material objects but the same psychological being. They would be neither one thing nor two *simpliciter*, there being no such relation as absolute numerical identity (Geach 1980, 215f.). And Hudson proposes that things have parts relative to places (2001, ch. 2).

extent that one has a mental life like yours and the other has the mental life of a stone?

As it happens, the extended-self thesis suggests an answer to this question. It implies that Otto must extend into his notebook because otherwise he would be too small: some of his mental states would extend beyond his boundaries. A psychological being must have parts wherever its mental states are—that was mental-state internalism. Now consider the converse of this principle: a psychological being can have parts *only* where its mental states are. In that case an organism could not be a subject of mental states because it is too big: it would always extend beyond its mental states.<sup>5</sup> No mental states are located in anyone's feet, for instance, yet most human organisms have feet as parts. So the claim would be this:

The boundaries of a psychological being can never extend beyond its mental states.

Conjoining it with mental-state internalism gives this:

A psychological being is located at a place if and only if at least one of its mental states is located or realized there.

Psychological beings are located where, and only where, their mental states are. Call this *thinking-subject minimalism*.<sup>6</sup> Like the extended-self thesis, it has a mereological corollary:

An object is a part of a psychological being if and only if that object is located at a place occupied by at least one of the being's mental states.

Minimalism appears to entail that no organism is ever a psychological being. It would also follow that no psychological being is ever physically indistinguishable from an organism.

Unless they have some other way of explaining why organisms should be incapable of mentality, friends of the extended self ought to endorse minimalism. It would explain something else too, namely why Otto's boundaries not only expand when he begins using his notebook, but shrink once more when he gives it up. Why is the notebook a part of him when and only when he has the disposition to use it as he does? Minimalism answers: because he must extend as far and only as far as his mental states extend.

## The Person as Neural Net

Minimalism is another important metaphysical principle. What would it mean if *it* were true? It would obviously make us a good deal smaller than we thought we were. Most of the parts of our bodies would not be parts of us: our feet, for instance,

<sup>5</sup> Hudson (2001, ch. 4) endorses this. Shoemaker (2008) gives a different explanation of why organisms cannot have mental properties, which may interest extended selfers.

<sup>6</sup> I previously used this name for the left-to-right component of the principle (Olson 2007, 88).

given that no mental states are located there. They are of course firmly attached and extremely useful; but like pacemakers and dental implants, they really belong to our environment.

How big *are* we, then? Seeing as I have nothing like Otto's notebook, my mental states are presumably confined to my brain. Minimalism therefore implies that I have no parts outside my brain. Strictly speaking no one has ever seen me or any part of me. (Most people wouldn't want to.) Not that I *am* my brain. The extended self implies that I could become larger by taking up a notebook like Otto's. But this would not increase the size of my brain. It would remain confined to my skull. Since (on the extended self) I have a property that my brain lacks, namely possibly having a notebook as a part, it follows that I could not be my brain. At best I might somehow coincide with it.

But minimalism would make it unlikely that all the parts of my brain are parts of me. If I have no mental states in my feet, I have none in the blood vessels of my brain either. The only tissues I am likely to share with my brain are the neurones. And it is doubtful even whether the whole of any neurone could be a part of me, for many parts of a neurone—the chromosomes, for instance—are not directly involved in the firing of synapses or other physical bases of thought. That's not what those things are there for. Their job is like that of the blood vessels supplying them with nutrients. So minimalism suggests that I am a highly exiguous net of tissue scattered across the parts of my brain that light up during CAT scans when I am mentally active. Otto is composed of such a thing and a notebook.

Or perhaps my mental states extend beyond my brain. Maybe certain bodily sensations and intentions to move extend into my feet, insofar as I can feel them and they respond directly to my will. In that case I extend about as far as my nerves extend. My feet would not be parts of me if they were permanently numb and paralyzed: an accident that had this consequence would literally make me smaller and lighter. And those of my cells that are not directly connected to my nervous system, which is most of them, would not be parts of me even in ordinary circumstances. My boundaries would lie roughly at the skin, but only a tiny proportion of my body's atoms would be parts of me. An accurate portrait of one of us would look like an anatomical illustration of the human nervous system. Nothing else would be capable of having mental properties.

It may be tempting to say that the nervous system is in some sense the core of a psychological being—the place where one's essential nature is realized. But it is hard to believe that no psychological being could extend beyond its nervous system, or those parts of it that are 'directly involved' in mental processes. And of course this too is a form of substance dualism. In any event, it would be an important fact if this were a consequence of the extended self.

## The Bundle View

The extended self implies that no organism could ever have mental properties. I suggested that the best way for friends of the extended self to account for this remarkable consequence is to suppose that a psychological being extends as far and

only as far as its mental states extend. That would make us rather peculiar material things, if indeed we are material at all. It would also leave us wondering *why* a psychological being must be located only where its mental states are. Why should thinking be incompatible with having feet as parts?

Friends of the extended self might reply by saying that we are not material things. That is, we are not things made of matter, with a mass and a density and a chemical composition. We are, rather, bundles of mental states. As Hume once suggested, a psychological being is entirely composed of its own mental states and processes (where the *x*s *compose* *y* iff each of the *x*s is a part of *y* and every part of *y* shares a part with one or more of the *x*s). Our parts are not atoms or cells, but hopes and dreams. Our bodies may be visible material things, but the parts of our bodies are not parts of us. We ourselves are invisible and intangible. More generally, all psychological beings are made up of their mental states and processes and nothing else. Call this the *bundle view*. (Do not confuse it with so-called ‘bundle theories of the *mind*’, which say something completely different.)

The bundle view would save the friends of the extended self from having to say that we are spidery material things coinciding with but distinct from parts of our nervous systems. It would also explain why minimalism is true: If the parts of a psychological being are all and only its mental states and processes, then it follows trivially that a psychological being must be located where and only where those mental states and processes are. And the extended mind really would entail the extended self: any being with mental states extending beyond its skin must itself extend beyond its skin. The inference would be as uncontentious as the principle that a thing must be located where its parts are.

It may be that Clark and Chalmers were presupposing the bundle view, and that this led them to move so quickly from extended mind to extended self. This is also suggested by their remark that to resist the inference would be ‘to shrink the self into a mere bundle of occurrent states’. Saying that Otto’s being confined to his skin would make him a bundle of *occurrent* mental states suggests that every psychological being must be a bundle of mental states of some sort.

So although the extended self is unattractive on the assumption that we are material things, it looks just right given the bundle view. This would also provide the elusive link with the extended mind. How attractive that makes it is a larger question. The bundle view has plenty of troubles of its own. It too is a form of substance dualism. It implies that mind and life are incompatible: no organism could ever have mental properties. (No biological organism is a bundle of mental states. And it has to be part of the proposal that only such bundles can have mental properties.)

At the heart of the bundle view lie two great mysteries. The first is by now familiar: why should it be impossible for anything other than a bundle—an organism, say—to think? A person’s mental states would seem to be states of an organism. Why is a thing’s being in a state of thought or consciousness not sufficient for it to think or be conscious? The second mystery is how a bundle of thoughts could think. Saying that what thinks is not the organism of which my thoughts are states but rather the bundle of those thoughts itself is like saying that what moves across the

stage is not the dancer but rather her movements. It looks like the most elementary sort of confusion.<sup>7</sup>

In any event, the bundle view is another momentous metaphysical claim. And the extended-mind thesis does not appear to provide any support for it. Or at least not unless the extended mind entails the extended self. But there is no reason to believe *that* unless the bundle view is presupposed.

What can we conclude from all this? I have argued that if the extended-self thesis is true, and particularly if it follows from the extended mind, then we and other psychological beings must be immaterial bundles of mental states and processes. Those friends of the extended mind who are uncomfortable with this will resist the inference to the extended self. Otto's memories may or may not extend into the notebook he keeps in a drawer. But either way, Otto himself is right here.

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<sup>7</sup> I discuss the bundle view at greater length in Olson 2007, ch. 6.