Why Some Version of the Extended Mind Hypothesis Must Be On the Table

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The Extended Mind

"*Profoundly embodied agents. . . are able constantly to negotiate and renegotiate the agent-world boundary itself. Although our own capacity for such renegotiation is, I believe, vastly underappreciated, it really should come as no great surprise, given the facts of biological bodily growth and change.*" (Clark, 2008, p. 34)

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The Extended Mind Hypothesis (EMH)

"Proponents of the extended mind story hold that even quite familiar human mental states (e.g., states of believing that so and so) can be realized, in part, by structures and processes located outside the human head. Such claims go far beyond the important but far less challenging assertion that human cognizing leans heavily on various forms of external scaffolding and support. Instead, they paint mind itself (or better, the physical machinery that realizes some of our cognitive processes and mental states) as, under humanly attainable conditions, extending beyond the bounds of skin and skull" (Clark, 2008, p. 76).

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The Parity Principle

"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" (Clark and Chalmers, 1998, p. 8).

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Main Points

- Any version of mind/brain identity (e.g., (Churchland, 1989)) is rejected. Mind is neither the same as nor reducible to brain; and in particular, they need not share the same boundary with respect to the world.

- It is important, but insufficient, to stress the rich interactions between any cognitive agent and its environment. At least some of those interactions are sufficiently rich as to blur the lines between the two.

- Bottom line: mind extends in non-trivial ways into the world beyond the immediate boundaries of the agent (whatever we take those to be).

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The Core Argument

- The Extended Mind Hypothesis cannot be dismissed so easily as Rupert and Adams & Aizawa wish to do.

- On the one hand, their criticisms of Otto and Inga have much to say for them. Either Otto is so special as to be unimportant, or so common as to open the door to cognitive bloat.

- On the other hand, their criticisms of EMH do not depend in any important way on this.

- What they *do* depend on is a crystal clear and sharp boundary between mind and non-mind.

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The Difficulty With Boundaries

- Such a clear and sharp boundary is only guaranteed if one adopts certain starting metaphysical starting points: i.e., *some* form of realism.

- Otherwise one is taking the notion of boundary from the domain of physical volumes, where it is only more-or-less clear, to the domain of things that are not in the first instance physical volumes, where it becomes very unclear.

- One need only show that the boundary between mind and non-mind is sufficiently flexible, and Clark & Chalmers have proven their point.

- This is the best way to advance the EMH.

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The Argument from Concepts

- If anything bears the "mark of the cognitive", concepts do.

- One need not take a McDowell-type position that the world is "fully conceptual" in order to conclude that concepts and non-concepts may not reliably pull apart.

- If concepts bleed into the world, then so does cognition.

- One can allow this as a possibility without any particular metaphysical commitment.

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Otto & Inga

- Otto and Inga share a common belief (the location of the Museum of Modern Art) and a common desire (the intention to go there for a certain exhibition).

- For both of them, the belief is non-occurent.

- The only relevant difference between Otto and Inga is meant to be the location of the information, prior to conscious recall:
  - Long-term memory for Inga ("internal memory").

  - Notebook for Otto ("external memory").

- Failure to ascribe the same belief to Otto as to Inga is nothing more than prejudice about mental boundaries.

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What's Wrong With Otto?

- Alzheimer's doesn't work this way. It's not clear that something like Otto's situation is even possible.

- More critically, I worry that Clark & Chalmers have not picked out what is special about Otto if he *is* possible: the very distinctive and intimate way he is dependent on his notebook.

- Chalmers' introduction to Supersizing aside, it doesn't seem that most of us are bound to our laptops, iPads, smart phones, etc., in anything like the same way.

- It is plausible that, if Otto lost his notebook, we would indeed be inclined to say that he lost a part of himself. But most of us are not in Otto's position.

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Cognitive Bloat

- *Either* Otto is so special as to be unuseful for advancing any substantive EMH (as I suspect, and Rupert explicitly allows)

- *Or*, if Otto's case *does* generalize in the way that (I think Rupert is right) Clark and Chalmers need it to, then it leads to cognitive bloat, making the title of Clark's book ironically appropriate.

- Moral of the story: a little extended mind goes a long way.

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Intuitions

- *". . .To many in the philosophical community, the extended view seems incredible on its face" (Rupert, 2010, p. 2).*

- *"Some time in the early summer of 1998 or so, Fred came across a paper by Andy Clark and David Chalmers, advancing what seemed to us to be the outrageous hypothesis that, at least at times, cognitive processes extend into the tools people use" (Adams and Aizawa, 2008, p. vii).*

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Disclaimers

- Parity Principle "true and obvious" (Adams and Aizawa, 2001, p. 46).

- No "fetish for the bodily boundary" (Rupert, 2009, p. 45).

- Not relying on intuitions (which are things to be set aside) but on the overwhelming weight of empirical evidence.

  "The average person's intuition-based applications of 'cognition', even the well-informed theorist's reactions, should not be trusted to reflect the actual structure of cognition – unless, of course, the subject has in hand the correct theory of cognition" (Rupert, 2009, p. 32).

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What the Argument is Not

Not an argument over materialism or naturalism, or physical monism vs. substance dualism: *"In questioning Brainbound, I shall not in any way be questioning the basic materialist vision of mind as emerging fully and without residue from physical goings-on"* (Clark, 2008, p. xxviii).

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What I Think the Argument Is

- Rupert and Adams & Aizawa are all concerned that Clark & Chalmers "literally" mean that the mind extends beyond the body / into the world / etc.

- "[The EMH is] the view that human cognition – to some substantial degree – literally includes elements beyond the boundary of the human organism" (Rupert, 2009, p. 3).

- Implication that Clark & Chalmers are not "merely" speaking metaphorically; they "really" mean it.

- Such a crisp distinction between literal and metaphorical clearly assumes some form of realist metaphysics. An anti-realist or pragmatist or pluralist simply wouldn't talk this way.

- If some form of anti-realism *should happen* to be true, then intuitions, like perspectives, cannot simply be set aside; they will play an unavoidable and substantive role in the theory.

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- Implication that Clark & Chalmers are not "merely" speaking metaphorically; they "really" mean it.

- Such a crisp distinction between literal and metaphorical clearly assumes some form of realist metaphysics. An anti-realist or pragmatist or pluralist simply wouldn't talk this way.

- If some form of anti-realism *should happen* to be true, then intuitions, like perspectives, cannot simply be set aside; they will play an unavoidable and substantive role in the theory.

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What I Think the Argument Is

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The EMH and Boundaries

- The extended mind debate at heart is about where one should draw the boundary between mind and world, and whether that boundary is, as an empirical matter, fixed at the physical boundary of skin and skull.

- Given the importance of this boundary to the debate, one might expect more attention to be paid to its nature.

- Is the boundary "really" real or is it something we construct (and possibly can move)?

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The Problem with Boundaries

- Proposal: overly fixed boundaries of any kind are problematic, if examined too closely.

  - Problem already at level of single cell.

  - Problem only worse at level of multicellular organisms.

- The realist-inclined EMH opponent need not be bothered by any of this. It is enough for her to say e.g. that the boundary between mind and world is *roughly* at the physical boundary of skin and skull – or is it?

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Flexible Boundaries

- The difficulty with this (or the opportunity!) lies with how rough is "roughly".

- Rupert (as well as Adams & Aizawa) moves seamlessly from the boundary of the organism *as a biological agent* to the boundary of the organism *as a cognitive agent.*

- "Internal" and "external" are properties of physical objects.

- It is not immediately clear whether a cognitive agent is that sort of thing.

- Allowing this is in no way the same as embracing substance dualism.

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Representations, Mental Representations, Internal Representations

- Labeling some representations as "internal representations" is no help unless the application of "internal" in the mental domain is understood and agreed upon.

- Rupert just takes for granted that the "systems-based criterion" provides an adequately clear boundary. He does not (that I can tell) provide any evidence.

- That criterion is no help recapturing a clear sense of boundary unless it is assuming the very physical translation that is meant to be derived.

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The Myth of the Given

- "[The idea that] experience, conceived in such a way that it could not be a tribunal, is nevertheless supposed to stand in judgment over our empirical thinking" (McDowell, 1996, p. xvii).

- Often taken to mean that "world is assimilated to mind: reality is in the space of reasons. Mind is able to represent world because world, like mind, turns out to be conceptual: reality is itself conceptual" (Koons, 2004, p. 130).

- One need not embrace McDowell's conceptualism to accept his attack on the Myth of the Given.

- So long as concepts do not fully or do not reliably pull apart from their referents in the world, so long as some conceptual residue remains (or may remain), the Given will be a myth.

- One need not embrace anti-realism to allow the possibility, in practice, of such residue.

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Two Views on Concepts

- Important (and neglected) distinction to be made between:

    - Concepts as we reflect upon them *as* concepts, and

    - Concepts as we possess and use them non-reflectively.

- On the one hand, they "just are" representations.

- On the other, they seemingly must be something else (e.g., non-representational abilities).

- Proposal: the non-reflective agent makes no distinction between concepts and their referents; it takes a reflective mind to pull them apart.

- Even there, if we examine things too closely, we invite contradiction or paradox.

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A Regress

- Consider: there are things that are concepts, and there are things that are not concepts.

- But to reflect upon either is to bring them into the space of concepts.

- Now one has concepts of concepts on the one hand, concepts of non-concepts on the other.

- But *that* reflection invites another layer of regress, and so on.

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Concepts are the Expectations that Drive Experience

- Consider your dog Rover.

- Upon any specific Rover encounter, you bring a great deal of conceptual expectations to bear.

- To recognize Rover *as* Rover – or, more minimally, a dog; or, more minimally yet, an object – is already to have passed beyond the possibility of strictly in-the-moment, strictly non-conceptual experience.

- Even the concept "my dog Rover yesterday" is a generalization over, and abstraction away from, many specific Rover encounters.

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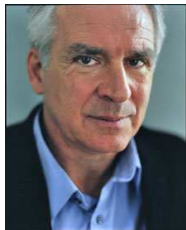
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Concepts as Simplifications

"The prime problem is that the information received by the receptors is too rich and too unstructured. What is needed is some way of transforming and organizing the input into a mode that can be handled on the conceptual or symbolic level. This basically involves finding a more **economic** form of representation: going from the subconceptual to the conceptual level usually involves a **reduction of the number of dimensions** that are represented. . . (Gärdenfors, 2004, p. 221).

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Concepts as Necessary Fictions

- The heart of the problem is the very transparency of concepts: the way they appear to present the world uninterpreted.

- As the quote from Peter suggests, conceptualization is a *lossy* compression algorithm.

- Yet consistently, we take the simplification for the (lost) original and not an approximation.

- Concepts present the world, not as it is, but as we can understand it.

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A Particular Sort of Self-Reference

- The difficulties if not impossibilities of disentangling mind from world are to be expected if one looks at the nature of the enterprise that is philosophy of concepts.

- As with any "sciences of the mind", theories of concepts take empirical study of the "external" world and turn it around, to focus attention on ourselves.

- Not just any aspect of ourselves, but that aspect that seems most essential to making us who we are: our minds, our structured thoughts.

- We can lose any other aspect of ourselves and still claim, with justification, that we are the same person.

- But if we lose our mind, we really have lost ourselves.

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A Particular Sort of Self-Reference

- The difficulties if not impossibilities of disentangling mind from world are to be expected if one looks at the nature of the enterprise that is philosophy of concepts.

- As with any "sciences of the mind", theories of concepts take empirical study of the "external" world and turn it around, to focus attention on ourselves.

- Not just any aspect of ourselves, but that aspect that seems most essential to making us who we are: our minds, our structured thoughts.

- We can lose any other aspect of ourselves and still claim, with justification, that we are the same person.

- But if we lose our mind, we really have lost ourselves.

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The Role of the Observer

- Sciences of the mind unique in this way: the lines between observer and observed become significantly *and unavoidably* blurred.

- I cannot speak of mind or of concepts without, implicitly if not explicitly, intimately including my own mind, my own concepts.

- As F.A. Hayek notes, much of science has proceeded on the basis that, for all practical purposes, the observer and any bias she introduces can be either safely disregarded or, with careful reflection and proper procedures, removed.

- Metaphysics aside, for good practical *and* logical reasons, such a distancing seems not to be possible in studying concepts: we cannot set our conceptual nature aside.

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Conclusions

- As a matter of practical necessity, one needs to draw the line between mind and "the rest of the world" somewhere – if my keyboard might, plausibly, under certain circumstances, bear "the mark of the cognitive", Alpha Centauri should not.

- The Otto thought experiment threatens to draw this line either too conservatively (to be interesting) or too liberally (embracing everything).

- A little extended mind goes a long way, and all this requires is a sufficiently flexible boundary: one that shifts not too much but *just enough*.

- An over-concern with the "literal" facts of the matter reflects hidden metaphysical agendas and leads one to see the line as being both more fixed and more determinate than it really is.

- If concepts bleed "all the way out", so that no part of the world is reliably free of their colouring, and if concepts are intrinsically conceptual entities, then cognition plausibly extends into the world as well.

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Qu: "Where does the mind stop, and the rest of the world begin?"

Ans: Wherever we currently happen to be drawing the line (between "me" and "not me", self and other, self and world).

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