Available online at www.sciencedirect.com
ScienceDirect
Cognitive Systems Research 13 (2012) 12–23
Cognitive Systems RESEARCH
www.elsevier.com/locate/cogsys

The where and what of cognition: The untenability of cognitive agnosticism and the limits of the Motley Crew Argument

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Received 26 August 2010; accepted 21 September 2010
Available online 14 October 2010

Abstract

Cognitive agnosticism is the view that one can fruitfully discuss the pros and cons of what has recently been called the "extended mind" in the absence of an account of cognition. The failure to provide a mark of the cognitive should not prevent one from worrying about whether cognitive processes are an intracranial affair only, encompass extracranial parts of the body, or even stretch out into the extrabodily environment. Cognitive agnosticism, we argue, is unsustainable: we have to address the question *where* cognition is, but in order to do so we have to tackle the question *what* it is first. But instead of adding our own account to the growing list of suggestions regarding the What-question, we suggest that it may be worthwhile to start with the more general question what kind of concept "cognition" could be. Along the way, we will learn something about the limits of a recent objection against cognitive extension sometimes referred to as the "Motley Crew Argument".
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Keywords: Cognition; Extended mind; Functionalism; Parity principle

1. Cognitive extension and cognitive agnosticism

According to classical cognitivism, cognitive processes are a special kind of computational processes over (symbolic or subsymbolic) representations. In the case of humans, these processes and representations seem to be found in and only in the brain—maybe not necessarily so, but arguably as a contingent matter of fact (Adams & Aizawa, 2001, 2008). Such a view squares nicely with, although it does not entail, what Hurley (1998, 2001) dubbed the "sandwich model of cognition," according to which cognition is the intracranial "filling" between perceptual input from and behavioral output to the world surrounding the agent. Famously, Clark and Chalmers (1998) suggested a radical alternative to intracranialism. Cognitive processes, they held, can (and at least sometimes do) *extend* beyond the brain into the extracranial parts of the body and the extrabodily parts of the environment. This hypothesis of *cognitive extension* is best understood as a claim about the location of the material realizers of cognitive processes: while intracranialists locate the realizers of cognitive processes within the bounds of the skull, advocates of cognitive extension hold that cognitive processes can be (and at least sometimes are) materially realized (in part) by processes beyond the skull or skin.

During the past decade, the idea of cognitive extension[1] has sparked a heated debate.[2] A key issue has been how to

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[1] Clark and Chalmers (1998) talk about the "extended mind" or "active externalism." Other labels include "vehicle externalism" (Hurley, 1998), "wide computationalism" (Wilson, 1994), "locational externalism" (Wilson, 2004), "environmentalism" (Rowlands, 1999), "integrationism" (Menary, 2006), and "radical embodied cognitive science" (Chemero, 2009).

[2] Not the least in this journal; see the special issue (vol. 11/4, 2010) on "Extended Mind."

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doi:10.1016/j.cogsys.2010.10.001

argue for such a seemingly absurd view. Why, exactly, should we abandon the received and well-entrenched view that cognitive processes are "brainbound" (although perhaps dependent, or even essentially dependent, upon their wider bodily and environmental context) in favor of an alternative conception according to which they are distributed over brain, body, and environment? What do we gain by adopting the latter view, either philosophically or empirically? This is what Mark Rowlands has recently called the "*big question*": "We might be willing to grant that cognitive processes *depend* on wider bodily structures and processes in order to do what they are supposed to do. But, why move from this to the more radical—and for that reason also more intuitively implausible—claim that these wider bodily structures and processes *constitute*, or are *constituents* of, cognitive processes?" (2010, pp. 57–58; emphases added).

In the philosophical debate about cognitive extension, considerations of *parity* initially seemed pivotal: an extended process should be deemed cognitive if a relevantly similar, purely intracranial, process would (Clark & Chalmers, 1998). More recently, *functionalism* has been invoked: why should extracranial factors *not* qualify as realizers of cognitive processes, if they play the right kind of functional role (Wheeler, 2010a)? Strikingly, opinions on these matters diverge widely (Walter, in press; see also Drayson (2010)). While Wheeler (manuscript, chap. 5) thinks parity considerations provide the only plausible basis for cognitive extension, Clark (2008a, p. 77) denigrates them to a mere "rule of thumb," and others deny they can play any substantive role at all (Coleman, in press; Di Paolo, 2009; Rupert, 2009, 2010a). Similarly, while Clark (2008a) argues that Clark and Chalmers' original argument is best viewed as a simple argumentative extension of functionalism and Mark Sprevak (2010) and Wheeler (2010a,b) maintain that functionalism *entails* cognitive extension, Shapiro (2008) and Rupert (2004, 2009) argue that functionalism is at best inconclusive and at worse at odds with cognitive extension. Although there is a lot to be said about these issues (some of which will be said below), our main concern about the debate between those who think cognitive processes are extended and those who think they are not is much more fundamental. In a nutshell, our point is this: either there is an adequate account of what we mean by "cognition" or not. If there is, then the debate is easily resolved and there is no need for any further lengthy disputes; if not, then the debate is pointless, because we will not know what we are talking about. And without knowing what we mean by "cognition," we will be left unable to resolve those issues so hotly contested in the current debate.

All quarrels about the vices and virtues of our best current arguments for cognitive extension would obviously be superfluous if we had what Adams and Aizawa (2001, 2008, 2009) call a "mark of the cognitive." If we knew what makes a process cognitive, we could (at least in principle; see note 12) simply go and see where in the world those processes that fulfill the mark occur, rendering any disputes about cognitive extension unnecessary. Unfortunately, we seem to be rather clueless regarding the *What* of cognition. We just do not seem to know what, exactly, cognition is. After all, if we had a clue, we would not have been arguing about its *Where* so vigorously for over a decade now without making any progress.[3]

We find this situation bewildering. How can we squabble about the location of cognitive processes if we do not even know which processes are cognitive to begin with? How can we expect to make progress on the *Where*-question, barring an answer to the *What*-question? After all, as Robert Rupert puts it, "the author who asserts that cognition extends into the environment had better be prepared to tell the rest of us what it is that extends into the environment" (2010b, p. 114). Likewise, one should add, the intracranialist had better be prepared to tell us what it is that can occur within the confines of our skulls only. In other words: *Cognitive agnosticism is untenable*, where cognitive agnosticism is the view that one can fruitfully discuss the pros and cons of cognitive extension in the absence of an account of cognition, so that the failure to provide a mark of the cognitive should not prevent one from worrying about whether cognitive processes are an intracranial affair only, encompass extracranial parts of the body, or even stretch out into the extrabodily environment.[4] Such a view is unsustainable, whether or not by a "mark of the cognitive" we mean a criterion that derives from scientific practice (as some participants in the debate seem to think) or a specification of a set of conditions against a wider philosophical background (as others seem to think): barring an answer to the What-question the Where-question is irresolvable, and this is unacceptable because the Where-question is a substantive issue that has to be resolved some way or other.

[3] This is essentially the same diagnosis recently offered by Rowlands (2009a).

[4] Apparently agnosticism-friendly proponents of cognitive extension include, e.g., Clark and Anthony Chemero. Clark's pluralism regarding the cognitive (his view that cognitive extension is fully continuous with the cognitivist heritage of classical computational and representational approaches [Clark, 2008a, p. 198; see also pp. 152–156]), for instance, suggests an agnosticist reading (see also his [2008a, p. 239] approval of Richard Samuels' remark "that we do not encounter anything like Adams and Aizawa's demand for a 'mark of the cognitive' in other scientific fields"). Chemero (2009, p. 212) is even more explicit: "I disagree that proponents of radical embodied cognitive science [Chemero's version of cognitive extension] actually require a definition of 'cognition.' ... There is no such thing." Shapiro (2010, chap. 6.10) also seems to deny that a mark of the cognitive is needed (although he is not explicitly defending cognitive extension). Laudable opponents of agnosticism include Adams and Aizawa (2001, 2008, 2009) among the critics and, recently, Rowlands (2009a) among the proponents of cognitive extension. The view Sprevak (2010) calls "quietism" closely resembles cognitive agnosticism, and Sprevak rejects it for similar reasons we are eschewing cognitive agnosticism: "The hope was that one could appeal to general theories of mentality to decide whether extended cases were mental or not. If quietism is correct, then there is no way of resolving these cases: they are simply cases where competent observers differ" (p. 523).

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