

Realization and Extended Beliefs

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Extended Beliefs

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- extended mind (Clark and Chalmers 1998)
- active externalism (Clark and Chalmers 1998)
- vehicle externalism (Hurley 1998; Rowlands 2003)
- environmentalism (Rowlands 1999)
- locational externalism (Wilson 2004)

Extended Beliefs

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“there are conditions under which thinking and thoughts (or more precisely, the material vehicles that realize thinking and thoughts) are spatially distributed over brain, body and world, in such a way that the external (beyond-the-skin) factors concerned are rightly accorded fully-paid-up cognitive status” (Wheeler *forthcoming*, p. 1)

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Inga and Otto

Extended Beliefs

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Inga and Otto

According to C&C, the state of Otto's notebook interacts with Otto's desires and other beliefs in a way similar to the way in which Inga's biомemory interacts with her desires and other beliefs.

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Inga and Otto

According to C&C, the state of Otto's notebook interacts with Otto's desires and other beliefs in a way similar to the way in which Inga's biомemory interacts with her desires and other beliefs.

E.g., exposure to new information causes Otto to modify the state of his notebook and Inga to modify her biомemory.

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Inga and Otto

Moreover, the current state of Otto's notebook causes Otto to stop at 53rd St., and the current state of Inga's biomemory causes Inga to stop at 53rd St.

The **functional role** of the stored information—its “functional poise” (Clark 2007, 2008)—appears to be the same in both cases.

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Inga and Otto

Hence, C&C conclude, just as Inga has a belief that MOMA is on 53rd St., so Otto has a belief, with the same content, the physical realizers of which extend partially into the environment, viz., the notebook.

Arguments for EXC

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via a notion of cognition

Arguments for EXC

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via a notion of cognition

First, give a general account of **cognition** (an account of what it is for a process to be a **cognitive process**).

Second, go and see which processes in the world fulfill these conditions – are they restricted to biological organisms, or subsystems thereof, or do they include extrabodily items?

Arguments for EXC

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via a notion of cognition

We have not the slightest idea what an adequate account of cognition would look like (Kästner and Walter, 2011; Kyselo and Walter 2010; Walter and Kästner, *under review*).

Arguments for EXC

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via a notion of cognition

via the parity principle

Arguments for EXC

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via 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)

Arguments for EXC

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via the parity principle

Without an account of the cognitive, the parity principle does not give us extended cognition; given an account of the cognitive, the parity principle is superfluous (Walter 2011).

Arguments for EXC

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via a notion of cognition

via the parity principle

via functionalism

Arguments for EXC

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via functionalism

Functional equivalence is cognitive equivalence.

Extended processes and intracranial processes can be functionally equivalent.

Therefore, the extended processes in question must be cognitive if the intracranial ones are.

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via functionalism

What is the right level at which to assess functional equivalence?

Without an account of cognition, functionalism does not give us extended cognition; given an account of cognition, functionalism is superfluous (Walter 2011).

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via a notion of cognition

via the parity principle

via functionalism

via thought experiments

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via thought experiments

The claim that cognitive processes **can** be extended is not very interesting; the interesting question is whether they actually **do** extend.

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via a notion of cognition

via the parity principle

via functionalism

via thought experiments

via real life examples from cognitive science

Arguments for EXC

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via real life examples from cognitive science

coupling – constitution issues (Adams and Aizawa 2001, 2008) remain unresolved: why should we treat the extrabodily item as **constitutive** of the cognitive process and not only as a **causal contributor** to it?

Arguments for EXC

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via a notion of cognition

via the parity principle

via functionalism

via thought experiments

via real life examples from cognitive science

via phenomenology

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via phenomenology

If we are used to using a tool, we may no longer **experience it as a tool** (cf. Heidegger's hammer).

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via phenomenology

How do we derive substantial ontological conclusions from first-person phenomenology?

An Argument (Maybe)

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“there are conditions under which thinking and thoughts (or more precisely, the material vehicles that realize thinking and thoughts) are spatially distributed over brain, body and world, in such a way that the external (beyond-the-skin) factors concerned are rightly accorded fully-paid-up cognitive status” (Wheeler *forthcoming*, p. 1)

An Argument (Maybe)

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“there are conditions under which thinking and thoughts (or more precisely, **the material vehicles that realize thinking and thoughts**) are **spatially distributed over brain, body and world**, in such a way that the external (beyond-the-skin) factors concerned are rightly accorded fully-paid-up cognitive status” (Wheeler *forthcoming*, p. 1)

An Argument (Maybe)

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Realization Physicalism

Every respectable property is either a fundamentally physical property or else realized by fundamentally physical properties (Poland 1994; Melnyk 2003; Montero 1999, 2001; Shoemaker 2007).

An Argument (Maybe)

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Sufficiency of Realization

Properties F_1, \dots, F_n are the fundamentally physical realizers of property G only if the instantiation of F_1, \dots, F_n is *sufficient* for the instantiation of G .

An Argument (Maybe)

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Sufficiency of Realization

Properties F_1, \dots, F_n are the fundamentally physical realizers of property G only if the instantiation of F_1, \dots, F_n is *sufficient* for the instantiation of G .

(I.e., I am talking about **total realizers**, not **core realizers** in Shoemaker's sense)

An Argument (Maybe)

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Property Realism

Properties studied by the special sciences are real.

An Argument (Maybe)

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Property Realism

Properties studied by the special sciences are real.

A view opposed to property realism would, e.g., be one according to which all the properties that exist are fundamentally physical properties (maximally determinate properties), while “higher-level” special science predicates fail to pick out genuine properties (Robb and Heil 2003).

An Argument (Maybe)

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Taken together, Realization Physicalism,
Sufficiency of Realization, and Property Realism
yield Externalism.

An Argument (Maybe)

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Externalism

Some objects possess special science properties the fundamentally physical realizers of which are not all properties of these objects' proper parts.

An Argument (Maybe)

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Externalism

Some objects possess special science properties the fundamentally physical realizers of which are not all properties of these objects' proper parts.

In other words: The realizers of some special science properties include fundamentally physical properties that are properties of objects that do not spatially (or spatiotemporally) overlap with the bearers of the special science properties in question.

An Argument (Maybe)

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Consider my properties of

- being a philosopher
- having tenure
- being engaged
- being a younger sibling
- being a tax payer
- being a mammal

An Argument (Maybe)

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By **Property Realism**, these are all properties that I have.

An Argument (Maybe)

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By **Property Realism**, these are all properties that I have.

By **Realization Physicalism**, these are thus all properties that are realized by fundamentally physical properties.

An Argument (Maybe)

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By **Property Realism**, these are all properties that I have.

By **Realization Physicalism**, these are thus all properties that are realized by fundamentally physical properties.

By **Sufficiency of Realization**, the instantiation of the fundamentally physical properties that realize them must be sufficient for their instantiation.

An Argument (Maybe)

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Suppose, *for reductio*, that for any given special science property of an object, the fundamentally physical realizers of this property are all properties of that object's proper parts.

An Argument (Maybe)

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Suppose, *for reductio*, that for any given special science property of an object, the fundamentally physical realizers of this property are all properties of that object's proper parts.

Then, since perfect physical duplicates (PPDs) have qualitatively identical proper parts, PPDs should share all their realized properties.

An Argument (Maybe)

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Suppose, *for reductio*, that for any given special science property of an object, the fundamentally physical realizers of this property are all properties of that object's proper parts.

Then, since perfect physical duplicates (PPDs) have qualitatively identical proper parts, PPDs should share all their realized properties.

Yet, a PPD of me could fail to be a philosopher, have tenure, be engaged, be a younger sibling, be a tax payer and be a mammal.

An Argument (Maybe)

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Therefore, *by reductio*, it is not the case that for any given special science property of an object, the fundamentally physical realizers of this property are all properties of that object's proper parts.

An Argument (Maybe)

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Therefore, *by reductio*, it is not the case that for any given special science property of an object, the fundamentally physical realizers of this property are all properties of that object's proper parts.

Externalism

Some objects possess special science properties the fundamentally physical realizers of which are not all properties of these objects' proper parts.

An Argument (Maybe)

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In particular, the fundamentally physical realizers of my properties of being a philosopher, having tenure, being engaged, being a younger sibling, being a tax payer, and being a mammal are **spatially distributed and involve properties of objects beyond my systemic boundaries.**

An Argument (Maybe)

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If the foregoing considerations are somehow in the right ballpark, quite a lot of perfectly mundane properties exhibit the characteristics that critics of extended cognition find so disturbing in the case of dispositional beliefs, memories, and other cognitive capacities.

An Argument (Maybe)

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If the foregoing is somehow in the right ballpark, quite a lot of perfectly mundane properties exhibit the characteristics that critics of extended cognition find so disturbing in the case of dispositional beliefs, memories, and other cognitive capacities.

Their fundamentally physical realizers transcend the systemic boundaries of their bearers in the sense that the spatial (or spatiotemporal) region in which the realizers are instantiated encompasses more than the spatial location of the bearers.

An Argument (Maybe)

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Basically, that's an old insight (some properties of objects do not supervene upon these objects' intrinsic make-up) in a new guise.

An Argument (Maybe)

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Basically, that's an old insight (some properties of objects do not supervene upon these objects' intrinsic make-up) in a new guise.

That's certainly true, but note that it is given (new) **ontological bite**. The claim is not only one of supervenience, but one about the location of the realizers.

An Argument (Maybe)

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This is not a direct argument for extended cognition!

An Argument (Maybe)

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This is not an argument for extended cognition!

All the argument shows is that what many find disturbing about extended cognition may actually be a quite widespread and (thus?) innocent phenomenon, and not at all outrageous metaphysics.

Caveats and Responses

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I haven't surveyed the relevant literature.

Wilson (2001, 2004) seems to tinker with similar ideas.

Rupert (2009) and Shapiro (2007) argue that considerations concerning realization actually count against extended cognition.

Caveats and Responses

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Realization Physicalism

Caveats and Responses

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Realization Physicalism

Sufficiency of Realization

Caveats and Responses

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Realization Physicalism

Sufficiency of Realization

Property Realism

Caveats and Responses

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Realization Physicalism

Sufficiency of Realization

Property Realism

Deny that issues concerning realization have
“ontological bite”.

Caveats and Responses

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Realization Physicalism

Sufficiency of Realization

Property Realism

Deny that issues concerning realization have “ontological bite”.

Deny that realization physicalism applies to extrinsic properties.

Caveats and Responses

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Realization Physicalism

Sufficiency of Realization

Property Realism

Deny that issues concerning realization have “ontological bite”.

Deny that realization physicalism applies to extrinsic properties.

Ask for a well-worked-out account of realization.

Caveats and Responses

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Deny that dispositional beliefs, memories and other cognitive capacities are comparable to properties like being a philosopher, having tenure, being engaged, being a younger sibling, being a tax payer, and being a mammal.

Finally, ...

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... thank you very much for your attention!