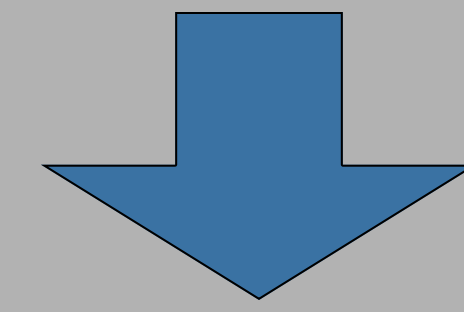


Can Embodied Cognition Deny Representation and Still Account for Intentionality?



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Thesis: A complete rejection of representationalism leaves us unable to explain the aboutness of our mental processes towards the world.



Why Embodied Cognition?

Problems to address

1. Learning, skill acquisition, error detection, etc...
2. The hard problem of consciousness, the binding problem, the explanatory gap.

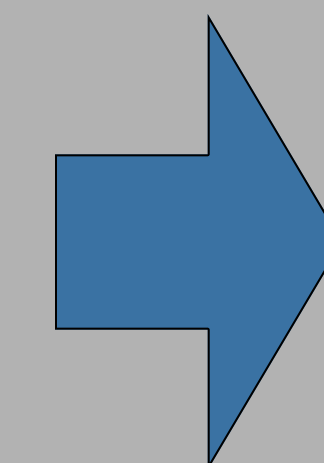
Our mental states are in some way “about” the world, they “represent” chairs and cups, dogs and cats, smells and sounds, emotions and desires. How do brain processes create internal mental representations of the outside world?

The Argument: Cognition is the result of a tightly coupled (sensorimotor) system made up of the entire organism, and the dynamic, temporal interactions it has with the environment.

Important Point

1. Deny mental representations exist.

Representation cannot be passive “re-presentation” of pre-given objects in the world, experience is not a passive process of representations created in the brain.



How do embodied accounts explain cognition while denying representation?

Perception

The Argument: Seeing is a particular way of exploring the environment. An organism takes advantage of the affordances provided by the structure of the rules governing sensory changes produced by various motor actions, and visual experience is the result of this active process.

Important Points About Visual Experience

1. Future oriented, anticipatory
2. Action oriented
3. Can account for richness of visual experience, despite:
 - . Impoverished visual signal
 - . Blind spot
 - . Perturbations by eye movements

(O'Regan, Kevin, and Noë, Alva, 2001)

Learning and Skill Acquisition

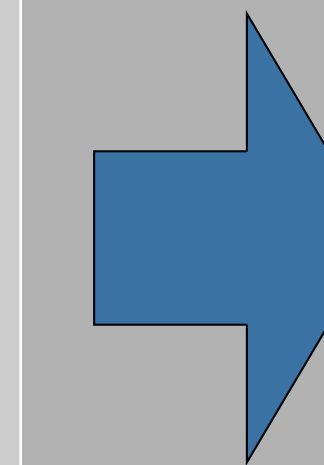
The Argument: As the body acquires skills, they aren't stored as representations, but manifest themselves as dispositions to respond to certain stimuli, and situations in the environment, in certain ways. The agent sees things as affording certain actions given past experiences, but no representations are invoked.

(Dreyfus, Hubert, 2002)

Association and Goal States

Problems to address: How to generalize a current situation as being similar to a past one, without a representation to compare it to? How to talk about success or failure without a representation of what each would look like before hand?

The Argument: The current input is seen as being impoverished in some way, a deviation from the prototypical input. While engaging in skillful activity, there is a sense of deviation from the optimal body/environment relationship, and it is this “sense” in the moment that directs an agent's behavior.



Tennis, Perception, and Expertise

Perception

The Argument: A tennis ball affords certain actions for the agent, given the types of motor actions that can be engaged in with it. The experience of the ball emerges from these affordances of what the agent can do with the ball.

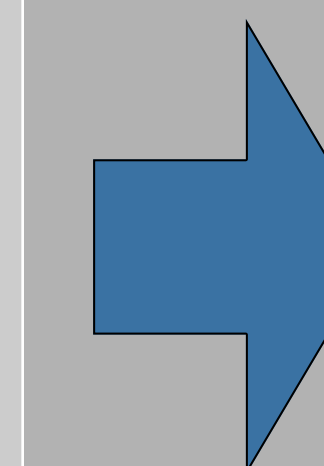
My response: Different organisms will have different affordances based on their morphology and neurophysiology, and will thus have different perceptual experiences. Representation is a way to account for this.



Skillful Action

The Argument: The tennis player does not need to represent body position, racket position, racket angle, ball position on racket or force of hit. The player engages in skillful action, and if it feels as if it's deviating from an optimum, he adjusts to bring the current situation in line with the optimum one.

My response: Granted, but the agent “wants” to hit the ball. He imagines, or represents, a future state of affairs. His attention, awareness, and intentionality is focused on this action and goal.



The Problems of These Embodied Accounts

1. These accounts provide no explanation of why certain causal interactive processes allow intentionality (or aboutness) to arise.
2. If experience is constructed from our future anticipations given the sensory input we interact with, and our bodily dispositions, the world can't serve as “its own best representation.”
3. Dreyfus has to presuppose consciousness and intentionality in order to execute his argument.

Embodiment should constrain an account of representation, not deny it.

Husserl and Phenomenology

1. Many in embodied cognition have been influenced by Husserl, embracing embodiment, but neglecting the way in which for him intentionality was constructed.
2. For Husserl, consciousness is always consciousness “of” something.
3. Intentionality is always in a dynamic relationship with the objects of that intentional activity. It is present during both perception and the learning process and must be accounted for.

Conclusion: Embodied accounts cannot explain intentionality without appeal to representation. In rejecting representation, they keep pushing the fundamental question of intentionality further and further back.