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Perception-Action Coupling and the Dynamicist/Computationalist Divide

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Abstract

A common claim by advocates of embodied, dynamical approaches is that action and perception are “coupled.” On the face of it, this claim may not seem controversial, after all many researchers working in mainstream computationalist neuroscientific approaches also talk about the “coupling” of perception and action. Our goal here is to clarify the relation between these claims of perception-action coupling stemming from dynamical and from computational perspectives. Examining the empirical evidence that computationalists and dynamicists invoke to support their claims we conclude that, despite using similar terminology, they mean entirely different and incompatible things. Still, we propose that both approaches can, at least to some extent, accommodate the evidence invoked by the other. This suggests that the evidence should not, on its own, be used to argue in favor of one approach against the other, and that the disagreement is of a philosophical nature rather than an empirical one.