# The metaphysics of evolution

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This paper briefly describes process metaphysics, and argues that it is better suited for describing life than the more standard thing, or substance, metaphysics. It then explores the implications of process metaphysics for conceptualizing evolution. After explaining what it is for an organism to be a process, the paper takes up the Hull/Ghiselin thesis of species as individuals and explores the conditions under which a species or lineage could constitute an individual process. It is argued that only sexual species satisfy these conditions, and that within sexual species the degree of organization varies. This, in turn, has important implications for species' evolvability. One important moral is that evolution will work differently in different biological domains.

## 1. Introduction: why metaphysics?

Metaphysics is the branch of philosophy that aspires to provide the most general description of reality. Metaphysics aims to say what exists, but at a more general and abstract level than that typical of practical science or, for that matter, everyday life. It may ask, for example, whether there is one kind of being, two (as Descartes believed), or many. It may ask about the relations between very broad categories of entities. Now almost all biologists believe that living beings are made of the same kind of material stuff as the non-living; once, however, it was common to suppose that investigating life involved investigating something in certain respects, at least, quite different from the vulgarly material. This, one might say, is an example of progress

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