What is reductionism?

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Abstract

What exactly is meant by reductionism in the context of the philosophy of biology? As with many such terms, it is hard to come up with a brief, but adequate characterization that doesn't exclude certain proponents – or opponents – of the view. In this paper, I will argue that reductionism must involve an explanatory asymmetry: the reductionist claims that lower level explanations are always as good or better than higher level explanations (setting aside the purely pragmatic sense of "good" as cognitive accessibility). Importantly, the reductionist should allow that, in some cases, higher level explanations are equally good as lower level explanations. I will argue that this position is justified both on purely philosophical grounds as well as being justified by reference to experimental practice (i.e. the sorts of experimental systems that are characterized as "reductionist").

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