
The Moral of the Story: What Does the Evolutionary Contingency Thesis Teach Us About Biological Laws?

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Abstract

John Beatty's Evolutionary Contingency Thesis (ECT) is supposed to reveal an important fact about biology and the laws of nature. Responses to ECT disagree about what, precisely, that lesson is. Beatty (1995) argues that ECT shows there are no biological laws. Elliott Sober (1997) claims ECT demonstrates that biological laws are not the generalizations we normally take them to be (e.g. the Hardy-Weinberg Principle), but rather a larger conditional with the biological generalization as the consequent. Robert Brandon and Daniel McShea (Brandon 2006, McShea and Brandon 2010) argue ECT holds for generalizations contingent on the outcome of evolution, revealing a privileged position for evolutionary mechanisms. Sandra Mitchell (2003) believes ECT demonstrates the natural necessity view of lawfulness should be abandoned in favor of a pragmatic view.

Each account offers important lessons about the role of biological laws. However, each response has important problems. Rather than accept one view to the exclusion of others, I argue that the proper response to ECT is a synthesis of important features found in each account. I use this synthesis to sketch a virtue based account of science: disciplines that employ sufficiently virtuous tools and practices are viewed as scientific, even if a discipline is lawless.

My discussion has three components. First, I discuss ECT and a range of responses to ECT. Second, I discuss the advantages offered by each response to ECT and concerns that prevent us from accepting any particular response. Finally, I outline a synthesized account of virtue based science.

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