
Asymptotic Idealization in Evolutionary Explanation

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Abstract

Session: The space of explanations in evolutionary biology. (Huneman, Ariew, Darden, Lyon, Strevens, Walsh) Batterman and others have argued that many explanations have an asymptotic form: they explain a state of affairs or behavior by showing that it emerges "in the limit". Explanatory models of this sort have two properties that, on the DN account, explanations are supposed to lack: (a) the "premises" of the model do not entail the explanandum, and (b) the model is idealized in certain ways having to do with the infinitude introduced by the use of limits, and so false of the real world. My talk will present a simple example of asymptotic explanation in evolutionary biology; it will show how to understand the limiting aspect of the relevant model, and in particular to relate it to the conventional wisdom among biologists as to what the model is doing; and it will attempt to fit the model into a modern theory of scientific explanation.

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