Selection and drift: why "caused by" rather than "constitutes"?

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Abstract

There are many strands to the debate about the causal status of evolutionary theory. To the extent the debate emanates from different views on causation in general it will clearly be as dialectically unsettled as the general discussion is; it may be overly optimistic to hope for conclusive arguments on the topic of the metaphysics of causation in the near future. However, there is a kind of argument for a non-causal view that does not involve commitment to controversial views about causation. These arguments focus on the distinction between saying that frequency changes are caused by selection/drift and saying that changes constitute selection/drift, and conclude that we should prefer the latter on pain of arbitrariness. The arguments proceed by comparing cases where causal theorists invoke selection/drift as causes with cases where they don't and argue that there is no relevant difference to justify the difference in treatment. I intend to make clear the structure of these arguments and show their independence from controversial assumptions about causation. These arguments are somewhat limited in scope, however. They target selection and drift specifically and so will not serve to establish the general statistical view. A major motivation behind the paper is that of clarification. Given that there are several strands in the debate there may be different opinions about what being a causal/non-causal theorist amounts to.

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