Must Evidence Underdetermine Theory?

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Abstract

According to the underdetermination thesis, all evidence necessarily underdetermines any scientific theory. Thus it is often argued that our agreement on the content of mature scientific theories must be due to social and other factors. Drawing on a long standing tradition of criticism, I shall argue that the underdetermination thesis is little more than speculation based on an impoverished account of induction. A more careful look at accounts of induction does not support an assured underdetermination or the holism usually associated with it. I also urge that the display of observationally equivalent theories is a self-defeating strategy for supporting the underdetermination thesis. The very fact that observational equivalence can be demonstrated by arguments brief enough to be included in a journal article means that we cannot preclude the possibility that the theories are merely variant formulations of the same theory.

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