Probability without certainty Foundationalism and the Lewis-Reichenbach debate

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Abstract

Like many discussions on the pros and cons of epistemic foundationalism, the debate between C.I. Lewis and H. Reichenbach dealt with three concerns: the existence of basic beliefs, their nature, and the way in which beliefs are related. In this paper we concentrate on the third matter, especially on Lewis's assertion that a probability relation must depend on something that is certain, and Reichenbach's claim that certainty is never needed. We note that Lewis's assertion is prima facie ambiguous, but argue that this ambiguity is only apparent if probability theory is viewed within a modal logic. Although there are empirical situations where Reichenbach is right, and others where Lewis's reasoning seems to be more appropriate, it will become clear that Reichenbach's stance is the generic one. This follows simply from the fact that, if $P(E|G) > 0$ and $P(E|not\text{-}G) > 0$, then $P(E) > 0$. We conclude that this constitutes a threat to epistemic foundationalism.

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