Reichenbach's Epsilon Definition of Simultaneity in Historical and Philosophical Perspective

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Abstract

I examine the development of Reichenbach's ideas concerning the conventionality of simultaneity in connection with his ``epsilon''-definition of simultaneity. It does not appear that he ever considered non-standard choices of ``epsilon'' that yield the same ``light-geometry'' as that of special relativity. Rather, it appears he believed that non-standard choices, though always epistemically justified, lead to different ``light-geometries'' (e.g., classical space-time) and thus would necessitate more complicated ``matter axioms'' than those postulated in his axiomatization of relativity.

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