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Are the laws of nature Markovian? ROBERT JONES, Emporia State University — The present laws of physics are Markovian. The state of the world at the current time step, t, depends only on the state of the world at the previous time step, t-1. (If there happen to exist closed timelike curves in our world then general relativity suggests that this may not be true even in physics.) But other sciences may propose laws which are nonMarkovian. Biology (evolution) has the memories stored in DNA, cognitive science has long term and short term memories, economics may exhibit behavior (cooperation) that depends on a memory of past events, etc.

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