

Extending cosmological natural selection

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Abstract

The purpose of this paper is to propose an extension to Lee Smolin's hypothesis that our own universe belongs to a population of universes which have evolved by natural selection. Smolin's hypothesis explains why the parameters of physics possess the values we observe them to possess, but depends upon the contingent fact that the universe is a quantum relativistic universe. It is proposed that the prior existence of a quantum relativistic universe can itself be explained by the notion of evolution towards stable ('rigid') mathematical structures.

Keywords: cosmological natural selection; stable structures; deformation; standard model parameters

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