

On Many-Minds Interpretations of Quantum Theory

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Abstract

This paper is a response to some recent discussions of many-minds interpretations in the philosophical literature. After an introduction to the many-minds idea, the complexity of quantum states for macroscopic objects is stressed. Then

it is proposed that a characterization of the physical structure of observers is a proper goal for physical theory. It is argued that an observer cannot be defined merely by the instantaneous structure of a brain, but that the history of the brain's functioning must also be taken into account. Next the nature of probability in many-minds interpretations is discussed and it is suggested that only discrete probability models are needed. The paper concludes with brief comments on issues of actuality and identity over time.

Keywords: quantum theory, many minds, many worlds, Everett

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