

Everett and Structure

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Abstract

I address the problem of indefiniteness in quantum mechanics: the problem that the theory, without changes to its formalism, seems to predict that macroscopic quantities have no definite values. The Everett interpretation is often criticised along these lines and I shall argue that much of this criticism rests on a false dichotomy: that the macroworld must either be written directly into the formalism or be regarded as somehow illusory. By means of analogy with other areas of physics, I develop the view that the macroworld is instead to be understood in terms of certain structures and patterns which emerge from quantum theory (given appropriate dynamics, in particular decoherence). I extend this view to the observer, and in doing so make contact with functionalist theories of mind.

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