

Epistemic-ontic interpretation of quantum mechanics: quantum information theory and Husserl's phenomenology?

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The opposition between Einstein and Bohr has been often described as the opposition between an epistemological and an ontological approach towards quantum mechanics. Although both frameworks (ontological and epistemological) have been later recognized as supplementary rather than contradictory, they have stayed more or less isolated from one another. An interesting possibility for exceeding this opposition has been offered by the quantum information theory, which is based on the epistemological approach, but at the same time, because of its connection with philosophical tradition, offers a possibility for an ontological supplementation.

An epistemologically-ontological interpretation based on quantum information theory and phenomenology thus enables more complex understanding of quantum mechanics –including the observer and his role as well as the role of the observed reality –essentially based on re-united aspects of physics and philosophy.

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