

Bohr's relational holism and the classical-quantum interaction

Thursday, 20 June 2019 15:30 (40 minutes)

In my presentation I will focus on Bohr's problematic distinction between classical systems and quantum systems. The first thesis that I will discuss is that such a distinction is motivated by the fact that the shared, objective language in which properties of the quantum realm must be described is a condition of possibility to talk about quantum systems. These systems cannot be subject to a scientific analysis based itself on quantum mechanics, since any use of the latter theory presupposes the classical language. The second thesis that I will discuss is an analysis of Bohr's classical/quantum distinction in terms of the distinction between theories of principle and constructive theories proposed by Einstein in 1919. Finally, I will discuss the various senses in which this distinction might be interpreted as contextual and therefore understood holistically in terms of a peculiar inseparability of the quantum system from the classical apparatus.

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Session Classification: Quantum and/or Classical Worlds?