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# There is no quantum world

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The theory of relativity is about the explanatory framework of physics —a 'principle'theory, to use Einstein' s term, by contrast with 'constructive' theories. Specifically, we were wrong about the structure of space and time. Quantum mechanics is also a 'principle'theory, about a different feature of this framework: we were wrong about commutativity, more specifically about Booleanity, what George Boole characterized as 'the conditions of possible experience.' I will elaborate on the significance of non-Booleanity as it relates to the 'quantum limits of knowledge'theme of the conference and to the title, which is a quote from Aage Petersen's article 'The philosophy of Niels Bohr' in Bulletin of the Atomic Scientists 19, 8–14 (1963): 'When asked whether the algorithm of quantum mechanics could be considered as somehow mirroring an underlying quantum world, Bohr would answer, "There is no quantum world. There is only an abstract quantum physical description. It is wrong to think that the task of physics is to find out how nature is. Physics concerns what we can say about nature."'

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