Bell’s theorem, computability of quantum theory, and relativity of the ‘local realism’

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Using explicit counterexample it is shown that the Bell's inequalities can be broken by a system that satisfies all the requirements of local realism, in apparent contradiction with the theorems about the impossibility of hidden variables in quantum mechanics. This local-realistic system is exactly a classical computer that simulates quantum evolution of an Einstein-Podolsky-Rosen entangled pair. The possibility of exact simulation of quantum systems by classical machines follows from algorithmic computability of quantum theory. It is shown that the inaccuracy of the usual proof of theorems on the impossibility of hidden variables is a simplified interpretation of the concept of the local realism. Actual reality may incorporate many different 'layers of reality' with different kinds of realisms, but not just one as implicitly supposed in the theorems. It is explicitly shown by the counterexample to the Bell's theorem. This layers of reality are connected by relations of substrate-imagine and my be described in a framework of the theory of categories. Some consequences of this construction is considered for the nature of physics, mathematics and their relation.