

# Foundations of Quantum Physics beyond Bell: Celebrating 60 years of Bell's theorem

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## Turing, Wigner, Bell: the high frontier for experimental metaphysics

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Experimental metaphysics is the study of how empirical results can reveal facts about the fundamental nature of the world, independent of any theory. It is a field born from Bell's 1964 theorem, and the experiments it inspired. I argue that the high frontier for the field will come from combining Bell's 1964 paper with those of two other scientists of roughly the same era. Specifically, realising a thinking machine (à la Turing) on a quantum computer in the role of Wigner's friend on one side of a Bell experiment would yield either a more acute contradiction between metaphysical assumptions or new physics.

A few papers are relevant, but especially this one: <https://doi.org/10.22331/q-2023-09-14-1112>

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