

Review of: "On the Bell Experiment and Quantum Foundation"

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Potential competing interests: No potential competing interests to declare.

Bell theorem is based on 3 assumptions (see for example the review paper Physics Reports 413/6 (2005) 319 or Stanford Encyclopedia <https://plato.stanford.edu/entries/bell-theorem/>):

- Realism: exist hidden variables with a certain probability distribution
- Bell locality
- Independence of measurements (or freedom of choice)

While other supposed hidden hypotheses, such as counterfactual definiteness have been excluded both theoretically [Int.Journal Quan. Info.19 2150018 (2021)] and experimentally [arXiv:2303.04787].

Of course, any model violating one of these can violate Bell inequalities. For instance, de Broglie – Bohm model does not satisfy Bell locality and thus is not excluded by Bell inequalities tests.

The present model assumes that: *"Related to the mind of an observer A there is an inaccessible variable ϕ such that all accessible variables can be seen as functions of ϕ ."*

Namely, the so-called freedom of choice/ independence of measurement hypothesis is violated, since there is some pre-determined hidden variable related to this. In this sense, this model is part of "the superdeterministic" family. Thus "nihil sub solem novum".

In my opinion, the specific model in itself does not appear to be particularly interesting, nonetheless, it can represent a further example of how such models can be built.