The mystery of quantum three box paradox

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Post-selection is a commonplace in experimental analysis. Yet, it is known to often lead to the so-called *selection bias*, that is appearance of non-causal correlations and misleading conclusions. This issue gives rise to many paradoxes, e.g. Berkson's paradox, Ellenberg paradox, obesity paradox, etc. Quantum physics does not provide a clear picture of how the *cause-and-effect* works on the fundamental level. It is a theory that perfectly predicts the statistics of experimental results, but its interpretation remains rather obscure. This is why quantum mechanics is exceptionally vulnerable to the issues of causal inference. In this talk, I will briefly explain one of the quantum mechanical curiosities, the so-called *quantum three box paradox*, and suggest a possible, natural explanation which refers to the selection bias. Let it be a warning against careless post-selection.