

Thoughts on How Quantum Mechanics can consistently describe the use of itself

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Quantum physics has an almost mystical reputation for being notoriously difficult, something, that in my experiences, it has lived up to. That being said, one would expect that those established in the field would not find foundational understanding of it difficult but that is the case here. This paper is a rebuttal paper to a report claiming to have a thought experiment that demonstrates the lack of self-consistency in quantum physics (a death blow to many theories), however, it appears as though their conclusion was incorrect. I will not cite the original paper (as I have a habit of not inflating incorrect or misleading papers citation counts), but I did not need to read it as Lazarovici provides a sufficient explanation of the thought experiment. Thankfully, this paper was mathematically very simple as it was a simple thought experiment. However, the thought experiment does take a little bit to wrap your head around.

I think Quantum Physics often has the problem of being a little too close to reality. What I mean by this, is if I have the thought experiment as a math problem (i.e. solving for the wavefunction results), I have no doubt that all would reach the same (correct) result of the final wavefunction. But because we have intuition about the real world as it is, we inject this into our thinking about quantum physics and this leads us astray, as it did for the original authors. I think this paper will require a few more read throughs before I fully understand it, but I find disagreements like this very interesting (not just for the academic drama, but it really is a question about the soul quantum physics).

My final closing remark is that, whenever the authors of this paper say "object" my only thought is "You Keep Using That Word, I Do Not Think It Means What You Think It Means". But that is a topic for another day and perhaps I will discuss it more on a philosophy of science paper.