Review of: "Consistent Interpretation of Quantum and Classical Mechanics"

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The manuscript intents to rewrite the postulates of quantum mechanics in a way which would be consistent with classical mechanics. I find the manuscript very confusing at different levels, and I doubt the author is actually dealing with experimental science. Here are the reasons why.

1) The manuscript mixes up universal statements and particular statements. The postulates should only contain universal statements, so as to build the structure of the theory, but in the manuscript the postulates contain statements specific to particular systems.
a) For instance the author gives the state of the electron of hydrogen in the 6th postulate, whereas this is a specific information which has nothing to do in a postulate. It has not to be postulated precisely because it can be proved by experiment through ray spectrum after postulating Schrödinger equation. The author does not seem to be aware of this difference.
b) An other example is that the author discards Born's probabilistic interpretation of the wavefunction on the specific example of hydrogen in radial coordinates because the wavefunction then cannot be reduced to a radial Dirac function. But this is only a technical impossibility, because no radius detector has been designed so far. Born's principle works every time it is possible to build the corresponding detector, and this is what is expected from an experimental science.
c) A consequence of this confusion is that the author proposes 13 postulates instead of 6, because he wants to give to particular statements the status of universal statements. What is expected from universal statements is to try to have the theory working with the least possible number of them.

2) The author's postulates are incomplete, so quantum mechanics cannot be rebuilt from them. For instance, the principle of superposition, a key ingredient of the quantum theory, is missing. Also the notion of Hilbert space.

3) Mathematics are not masterised. For instance on page 10 the author claims that x of the electron is not well defined for a wave whereas p is well defined. This is false, p is only well defined for a plane wave, and x is well defined for a Dirac distribution. Both Dirac wave and plane wave are idealisations and cannot be found in nature.

4) Concepts are, either not defined, or defined in a way which is not connected with experience. Hence they are unusable for practical purpose. For instance, in postulate 9, the author claims the existence of an intermediate energy E' of the electron while it makes a transition from a state to an other. This energy is not linked to any measurable property, so no prediction can be made from this postulate, which is then unverifiable.

5) The notions used in the manuscript are not logically consistent.

a) For instance the author suggests the existence of «stateless wavefunctions» whereas the wavefunction is, by standard definition, the state of the system. So «stateless wavefunction» is an oxymoron. Otherwise, the author should define what he means by «wavefunction», which is not defined in the manuscript, so this remark could go with point (4).

b) The author proposes to separate quantum and classical theory through an «observation range» r, but then this observation range is, by definition, detector dependent, so the status of the properties of the system, as defined by the author, like Heisenberg principle, then strongly depends on the experimental setup. Now a contradiction arises because the author claims that his interpretation of quantum mechanics theory is not epistemic, whereas his observation range r is actually epistemic.