Did Bohr Hold the Minimal View (View 0) of QM?

Monday, 18th May 2026

386 words

Bohr insisted that we *must* use classical concepts when describing the results of measurements. According to Camilleri and Schlosshauer (2015), this is not an ontological claim about what is *actually* governing macroscopic measuring instruments, but simply the (to Bohr) "seemingly obvious" (2015, p. 75) fact that obtaining knowledge through experiment forces the experimenter to adopt the (perhaps problematic, but unavoidable) assumption "that you can distinguish sharply between the behaviour of objects and the means of observation" (2015, p. 76). But this does not mean that QM emerges out of the removal of this problematic assumption. Instead, we must recognise that all experimental knowledge relies on this assumption, which therefore puts limits on the "kind of knowledge can be obtained concerning objects")(2015, p. 76). Put differently, *there is no alternative* to using classical concepts if we want to obtain experimental knowledge of nature.

This sheds some light on Landau and Lifschitz' explanation that "[QM] contains classical mechanics as a limiting case, yet at the same time it requires this limiting case for its own formulation" (1990, p. 35) – for Bohr, the fact that QM requires classical mechanics for its own formulation is not a quirk of QM but is fundamental to the nature of knowing through experiment, as Camilleri and Schlosshauer's reading of Bohr reveals.

Bohr's disagreement with Heisenberg about the movability of the QM-classical "cut" did not mean that he held classical mechanics to be somehow ontologically privileged – instead his disagreement was based on epistemic grounds – the question we ask nature determines where we place the "cut".

Given that Bohr's *primacy of classical concepts* is not an interpretation of the quantum formalism but instead an epistemology of experimental knowledge, what - if any - are its implications for Bohr's views on the quantum formalism?

Bohr tells us that "Any well-defined quantum-mechanical problem must be concerned with a certain classically described experimental setting" (2015, p. 78). To me, this seems to put Bohr's views remarkably close to Bacciagaluppi's "Minimal View" of QM in which it is simply a theory of experiment with no ontological claims about reality. As the quote above suggests, Bohr did seem to think that any application of the QM formalism beyond the confines of an explicit experimental setting, is not "well-defined"? If so, does this mean he was a **minimalist** in the Bacciagaluppi sense?

Bibliography

Bell, J. (1990). *Against Measurement.*

Camilleri, K., & Schlosshauer, M. (2015). Niels Bohr as philosopher of experiment: Does decoherence theory challenge Bohr's doctrine of classical concepts?. *Studies in History and Philosophy of Science Part B: Studies in History and Philosophy of Modern Physics, 49*, 73–83. https://doi.org/10.1016/j.shpsb.2015.01.005