

## Notwithstanding Bohr, Three Tenets of QBism

*Wednesday, 19 June 2019 11:40 (40 minutes)*

Without Niels Bohr, QBism would be nothing. However in this talk, I try my best to explain how QBism is no minor tweak to Bohr's view on quantum mechanics. Along the way, I introduce three tenets of QBism: 1) All probabilities, including all quantum probabilities, are so subjective they never tell nature what to do. This includes probability-1 assignments. Quantum states thus have no "ontic hold" on the world. 2) The Born Rule –the foundation of what quantum theory means for QBism –is a normative statement. It is about the decision-making behavior any individual agent should strive for; it is not a descriptive "law of nature" in the usual sense. 3) Quantum measurement outcomes just are personal experiences for the agent gambling upon them. Particularly, quantum measurement outcomes are not, to paraphrase Bohr, "instances of irreversible amplification in devices whose design is communicable in common language suitably refined by the terminology of classical physics." Finally, I discuss how Bohr's notion of "phenomena" remains a guiding light to QBism in its endeavor to identify an ontology compelling the use of quantum theory to decision making agents: As best we can see, it has to do with the taking account of a world in which, as William James put it, "new being comes in local spots and patches."

**Presenter:** FUCHS, Christopher (University of Massachusetts Boston)

**Session Classification:** Quantum Bayesianism and Copenhagen Interpretation