

Craig Callender, “Bohumian Rhapsody”

The “Bohumian” interprets Bohmian mechanics (and hence quantum mechanics) in a Humean manner. As Mach rejected forces as fundamental entities in a classical world, the Bohumian rejects quantum states or wavefunctions as part of the fundamental quantum ontology. Quantum states are instead viewed as part of the representational structure of laws of nature: they are devices that help predict and explain how the basic ontology (particles, fields) moves on spacetime, not themselves part of that ontology. This paper develops and defends this interpretation (which is possible for any beable-based theory, not only Bohm). After motivating the view, sorting out confusions, and exploring new versions, I confront the main objection against it. Queen’s “Bohemian Rhapsody” is about a young man who kills someone and then sells his soul to the Devil. Bohumians face a similar question: can they “kill” the quantum wavefunction without selling their souls to an extreme version of Hume? Here I discuss this Faustian bargain and claim that Bohumians can resist the devil Beelzebub has put aside for them.