

PETER BOKULICH
Curriculum Vitae (December 2005)

Assistant Professor
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Areas of Specialization

Philosophy of Physics, Philosophy of Science, Philosophy of Mind.

Areas of Competence

Philosophy of Biology, Metaphysics, History of Science.

Education

Ph.D. (Philosophy) University of Notre Dame, 2003.
Dissertation: “Horizons of Description: Black Holes and Complementarity.”
Director: Don Howard.
B.A. (Philosophy) University of California at Berkeley, 1992.

Publications

“Does Black Hole Complementarity Answer Hawking’s Information Loss Paradox?”
Philosophy of Science, forthcoming.
“Niels Bohr’s Generalization of Classical Mechanics,” (with A. Bokulich) *Foundations of Physics* 35 (2005) pp. 347-371.
Review of *The Evidence for the Top Quark: Objectivity and Bias in Collaborative Experimentation* by Kent W. Staley, *Notre Dame Philosophical Reviews* (2005).
“Black Hole Remnants and Classical vs. Quantum Gravity,” *Philosophy of Science* 68 (2001) pp. S407-S423.

Papers under Review

“Putting Zombies to Rest: The Role of Dynamics in Reduction.”

I argue that property dualism is not supported by the purported logical possibility of qualitative zombies. Chalmers’s analysis of the logical supervenience of ordinary macroscopic facts on microphysical facts fails to account properly for causal properties. His arguments rely too heavily on kinematic facts and thereby obscure the dynamical facts at the macroscopic and microscopic levels. A proper analysis of the relation between causal and dynamical properties at different levels reveals that we can only imagine qualitative zombies if we beg the question against qualia being physical.

“Interactions and the Consistency of Black Hole Complementarity”

Presentations of black hole complementarity by van Dongen and de Haro, as well as by 't Hooft, suffer from a mistaken claim that interactions between matter falling into a black hole and the emitted Hawking radiation will lead to a failure of commutativity between spacelike related observables localized inside and outside the black hole. I show that this conclusion is not supported by our standard understanding of quantum interactions. I argue that the challenge facing black hole complementarity is that of reconciling a commitment to a bleaching response to Hawking's information loss paradox with the expectation that the event horizon will be locally unremarkable. This challenge is most promisingly met by proposals that postulate a consistent account of the limitations of our local semiclassical theories, but no support is added to these postulates by appeals to verificationism or to the interactions considered by 't Hooft.

Presentations

- “Putting Zombies to Rest: The Role of Dynamics in Reduction” presented at the American Philosophical Association, Eastern Division, December 2005.
- “Putting Zombies to Rest” presented at Tertulia Junior Faculty in the Humanities Group Boston University, December 2005.
- “Zombies! Property Dualism in Philosophy of Mind,” presented at Western Michigan University, February 2005.
- “Consistency and Complementarity in 20th Century Physics,” presented at the Joint Atlantic Seminar for the History of the Physical Sciences, February 2005.
- Comments on Jaakko Hintikka's “What is the Real Logic of Quantum Theory” at the Boston Colloquium for Philosophy of Science, January 2005.
- “Quantum and Classical Fields in the 1960s: Making Sausages without Hogs?” presented at the Dibner Institute for the History of Science and Technology, December 2004.
- “Does Black Hole Complementarity Answer Hawking's Information Loss Paradox?” presented at Philosophy of Science Association, November 2004.
- “The Criterion of Consistency: Quantum Fields in the 1930s,” presented at the Dibner Institute for the History of Science and Technology, February 2004.
- “Black Holes, Complementarity, and Quantum Gravity,” presented at the Boston Colloquium for Philosophy of Science, 2002.
- “Bohr on Disturbance and Quantum Uncertainty,” presented at HOPOS 2002 Montreal, 2002.
- Comments on “The ‘Logical Interpretation’ and the Measurement Problem,” at the NWU/UIC 2001 Philosophy of Physics Workshop in Honor of Arthur Fine, 2001.
- “Black Hole Remnants and Classical vs. Quantum Gravity,” presented at Philosophy of Science Association, 2000.
- “The Black Hole Information Loss Paradox,” presented at the Chicago Area Philosophy of Physics Discussion Group, 1999.
- “Reductionism ad Absurdum” or “A Solipsist Takes a Look at Himself,” presented at the Notre Dame Philosophy Graduate Student Colloquium, 1999.
- “Special Relativity and Models of Becoming,” presented at the Mephistos Graduate Student Conference, 1997.

Fellowships

MIT Dibner Institute Postdoctoral Fellowship, 2003-2005.
Boston U. Center for Philosophy & History of Science Research Fellowship, 2001-2002.
Notre Dame Department of Philosophy Dissertation Fellowship, 1999.

Professional Activities

Assistant Director of Boston U. Center for Philosophy & History of Science, 2002-2003.
Referee for the National Science Foundation.
Referee for *Philosophy of Science*, *Studies in History and Philosophy of Modern Physics*,
Synthese, and *Foundations of Physics*.
Co-founder of the Boston Area Philosophy of Physics Discussion Group (with
A. Bokulich).

Professional Affiliations

Philosophy of Science Association
American Philosophical Association
British Society for the Philosophy of Science

Teaching Experience

Philosophy of Physics; Boston University (Spring 2006).
The Mind and the World: Writing Seminar; Boston University (Fall 2005, Spring 2006).
Introduction to Philosophy; Boston University (Fall 2005).
Philosophy of Science; Boston University (Spring 2003).
Revolutions in Science: Writing and Research Seminar; Boston University (Spring 2003).
The Scientific Revolution: Writing Seminar; Boston University (Fall 2002).
Introduction to Philosophy; Tufts University (Spring 2002).
Ethics; Suffolk University (Fall 2001).
Informal Logic; Suffolk University (Fall 2001).
Minds, Brains, and Persons; Notre Dame (Spring 2001).
Images of Humanity: Scientific Perspectives; Notre Dame (Spring 2000).
Values in Science (graduate course); Chesapeake Biological Laboratory (Summer 1997).