





Logical Causality in Quantum Mechanics

CPNS Workshop #1

August 15-16, 2008

California State University Sacramento Sacramento, California

Focus 1: The Relationship of QM Logical Causality to Philosophy of Mind:

Consciousness as Emergent Complexity Deriving from Fundamental Logical Features of Quantum

Actualities / Whiteheadian Actual Occasions

Focus 2: QM and Physical vs. Metaphysical Conceptions of Extensiveness:

Physical vs. Philosophical Cosmology and The Role of The Logical-Mereological Order Underlying

4D Relativistic Spatiotemporal Extension

Morning Session, Friday, August 15

Welcome Michael Epperson, Project Leader

Introduction and Fetzer Goals Tim Eastman, Project Manager

Quantum Logic David Finkelstein

Logical Causality In Metaphysics and Philosophy of Mind: A Brief Overview Michael Epperson

Break

A Whiteheadian Perspective on Nature and Freedom Gary Herstein

Recent Work and Questions ALL

Afternoon Session, Friday, August 15

Emergence, Modern Physics, and Whitehead Michael Epperson

Finkelstein, Whitehead and One Approach to a Quantum Praxiology Mohsen Shiri-Garakani

Quantum Physics, Consciousness and the Mind-Body Question

Henry Stapp

Break

Open Dialogue on Modern Physics, Philosophy of Mind, and Emergence

ALL

6pm Dinner - Gonul's J Street Café - 3839 J St

Morning Session, Saturday, August 16

Notes on Tools and References Tim Eastman & Mike Epperson

Foundational Questions for Modern Physics David Finkelstein

Possibilities of Experience – Many Worlds?

George Shields

Physics and the World of Experience Tim Eastman

Whitehead and Extensiveness William Kallfelz

Logical Causality and Whitehead's Theory of Extension Michael Epperson & Gary Herstein

Break

New Directions - Dialogue ALL

Afternoon Session, Saturday, August 16

New Directions - Dialogue Continues

Paul Gailey & Jan Walleczek

ALL

ALL

Break

Comments on the Project and Fetzer-Franklin Goals

Research Plans, Strategy, Goals, Milestones

Summary and Future Plans Tim Eastman & Mike Epperson

6pm Dinner - Spataro Restaurant - 1415 L St.

BIBLIOGRAPHY

Eastman, T. E., & Keeton, H. (2003). *Physics and Whitehead quantum, process, and experience*. SUNY series in constructive postmodern thought. Albany: State University of New York Press.

Epperson, M. (2004). *Quantum mechanics and the philosophy of Alfred North Whitehead*. American philosophy series, no. 14. New York: Fordham University Press.

Finkelstein, D. R. (1996). *Quantum relativity: a synthesis of the ideas of Einstein and Heisenberg*. Texts and monographs in physics. Berlin: Springer.

Herstein, G. L. (2006). Whitehead and the measurement problem of cosmology. Process thought, v. 5. Frankfurt: Ontos Verlag.

- Shields, G. W. (2003). *Process and analysis: Whitehead, Hartshorne, and the analytic tradition*. SUNY series in philosophy. Albany: State University of New York Press.
- Stapp, H. P. (2007). *Mindful universe: quantum mechanics and the participating observer*. The frontiers collection. Berlin: Springer.

