

Fredrik Andersen

Towards a Unified Metaphysical Framework for Physics

Abstract

The last century of physics has given us two main conceptual frameworks. Quantum Mechanics is most commonly seen as presenting a non-local, non-causal universe while Relativity Theory is a local, causal theory with differing concepts of space and time. Attempts at reconciliation have predominantly taken the form of reinterpreting Quantum Mechanics in relativistic terms, by for instance maintaining the relativistic version of the light principle. Since there are unclear parts of Relativity theory (as for instance the heuristic nature of rods and clocks) and others that are unexplained in the theory (for instance the nature of light and the basic constituents of the measuring apparatus), I propose a different approach. By applying relevant parts of Bohr's philosophy of physics to Relativity Theory we might come closer to a unified metaphysical framework for macro and micro physics.