

Reversing the Arrow of Explanation in the Relational Blockworld: Why Temporal Becoming, the Dynamical Brain and the External World Are All "In The Mind"

Stuckey, W. M. and Silberstein, Michael and Cifone, Michael (2005) Reversing the Arrow of Explanation in the Relational Blockworld: Why Temporal Becoming, the Dynamical Brain and the External World Are All "In The Mind".

Full text available as:

[PDF](#) - Requires a viewer, such as [Adobe Acrobat Reader](#) or other PDF viewer.

Abstract

We introduce the Relational Blockworld (RBW) as a paradigm for deflating the mysteries associated with quantum non-separability/non-locality and the measurement problem. We begin by describing how the relativity of simultaneity implies the blockworld, which has an explanatory potential subsuming both dynamical and relational explanations. It is then shown how the canonical commutation relations fundamental to non-relativistic quantum mechanics follow from the relativity of simultaneity. Therefore, quantum mechanics has at its disposal the full explanatory power of the blockworld. Quantum mechanics exploits this expanded explanatory capability since event distributions among detectors per the density matrix follow from spacetime relations (symmetry group) alone. Thus, the event distributions of non-relativistic quantum mechanics follow from a blockworld wherein spacetime relations are fundamental. Per RBW "quantum mysteries" are deflated and the implications for consciousness and the perception of temporal flow and absolute becoming are explored. We conclude that given RBW, consciousness is no less fundamental than any "physical" feature of the world such as brain states. Further, active consciousness is needed to explain the illusion that it is a dynamical world and consciousness in its most fundamental state is relational and non-local.

Keywords: Quantum Mechanics, non-locality, blockworld, consciousness, absolute becoming, explanation

Subjects: [Specific Sciences: Cognitive Science](#)
[Specific Sciences: Physics: Relativity Theory](#)
[Specific Sciences: Physics: Quantum Mechanics](#)

ID Code: 3249

Deposited By: [Cifone, Michael](#)

Deposited On: 20 March 2007

Additional Information: published in R. Buccheri, A. Elitzur and M. Saniga (eds.) "Endophysics, Time, Quantum and the Subjective" pp. 207-230 (World Scientific Publishing Co.)