

Endo- and exo-theories of matter

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Abstract

The endo/exo-dichotomy in the domain of the material world is analyzed from the standpoint of old-fashioned Cartesian dualism. The holistic structure of the quantum world enforces a Platonic view for the universally valid laws governing matter. In contrast to the structural simplicity of non-operational quantum endophysics, the empirical reality and experiments belong to quantum exophysics. In algebraic quantum mechanics, the transition from quantum endophysics to quantum exophysics is mathematically welldefined. The exophysical richness and variety of the concrete and particular emerges by imposing a new, contextually selected topology into fundamental endophysics. In the Cartesian world view, the inverse problem, however, is ill-posed. Though the endophysical realm can be grasped by human reason, endophysics cannot be set up from sense data and experiments without recourse to primordial images.

Keywords: Universally valid laws governing matter. Holistic structure of the quantum world. Cartesian

dualism. Non-operational quantum physics. Contextual topology.

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Subjects: Specific Sciences: Physics: Quantum Mechanics

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By:

Primas, Hans

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