

## AGPhil 2: Philosophie der Physik II

Time: Thursday 10:00–11:30

Location: H 2033

AGPhil 2.1 Thu 10:00 H 2033

**Psychological Environments in Modern Science** —  
•ALEXANDER UNZICKER — Pestalozzi-Gymnasium München

Throughout the history of science, the psychological environments of researchers have been studied mostly at an individual level, e.g. in biographies of iconic figures such as Albert Einstein or Isaac Newton.

Yet it is interesting to consider motivation, opinion formation and overall psychological situation of scientists, in particular within the 'big science' paradigm that predominates physics since WW II.

AGPhil 2.2 Thu 10:30 H 2033

**Emergence, Experience and Quantum Physics - A New View**  
— •RAVI GOMATAM — Institute of Semantic Information Sciences and Technology, Mumbai, India

How do simple parts (such as a plank and four sticks) bring about a whole (say, a 'table', in this case)? We deem the simples as real via a direct realism concerning objects in commonsense thinking. The same direct realism could not also serve to treat the wholes as real, if emergent systems are different from their constituent parts, as is commonly held. This may well be the nub of the issue in concerning emergence: we need an alternative version of direct realism.

This same need also arises in quantum mechanics, wherein the "cat paradox" shows that our usual direct realism about macroscopic objects is good enough only to get the irreducibly probabilistic interpretation, not to get at the quantum ontology underlying single events. I will motivate a new version of direct realism about experiences that leads to a new quantum notion of emergence of macroscopic objects at the level of experiences, which is what the wholes are. Unlike the microscopic holism exhibited by entangled EPR-pairs of microscopic

particles, well-discussed in the literature, this new view of macroscopic quantum holism is more intuitive, sans new paradoxes and is congenial to naturalize emergence.

AGPhil 2.3 Thu 11:00 H 2033

**Pataphilosophy: Phenomenology and Physics as handmaidens, The Promise of a New Science in Deleuze's History of Philosophy and Hegel's Science of Logic** — •JACK COOPEY — Durham University

The debates whether philosophy should itself assert its empty contents as defined by Deleuze, towards recent developments in physics in light of its ontologies, epistemologies and metaphysics, precisely because philosophy itself only analyses objects of other disciplines and does not possess its own object. It appears that at a prima facie level, that the relation between contemporary physics and phenomenology altogether appear so distant and more or less an impossibility beyond any potential conceptualization, but perhaps this is the very axis of reason which begs its very conception, and thus a dialogue or first encounter at the crossroads needs in fact to begin. The apparent conflict, paradox or contradiction between contemporary phenomenology and the recent developments in physics, is that whilst phenomenology on the other hand deals with the essences of things bracketing the metaphysical claims and presuppositions as defined by Husserl, and physics appears to now deal with concepts and objects beyond the essence of things, how and where are we to begin to draw a dialogue in these seemingly disparate objects of inquiries? Perhaps one avenue for a discussion across phenomenology and physics is in fact found within German Idealism, in the work of Hegel and his Science of Logic in which he took contemporary philosophical understandings of the physics of his time and attempted to incorporate them.