IZWT

EINLADUNG ZUM KOLLOQUIUM

Dr. Nick Tosh

(Galway/Irland)

Chances as cosmic frequencies

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Physical chance is puzzling. We know the magnitudes of certain chances rather precisely (for example, a radium-224 nucleus has a 0.792% chance of decaying in a given hour). We also know that chance guides rational belief: to know the chance of an event is to know how confident one should be that the event will occur. However, we do not know what chance is. Might it just be a kind of 'ideal' degree of belief? That suggestion is problematic. Plausibly, the fundamental laws of physics ascribe chances, but it would be a big surprise if they turned out to mention the belief states (ideal or otherwise) of thinking creatures. What we want, then, is an analysis of chance that (1) is non-epistemic, and (2) nevertheless allows us to explain the connection between chance and rational belief. I will present an analysis (a version of finite frequentism) that delivers on both these fronts. It has the peculiar consequence that if radium decay chances (say) are roughly as we take them to be, then certain histories – including our own – are duplicated enormously many times throughout the universe. I will argue, on philosophical and scientific grounds, that this consequence is not absurd.

Nick Tosh studied physics as an undergraduate and did his doctoral work in the history and philosophy of science. From 2004 to 2008 he was a Junior Research Fellow at Trinity College, Cambridge. He joined NUI Galway in 2008.
Nick's early publications focused on methodological issues in the history and sociology of science. More recently, he has become interested in the metaphysics of objective chance.

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16 c.t. Uhr

Raum S.10.15

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