Institut für integrale Studien
Institute for Integral Studies

IFIS-Online-Colloquium

The Institute for Integral Studies invites you to the **IFIS Online Colloquium n° 3**:

Time:	Monday, **February 20th, 2017**, at **20.00-21.30 h**, Zoom meeting.
Presenter:	**Prof. Dr. Harald Walach**, Europa-Universität Viadrina, Frankfurt/Oder (professor of clinical psychology and research methodology), IFIS' scientific board
Topic:	*Are Generalised Non-Local Correlations Real? Trials and Tribulations of Testing Predictions of a Theoretical Model*

Details

Based on Atmanspacher, Römer, & Walach's "Generalized quantum theory (GQT)" (2002), this presentation describes the so-called correlation-matrix experiment, which analyzes entanglement phenomena similar to those known from quantum theory, occurring in other fields. GQT takes serious the findings of quantum physics and looks at its implications for explaining a wide variety of puzzling phenomena, as well as for scientific inquiry in general. For a more detailed description see page 2.

Short bio of the presenter

Harald Walach (* 1957) is a psychologist and philosopher and professor for complementary medicine at the Europa University Viadrina at Frankfurt/Oder. He has a deep interest in exploring the workings of "healing", as well as the relation between external, positivist scientific and individual, inner experience and exploration. Together with physicist Hartmann Römer and psychologist Harald Atmanspacher, he has developed the *Generalized (Weak) Quantum Theory*, a theory of wholes which gives a systematic theoretical place to non-local processes.

Note: The Colloquium will be held in English.

☞ ***If you wish to participate, please register with us by February 15*** at *fein.elke@gmail.com*.
Registered participants will receive the Zoom invite upon registration.

More info on the IFIS Online Colloquium:

The main **intent of our Colloquium** – in line with IFIS' general mission and purpose – is to help connect interested integrally oriented researchers and practitioners by offering them a forum to exchange experiences around innovative approaches to complex social challenges. The colloquium is designed to strengthen the dialog and connection between IFIS' members and friends, mostly spread out in different countries and even continents. We also hope to attract new colleagues to join us and be part of IFIS' community of integral research and inquiry.

Web: http://www.ifis-freiburg.de/node/50 (English), or http://www.ifis-freiburg.de/node/85 (German)
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Are Generalised Non-Local Correlations Real?

Trials and Tribulations of Testing Predictions of a Theoretical Model

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Our normal scientific methods and theories assume that the systems we are working with – for instance in psychology, biology, medicine, sociology, or macroscopic physics – are classical in nature. Quantum systems, one assumes, are only very specific systems at very small scales or within very specific boundaries, for instance at extremely dense or cold circumstances. However, if we ask the question: What is the decisive characteristic that distinguishes a quantum type system from a classical one, we find a simple answer: Those systems that contain incompatible variables or observables are quantum-like systems, while classical systems contain only compatible variables observables. What does this mean? Compatible observables are such that we can measure them in any sequence, and the result of the outcome will remain the same. For instance, we can measure the length of a wardrobe, its depth and breadth, and its weight in any sequence, the outcome will always be the same. With quantum-like systems this is not possible: The decisive characteristic of such systems is that incompatible observables will yield different results depending on the sequence of measurements. For instance, in a quantum system proper, we can measure the momentum of a particle and then its location, or in reverse order, first the location and then the momentum. The outcomes of these two sequences of measurements will be different. Such variables or observables are called "incompatible" or "complementary" in quantum theory. Now, the interesting point is: it is very likely that such incompatible variables will also play a role in other systems than in strictly quantum-physical ones.

This is the remit of the theoretical model which we introduced a few years ago (Atmanspacher, Römer & Walach 2002) called "Generalised Quantum Theory – GQT". This model stipulates that incompatible observables are at the core of any system that is a quantum-type system. Another way of putting this is saying: Quantum-type systems are systems, in which measuring a variable will change its state or will influence the measured outcome. That such a situation is very frequent even in our lived world can be gleaned from the fact that, in psychology, becoming aware of a psychological state will immediately change it. This is a situation which formally requires a quantum-like formalism to theoretically model it. Various situations have been analyzed along those lines: The sequencing effect in questionnaire items, the dwell time of bistable images and other situations can be modeled using this approach.
GQT also predicts non-signaling, regular correlations that are similar to entanglement correlations in quantum theory. If these correlations are indeed an element of our reality, interesting theoretical consequences ensue. We can then formally treat and understand many phenomena that have been hitherto excluded from scientific discourse as instances of such non-signaling, generalized entanglement correlations, for instance all so called paranormal phenomena, or energy healing and other instances of complementary medicine.

In this talk I will elaborate on this model and the consequences and will describe a potential experiment, the correlation-matrix experiment, and its results and discus, whether this experiment might indeed be able to empirically demonstrate such generalized entanglement correlations as real.

Atmanspacher, H., Römer, H., & Walach, H. (2002). Weak quantum theory: Complementarity and entanglement in physics and beyond. Foundations of Physics, 32, 379-406.