Karolina A Kirmse

Karolina A Kirmse is German researcher who has carried out quantum experiments aimed at uncovering the basis of psi phenomena.

Summary

Karolina A Kirmse is a PhD student at the Institute for Frontier Areas of Psychology and Mental Health (IGPP) and research associate at the Dresden University of Technology. She conducted research for her master thesis under the supervision of Peter Sedlmeier and Walter von Lucadou on the Generalized Quantum Theory, using the correlational matrix method. In her dissertation she investigates this entanglement effect by means of a novel design incorporating remote influence of human behaviour as a main variable.

Master's Research

Background

Kirmse's master's research is testing Walter von Lucadou's Generalised Quantum Theory (GQT) in a specially designed experiment called the Correlational Matrix Method (CMM). Generalised Quantum Theory takes the basics of physical quantum theory, known as 'formalisms', and generates a standalone abstract version that can be applied to non-physics based systems, for example psychological and biological. Of key importance, GQT retains the core aspects of regular physical quantum theory: entanglement and complementarity.

Complementarity refers to the relationship between local measurable observables and the global system. For example, one could measure the polarization of a photon and then know the general polarization of the rest of the system, in that it would be opposite or complementary to that found locally. Entanglement refers to the relationship between particles and processes that once shared a common connection, separated by time and space. Where psi comes in is understanding entanglement within Generalized Quantum Theory (GQT),[1] which allows for entangled states between physical and psychological systems, eventually giving rise to nonlocal (distant in space and time) correlations – a proposed basis for psi phenomena.

However, to treat psi phenomena as nonlocal acausal correlations within Generalised Quantum Theory is essentially to admit the impossibility of strictly replicating a given finding, as the nature of the acausal correlations prevents a signal travelling between them. For psi experiments to be successfully replicated would open up a way of transmitting a signal, which is forbidden by nonlocal correlations in GQT.

In the mid-1980s, Walter von Lucadou and his colleague Harald Walach designed an experiment aimed at overcoming psi's deliberately elusive nature – the correlational matrix method (CMM). In a typical CMM experiment, participants are

instructed to influence the output of a random number generator (RNG), as in a typical psychokinesis (PK) study; here, the aim was to see what temporary acausal correlations – that is, correlations that have no discernable cause-and-effect physical basis (for example, the relationship between voltage spikes and the length of time a volunteer presses a button after the spikes are measured) – might be found between physical and psychological variables. More than twice as many correlations were generated during the experimental sessions than in the control sessions; the effect was huge ($p = 10 \times 10^{-6}$).2

Several independent replications have found similar effects and Walach has recently published a positive result in a high impact mainstream journal.3

Kirmse's Study

Kirmse's research was a further test of the validity of the assumptions of GQT in an independent replication of the matrix experiment according a predefined consensus protocol.

Forty-three females and 21 males participated. During each run, subjects repeatedly pressed a key to 'influence' the behaviour a randomly moving fractal display – its behaviour being determined by sampling a Zener diode after each button press. As with all CMM experiments, the protocol precludes direct PK influence, rather, it is the number of correlations between physical and psychological variables that is of interest.

Kirmse found an effect size difference between experimental and control sessions of 0.6, that was extremely significant ($p = 2.2 \times 10^{-16}$) even when using a more conservative simulation method ($p = 2.727 \times 10^{-5}$). Kirmse concluded that her research had replicated previous findings showing more correlations during experimental sessions involving subjects' 'intentions' than control sessions without any subjects. States of consciousness were found to influence the number of correlations to a very significant degree, especially absorption ($p = 1.769 \times 10^{-9}$), and internal dialogue ($p = 0.0006$).4

However, a recent reanalysis using the same statistical methods as in Walach et al. (2019), showed only a small effect that just missed significance at the indicated level of $p \leqslant .1$. Only at the significance level of $p \leqslant .02$, $p \leqslant .0005$, and $p \leqslant .0001$ were the correlations more significant than expected by chance.5

PhD Project

Kirmse plans to transfer the correlational matrix method to a distant intention paradigm. In a typical Attention Focusing Facilitation Experiment (AFFE), a subject referred to as a 'helper' attempts to distantly influence a remotely located subject (the 'helpee') to concentrate on a candle flame. A combination of these two approaches will test the appropriateness of Generalised Quantum Theory (GQT) to accommodate data from a hitherto independent research paradigm. It can also potentially improve the experimental setup of CMM by adding more variables and variability within the experimental design. In common with other CMM studies, experimental sessions are predicted to generate more correlations between

psychological and physical variables than control sessions. Subjects will be presented with a computer animated candle flame, the motion of which is determined by the output of a random number generator. Eye movements will be tracked using sensors for an objective measure of distracted attention. Key presses to indicate loss of attention by the subject will constitute the subjective measure of eye-tracking.6

Michael Duggan

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Endnotes

Footnotes

- 1. Lucadou et al. (2007).

- 2. Lucadou (1987).
- 3. Walach et al. (2019).
- 4. Kirmse (2018): https://www.researchgate.net/publication/348266643_Matrix_Reloaded_Replikation_des_Matrix-Experiments_mit_Variation_der_psychologischen_Variablen
- 5. Walach et al. (2020).
- 6. Kirmse (2020): https://www.researchgate.net/project/Revealing-the-Roots-of-Remote-Helping-An-investigation-of-macroscopic-entanglement-correlations-and-associated-psi-facilitating-features-in-Attention-Focusing-Facilitation-Experiments