Richard Silberstein

Richard Silberstein, an Australian neuroscientist, has recently carried out a brain imaging study that appears to confirm telepathic interactions between identical twins.

Career

Richard Silberstein is professor emeritus at Swinburne University of Technology in Melbourne, Australia. He served as chairman of the department of physics and subsequently as founding director of the Swinburne University Brain Sciences Institute before retiring in 2014. Silberstein holds a PhD in neuroscience from the University of Melbourne and a BSc (Hon) majoring in physics from Monash University. He has over 40 years of neuroscience research experience and is the originator of the steady state topography (SST) brain imaging methodology. He has authored and co-authored numerous publications in cognitive and clinical neuroscience as well as consumer neuroscience.

Twin Telepathy

Silberstein has recently explored changes in brain activity associated with telepathic interactions between sensorily isolated identical twins, to understand better the physical factors that facilitate or inhibit such phenomena and also their brain correlates.^[1]

Previous brain studies have found such interactions using either EEG or fMRI technology. Silberstein took a different approach, applying the evoked potential methodology Steady State Visual Evoked Potential Event Related Partial Coherence (SSVEP-ERPC) which is used to measure brain functional connectivity (FC) changes. This methodology offers advantages of higher temporal resolution estimates and higher resistance to noise and artefacts. It has also shown greater sensitivity to FC changes associated with cognitive processes such as creativity and ADHD.

Five pairs of monozygotic twins were recruited, all females over age 13. Within each pair, the twins were randomly assigned the role of either 'sender' or 'receiver' and placed in rooms that were separated by a corridor and three doors. The sender was asked to view a series of images at random intervals while the receiver looked at a single static image throughout. Each pair carried out two sessions and observations were made of two conditions: when the images were general (such as landscapes) and when the images were personally relevant (such as family pets). This yielded a total of 38 observations (one session failed because of a technical malfunction). A synchronous FC change was observed in 11 of these, confirming the unconscious telepathic connection found in earlier studies. The effect size was high by parapsychological standards (Cohen's d = 0.85), as was the level of statistical significance ($p = 4 \times 10^{\circ}$ -8).

A second hypothesis, that the effect would be largely found with images of personal interest, was not confirmed. A prominent feature was the large variability of the FC changes among the participants: Silberstein notes that if this proves to be a a common feature of FC changes associated with anomalous interactions 'then this suggests that simple pooling or cross-subject averaging is likely to dilute individual effects and yield non-significant findings.'^[2]

Silberstein and his team plan to extend the study, increasing the number of recording sites to give greater spatial details of the brain changes. They will also employ atomic clocks to synchronize the background visual flicker that is a component of SST methodology, enabling a deeper exploration of the effects of variations in twin spatial separation.

Michael Duggan

Literature

Silberstein, R.B., Bigelow, F.J. (2024). <u>Brain functional connectivity correlates of anomalous interaction between sensorily isolated monozygotic twins.</u> *Frontiers in Human Neuroscience*. 18:1388049.

Endnotes

Footnotes

- 1. Silberstein & Bigelow (2024).
- 2. Silberstein & Bigelow (2024),9.

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