Cedric Cannard

Cédric Cannard is a French researcher based at the Institute of Noetic Sciences in California, working on altered states of consciousness and psi phenomena.

Career

Cédric Cannard completed a MSc in neuropsychology and clinical neuroscience in France, with research focused on brain atrophies in schizophrenia (MRI) and brain oscillations involved in visual perception (EEG). In 2022, Cannard completed a PhD in neuroscience under the mentorship of Arnaud Delorme, working on well-being, EEG methods, and wearable neurotechnology. Cannard has been working since as a senior research associate at the <u>Institute of Noetic Sciences</u>, at the intersection between signal processing (EEG, ECG, PPG, EDA, EGG), altered states of consciousness, and psi phenomena (with a focus on presentiment/precognition).

Predictive Brain Processes

In a study currently under review, Cannard and co-workers explored presentiment in brain activity. They measured activity known as contingent negative variation (CNV), which shows up in the front part of the brain when we're expecting something. However, Cannard was looking to see what happens when events are unpredictable. Eighty-one female participants were exposed to different types of pictures (pleasant, neutral and unpleasant) in random order. Cannard found very significant brain activity changes around 110 milliseconds preceding pleasant pictures only (p < 0.001).1

Telephone Telepathy

Cannard and the IONS team explored the ability of participants to identify callers using telepathy or precognition, by completing trials where callers were chosen before or after guesses, respectively. Among 177 participants, those in telepathic trials exceeded chance (50.0% vs. 33.3% p < 0.001), whereas precognitive trials did not (31.9% vs. 33.3%). Genetic relatedness notably impacted accuracy (for instance, 25% genetic relatedness had 2.88 times higher odds of identifying the caller, p = 0.04). Communication frequency correlated positively (p = 0.03), while emotional closeness and physical distance did not significantly affect outcomes. Although the telepathy results favoured the psi hypothesis, the failure to find psi in more stringent precognition testing leaves open more conventional explanations like cheating and sensory leakage. 2

Optics Experiments

In a 2021 publication, Cannard with Loren Carpenter and <u>Dean Radin</u> describe experiments investigating the effects of intention on an optical physics system: photon polarization. A laser beam was passed through horizontal and vertical polarizers while participants were asked to focus their intention for the beam's

polarization to rotate. Against prediction, three exploratory experiments showed *decreasing* illumination with intention (p = 0.05). This motivated a reanalysis of data from previously published experiments involving mental influence of beams of light (although designed for other purposes), revealing a reduction in light intensity during periods of focused attention. These data appear to indicate that conscious intention attenuates the illumination intensity of a laser beam either by scattering or absorption. $\underline{3}$

Upsight

In a paper under review, Cannard and IONS colleagues investigated differences in brain electrical activity between two laboratory conditions in an individual who reports a subjective experience of a phenomenon he calls 'upsight'. The individual describes this as the capacity to perceive at will holographic images as though they appear on an inset screen that overlays his ordinary visual field, with eyes open or closed. EEG data were collected as the participant shifted between the upsight state and a control condition of recollecting previously viewed images. Statistically significant decline in frontal brain activity within the alpha range was observed during the upsight condition compared to the control condition, appearing to indicate decreased inhibition and heightened cognitive involvement. Cannard speculates that the upsight condition signifies a unique state of consciousness linked to highly realistic mental imagery.4

Death Classification

Cannard contributed to a 2020 study in which participants were asked to look at 180 facial photographs of deceased individuals and guess the cause of death from among three possible options: heart attack, death by gunshot or car accident. Both electroencephalogram (EEG) and electrocardiogram (ECG) data were collected. Overall evidence indicated accurate guesses by participants (p = 0.004), but, unexpectedly, this was primarily driven by the performance of control subjects not claiming any mediumistic ability (p = 0.005). This was possibly linked to the larger ERP (event related potential) amplitudes following image presentation that was shown by control participants, indicating greater attention and less response inhibition. $\underline{5}$

Michael Duggan

Literature

Cannard, C. et al. (under review). Brain Predictive Processes.

Cannard, C., Vieten, C., Yount. G. & Delorme, A. (under review). <u>A case study of differences in brain electrical activity between recall-based mental imagery and a subjective phenomenon of "upsight"</u>. *Journal of Anomalous Experience and Cognition*.

Carpenter, L., Cannard, C., Wahbeh, H., & Radin, D. (2021). Psychophysical interactions with photons: Three exploratory studies with unexpected

results. *Journal of the Society for Psychical Research* 85/1, 31-48.

Delorme, A., Cannard, C., Radin, D., Wahbeh, H. (2020). <u>Accuracy and neural</u> <u>correlates of blinded mediumship compared to controls on an image classification task</u>. *Brain and Cognition 146*, Article 105638.

Wahbeh, H., Cannard, C., Okonsky, J., & Delorme, A. (2019). <u>A physiological examination of perceived incorporation during trance</u>. *F1000Research*. 8, 67.

Wahbeh, H., Radin, D., Cannard, C., & Delorme, A. (2022). What if consciousness is not an emergent property of the brain? Observational and empirical challenges to materialistic models. Frontiers in Psychology 13, 5596.

Wahbeh, H., Cannard, C., Radin, D., Delorme, A. (2024). Who's calling? Evaluating the accuracy of guessing who is on the phone. Explore 20/2, 239-47.

Endnotes

Footnotes

- 1. Cannard et al (2024).
- 2. Wahbeh et al (2023b).
- <u>3.</u> Carpenter et al (2021).
- 4. Cannard et al (2024).
- <u>5.</u> Delorme et al (2020).

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