

## **fMRI and photo emission study of presentiment: The role of "coherence" in retrocausal processes**

### **Results:**

Eight experienced meditators were trained to meditate in the hostile environment of brain scanner. There they were presented with, in total, 64 random neutral, erotic and violent visual stimuli during meditation in the scanner. In a separate session they were presented similar stimuli during the resting state. The resting state measurements were also compared to data obtained from 8 control subjects.

Substantial effects of meditation on brain processing of different emotional visual stimuli were found in several brain regions. The relatively largest direct effects of meditation concerned Brodmann areas 18 and 19 in the Lingual Gyrus. Long term effects of meditation, inferred from the contrast between meditators in rest with control subjects in rest, were only found in brain regions that have been shown to be involved in attention.

For the evaluation of the hypothesis concerning presentiment we focused on the analysis of the anticipatory brain signals preceding neutral and emotional visual stimuli in the 36 regions of interest. In previous work with unselected subjects it was found that these anticipatory signals are dependent on the type of the future stimulus, in spite of the fact that at the time the signals are recorded the future stimulus is completely unknown and will be selected randomly.

Experienced meditators showed stronger presentiment especially when they were meditating. The effect of meditation was quite clearly that the 'retrocausal' effect of violent stimuli was reduced resulting in a relative larger contribution of erotic presentiment.

### **Published work:**

Bierman, D.J. (2011). Anomalous Switching of the Bi-Stable Percept of a Necker Cube: A Preliminary Study. *Journal of Scientific Exploration*, Vol. 25, No. 3, pp. 771–783, 2011

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