

Presentiment in a fMRI experiment with meditators

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In this extremely complicated experiment eight experienced meditators were exposed to randomly selected emotional and neutral pictures while in the fMRI scanner where their brain activity was monitored. There were two sessions, one where the meditators actually were meditating and one session where they were just in their daily state. Eight control subjects did the experiment once.

Thirty two clusters of activation upon stimulation were found. Most of these were either in earlier brain research associated with attentional processes and a few were also associated with emotional processes. There were distinct differences in response activity dependent of condition: meditation, non meditation or control and type of stimulus: emotional or neutral. These main stream results are currently extended with a new experiment on the differences between meditators and controls with regard to resting state activity and brain structure (!).

Of more interest for parapsychology are the results of time course analysis comparing conditions BEFORE the stimulus is presented. Qualitative analysis (peak counting) shows:

- a) that most dynamic changes in activity (peaks) precede emotional stimuli.
- b) that this is more outspoken for meditators
- c) That during meditation erotic stimuli give more presentiment while when not meditating violent pictures result in more presentiment.

Currently the same data are now analyzed by algorithmic methods using the variance in activity as the dependent variable. Furthermore in this stage we will focus on the spatial distribution of presentiment over the brain pinpointing regions where the effect is the most outspoken.

We will shortly present the rationale of this experiment and the extremely long training that had to be done before the meditators could meditate in the hostile brain scanning environment. The results of an identical experiment using skinconductance as dependent variable with these meditators yielded an interesting positive test-retest reliability. Of course the results of the final algorithmic analyses that we hope to have ready at the time of the conference will be presented too.