

Physiological Retrocausality (Presentiment)

Presentiment is defined to be a retrocausal (backwards-in-time) physiological effect, arising as a small change in brain and body one to several seconds before drastic changes in a person's surroundings, for example, from darkness to bright light, from silence to loud noise, before a painful electric shock, or before viewing a very disturbing scene of violence. In other words, it is unconscious precognition. Psychologically, it may be manifested as a vague feeling of unease or an intuition. Presentiment has been measured via Electroencephalography (EEG), functional Magnetic Resonance Imaging (fMRI), pupil dilation, skin conductance, and heart rate. It has been found in both dedicated investigations and in studies searching for other phenomena. A meta-analysis of previous presentiment studies (published in October 2012) can be found [here](#) showing a global effect size of 0.21. A theoretical discussion of presentiment explaining the mirroring effect about the stimulus can be found [here](#).

Presentiment results can be interpreted as being evidence that the time symmetries inherent and non-locality existing in physics can, in fact, become manifest in the macroscopic physical world. Presentiment is hypothesized to be due to coherent quantum biological processes in the brain.

The evolutionary advantage of being able to pull some information from a short time in the future has obvious advantages to avoiding danger and predation. However, a paradox arises. If the information from the future allows a creature to avoid a future event, then where does the information about the future event originate from? Perhaps presentiment can be better thought of as preparing a creature for event which

cannot be avoided. It can initiate the fight-or-flight response early. If the body of a prey animal is already preparing to flee several seconds before the animal sees a predator, the prey's chance of survival is increased, giving an evolutionary advantage.

Practical Applications

It may be possible to construct warning or prediction devices using the presentiment phenomenon. However, avoidance of a future event removes the signal necessary for detection (because Nature does not allow temporal paradoxes) so a more clever scheme involving a non-bypassable associated event is likely necessary. Further research is needed.

The TANC Lab, as a scientific non-profit organization, will not patent any technologies developed but will make them available to the public as open-access scientific publications.