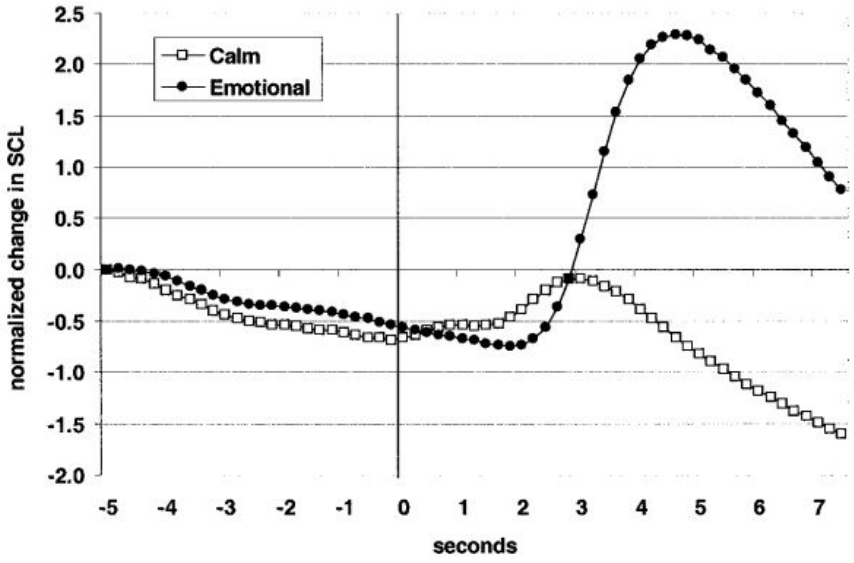
Cognition and Controversy

Existence Of Presentiment

The term for an unconscious form of precognition is pre-feeling or presentiment (commonly termed as Feeling the Future) as compared to pre-knowing. The basic hypothesis in a presentiment experiment is that physiological activity recorded before an unpredictable event will correlate with the physiological response observed after exposure to that event. Through many peer-reviewed studies, researchers have shown that people respond to emotionally-laden events up to 10 seconds before the events occur.

RESEARCH ON PRESENTIMENT

Dean I. Radin, a psychologist, in his research paper "Electrodermal Presentiments of Future Emotions" stated that the people respond to emotional events up to 10 seconds before the events occur.



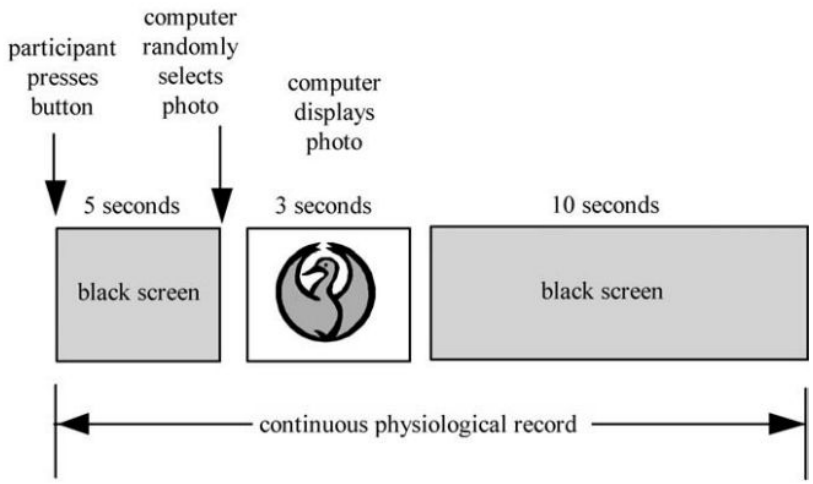
The Presentiment challenges our intuitive assumptions about the nature of time and its relationship to human consciousness. It even causes us to question our understanding of cause and effect.

People have long tried to test instances of precognition (the ability to know about the things in the future), by reflecting on dreams and divinations. But the first tests for evidence of presentiment (the ability to feel things in the future on a sensory or emotional level) were not conducted until the 1970s.

Among the first look at physiological measures as a test for precognition or presentiment were Jerry Levin and James Kennedy, staff members at the J.B. Rhine Institute for Parapsychology. Levin and Kennedy attempted to measure people's minute bodily reactions before and after they reacted to a light flashing either green or red. When the light turned green, the participants were asked to press a button and when it turned red, they were asked to do nothing. Lavine and Kennedy found that just before the green light was shown, participants' brainwaves behaved differently than they did before the red light.

Zoltan Vassy reported an experiment that involved the measuring the skin conductance of two independent participants shocked three seconds apart, and found that the "receiver" anticipated his or her own shock at the same time that the "sender" received hers; even though they were both physically isolated.

Nearly two decades later, the scientific attempt to measure presentiment was resumed by psychologist Dean Radin, now of the Institute of Noetic Sciences. Radin again used skin conductance as his measure but chose to show photographs to participants, rather than lights.



He selected a range of unemotional images (e.g. photos of lamps and apples) and a range of highly emotional once, good or bad, including photos of gruesome accidents (IAPS – NIMH Centre for the Study of Emotion and Attention, University of Florida). Images were randomly selected immediately before they were shown to the observer so that no one involved in the experiment – not even the researcher – could have known ahead of time what the participant would see.

Still, Radin found that participants responded to the emotional images – and only the emotional images – up to 10 seconds before the images appeared. His results were highly statistically significant. Later the same year, psychologist D. Bierman at the University of Amsterdam successfully replicated Radin's results with equally high statistical significance. A flurry of replication studies followed using similar measures – skin conductance, heart rate, pupil dilation and blood flow, to test how and when people reacted to future stimuli.

A meta-analysis of these and earlier studies by Psychologist Patrizio Tressoldi of Padova University demonstrated that the abundance of positive results was almost certainly not due to chance alone and not due to selective reporting.

In another meta-analysis in 2012, Tressoldi with Julia Mossbridge and Jessica Utts showed that 26 of the 49 studies showed a significant presentiment effect. The authors further determined that higher-quality, more rigorous studies were associated with greater effect sizes.

They also found that some studies at least, ruled out the gambler's fallacy, in which participants' expectations about what the next image "ought to be" based on what they've seen already determines their physiological reactions.

CRITICS

Now demonstrated in more than 50 scientific studies, the presentiment effect is virtually proved, but the results are still highly controversial. Some deny that there is any real data there at all; pointing to two replications of Daryl Bem's 2011 study on retroactive influence from future events that failed to produce positive results.

Eric-Jan Wagemakers of the University of Amsterdam has criticized the statistical methods of the presentiment advocates and proposed controversial new data analysis methods that make their effect disappear. Others acknowledged positive results, but argue that they could all be explained by natural, non-psi causes.

Samuel Schwarzkopf of University College, London, criticized the quality of the presentiment data – specifically, one of Bierman's fMRI studies – and pointed to several possible design flaws in the greater body of research. He pointed out that imbalances in the number of control and target stimuli in many presentiment studies created a pattern that participants could have learned or anticipated.

Schwarzkopf also suggested that certain methods of analyses introduced artefacts in the data, and pointed to the lack of common design protocols as undermining the reliability of the meta-analyses.

He predicted that if the expectation biases were controlled for directly, the presentiment effect would disappear.

Mossbridge, Radin, Tressoldi and others published a rebuttal in 2015 that addressed all of Schwarzkopf's critiques, and none of his hypotheses has been experimentally demonstrated.

ANALYTICS

The debate over the data is significant, as the implications of the presentiment effect are potentially enormous. By some interpretations, the data force us to reconsider our understanding of the relationship between time and human consciousness. If we are truly reaching forward in time, then whatever mechanism is responsible could also explain anecdotal cases of people being forewarned of traumatic events by "gut"

feelings and physiological symptoms. This raises the question: In making choices in life, are we limited to the information available at the present moment, or can we also feel ahead for future emotional outcomes?
If the latter is the case, then it would be seen to constitute a reversal of cause and effect, allowing human agents to introduce causes according to their future effects.

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