

Stimulating episodic memory: Initial explorations using SenseCam

E. Berry, M. Conway, C. Moulin, H. Williams, S. Hodges, L. Williams, K. Wood and G. Smith

Abstract

SenseCam is a camera that takes pictures in response to sensory changes. The resulting 'movies' show a series of stills in a few minutes that cover several hours of activities. SenseCam movies have remarkable similarities with episodic memory; for example, they are fragmentary, time compressed, temporally ordered, have a 'field perspective', formed outside awareness, and are visual. In preliminary, galtonesesque investigations with co-workers at Microsoft Research, Cambridge, and Addenbrooke's Hospital, Cambridge, UK, we found that SenseCam movies stimulate episodic memory. The effects are powerful, and an organic amnesic patient was able to recall events she could not previously recall; normal healthy participants recalled the trivia of routines as well as vividly recalling the minutiae of important events. One possibility we consider is that SenseCam pictures stimulate neural networks, possibly hippocampal, that cannot otherwise be easily accessed. It seems that the potential of SenseCam to stimulate episodic memory in many different groups is considerable.

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