

Accuracy and Completeness of Autobiographical Memory

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Goal

To use SenseCam/Revue in the service of evaluating the accuracy and completeness of autobiographical memory for everyday experiences.



Methods

Acquisition

9 college students wore SenseCam for 2 days.
 Timer-triggered mode: pictures taken every ~10 s.
 Mean pictures per day: 3171 (SD=1274)

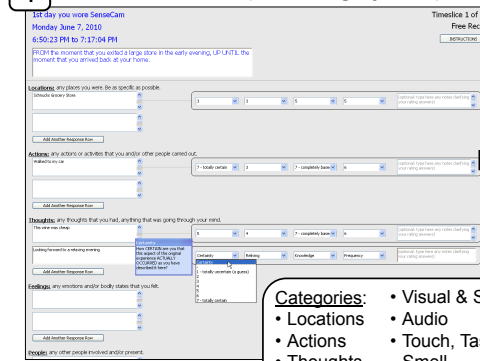
Timeslice Segmentation

We manually segmented each day into "timeslices" with basic verbal descriptions. Example:
FROM the moment that you walked out of the building where you had just had a meeting, UP UNTIL the moment that you later sat down outside with a group of people. 2:29:03 PM to 2:43:47 PM, July 1, 2010
 Mean timeslices per subject per day: 11.4 (SD=3.4)
 Timeslice duration (mean of subject mean of day median): 37 minutes (SD=8)

Testing Sessions (2 per subject)

Retention intervals: ~1 week and ~1 month.
 On each test, timeslices from one day were tested in random order, with 3 phases for each timeslice:

1 Initial Recall (with category cues)

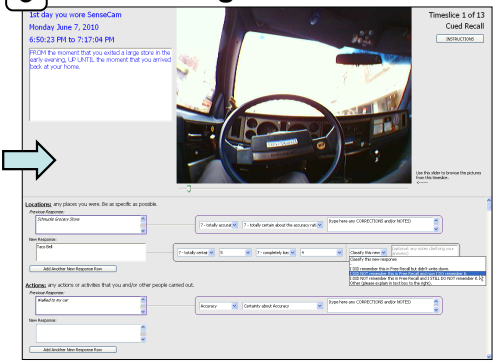


- Categories:**
- Locations
 - Actions
 - Thoughts
 - Feelings
 - People
 - Information
 - Content
 - Visual & Spatial
 - Audio
 - Touch, Taste, & Smell
 - Clothes & Belongings
 - Environment/ Weather

2 Picture Review

Timeslice pictures shown at 6 fps
Confirmation: Did these pictures show the same timeslice you were thinking of in Initial Recall?

3 Self-Scoring & Additions



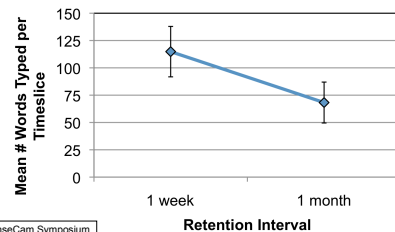
Timeslice pictures were available for further review. Subjects rated their initial recall responses for accuracy, and added new responses.

Results

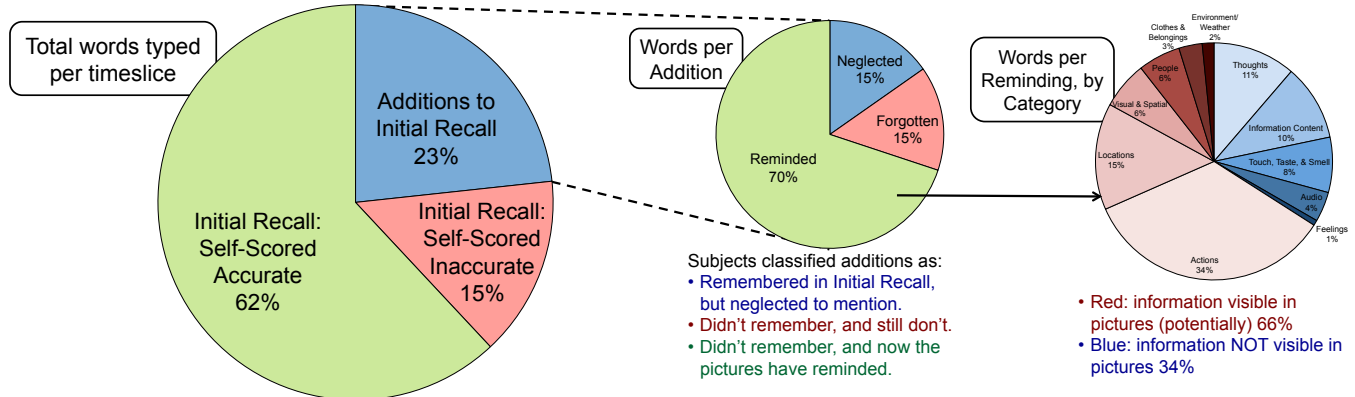
Mean proportion of timeslices that subjects completed per test: 76% (SD=21%)

Validation of timeslice segmentation:
 mean proportion of timeslices for which the verbal description & day/time successfully cued subjects to the slice of experience we intended: 87% (SD=20%)

Initial Recall



SenseCam Symposium
 Sept. 2010, Dublin



Accuracy of Initial Recall: = 79% (SD=14%)

Completeness of Initial Recall: = 71% (SD=14%)

Autobiographical memory is fairly accurate and fairly complete after 1 week to 1 month. Pictures from everyday experience stimulate memory even for non-visual info.