# NARRATIVE CMR

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June 5, 2021

**ABSTRACT**

Paper can review models and main phenomena of narrative comprehension AND free recall, focusing on offline products but also connecting to encoding dynamics.

Focus on centrality and its role especially in recent analyses/modeling of offline comprehension products.

Also focus of course on temporal organization and relevant benchmarks.

Announced plans:

1. To show that neither CMr nor LS-R nor even semantic-CMR satisfactorily account for both relevant semantic and temporal organizational phenomena.

2. To present an integrated model of how retrieved context theory and comprehension mechanisms interact to organize offline recall.

3. To leverage, for the first time, a likelihood-based analysis of the model's capacity to account for the sequence of recalls to support these comparisons.

4. To connect these results to novel predictions about the dynamics of comprehension and memory and point the way forward to more...parsimonious models.

***K*eywords** Psychology · Cognitive Science

## 1 Model Specification

### 1.1 Semantic-CMR

We'll present vanilla CMR, the item-based semantic cue version, and identify our intention to replace $M^{SEM}$ with the LS-R model's simulated connectivity matrix.

### 1.2 The Revised Landscape Model of Narrative Comprehension

## 2 Analysis Approach

### 2.1 Datasets

Recall for narratives, if split into idea units – "meaningful chunks of information that convey a piece of the narrative" – that are numbered according to chronological order, can be examined using analytic techniques developed for free and serial list recall tasks. This framework enables direct comparison between ideas, assumptions, and models applied to understand how people remember sequences such as word lists and those used to understand memory for narrative texts. To support analysis of narrative recall this way, we considered a dataset collected, preprocessed, and presented by **?**. In corresponding experiments, research participants read 6 distinct short stories. Upon reading a story, participants performed immediate free recall of the narrative twice. Three weeks later, participants performed free recall of each narrative again. Each recall period was limited to five minutes. Following data collection, a pair of research assistants in the Brown-Schmidt laboratory were each instructed to independently split stories and participant responses into idea units as defined above, and to identify correspondences between idea units in participant responses and corresponding studied stories reflecting recall. Following this initial preprocessing, research assistants then compared and discussed their results and recorded consensus decisions regarding the segmentation and correspondence of idea units across the dataset. Further analysis focused on the sequences of story idea units recalled by participants on each trial as tracked by these researchers.

### 2.2 Summary Statistics

### 2.3 Likelihood-based model comparison

Just reproduce language from past papers.

### 2.4 Parameter Optimization

Just reproduce language from past papers.

### 2.5 Representational Similarity Analysis

## 3 Results

Core summary phenomena, AIC weights, representational similarity analysis outcomes.

## 4 Discussion

Why is this necessary? What does this predict? What's next for modeling?

## References