

Background



The Storyteller
Philip de Laszlo (1891)

Stories can take hold of the human mind, carrying us away from our immediate surroundings and immersing us in alternate worlds^{1,2}.

Stories also have lasting consequences such as increasing the memorability of episodes³ and the malleability of long-standing beliefs¹.

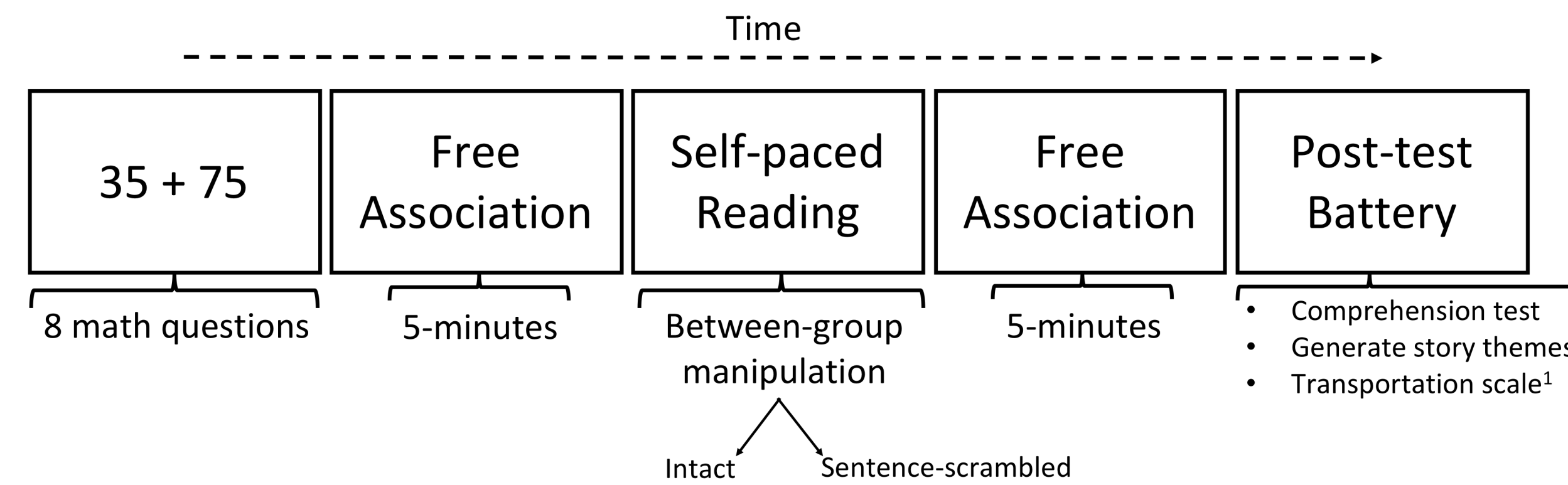
Little is known about *how* stories to exert their such a lasting influence over our mind, particularly after they have already ended.

Experimental Design

Questions:

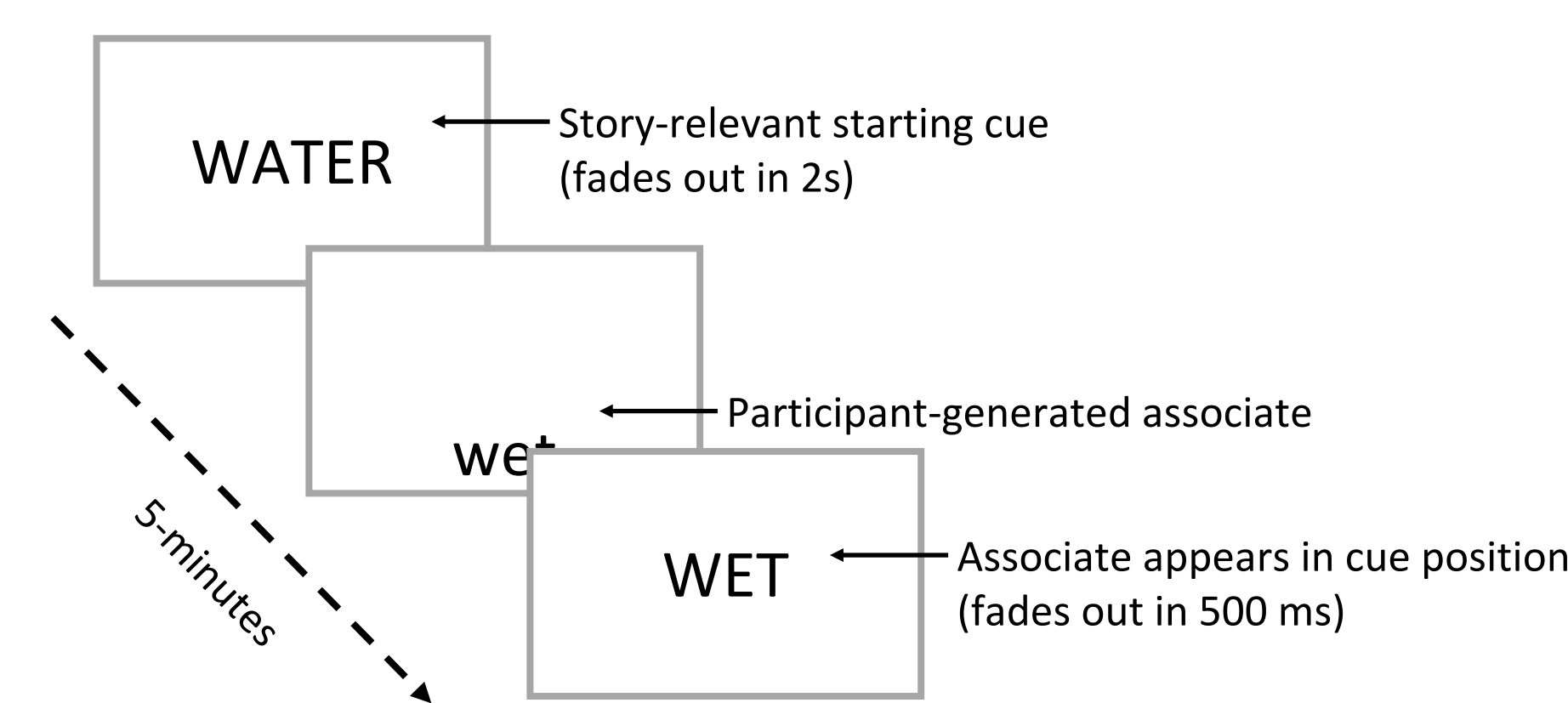
- I. Do stories have a lasting influence on our spontaneous thought?
- II. What lasts, for how long, and what are the underlying processes?

Paradigm: "Assorted Cognitive Tasks"

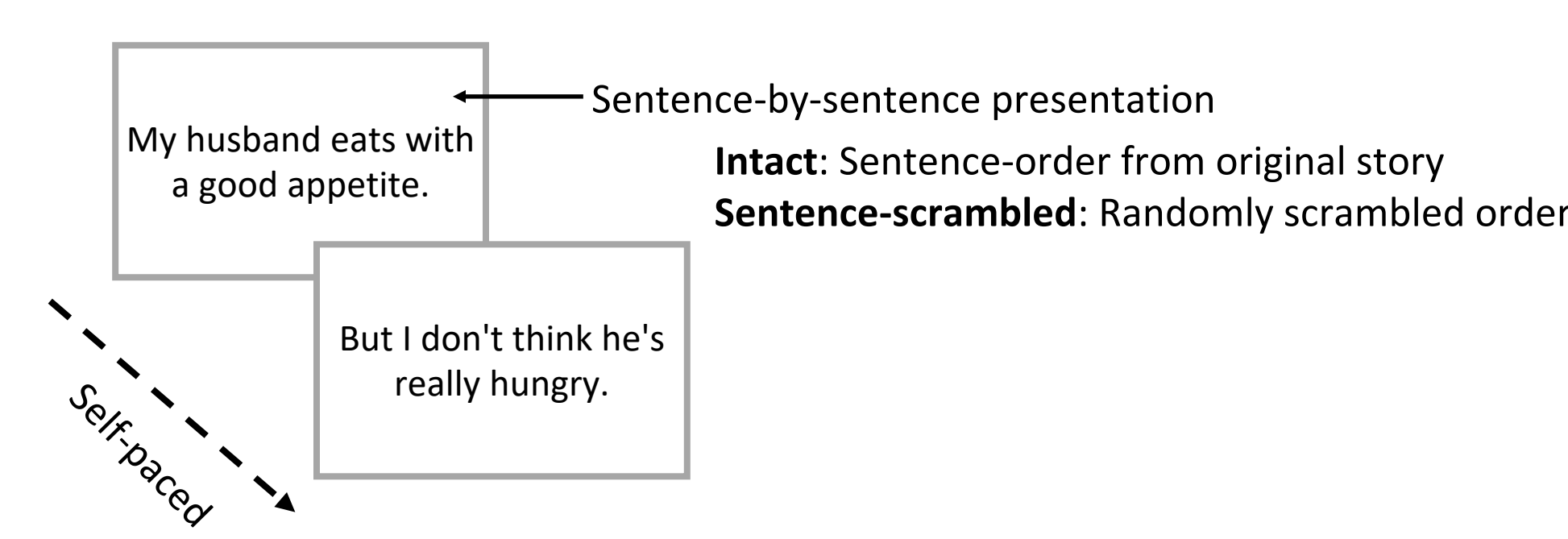


Sample: N = 160, tested via Amazon's MTurk; n = 80 per condition (e.g., Intact)
Story: *So Much Water So Close to Home* by Raymond Carver
Summary: A brooding and unsettling story about a wife who suspects her husband of committing a murder on a recent camping trip with his friends.
Length: 2356 words; 268 sentences

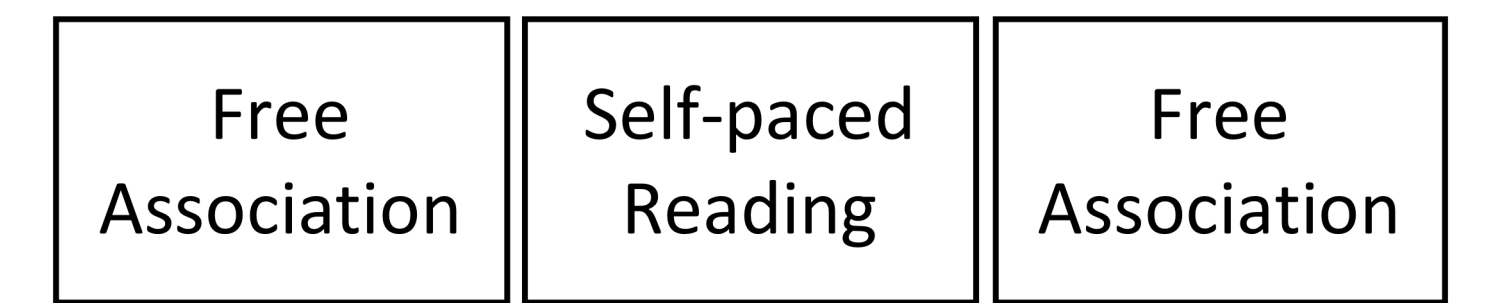
Free Association



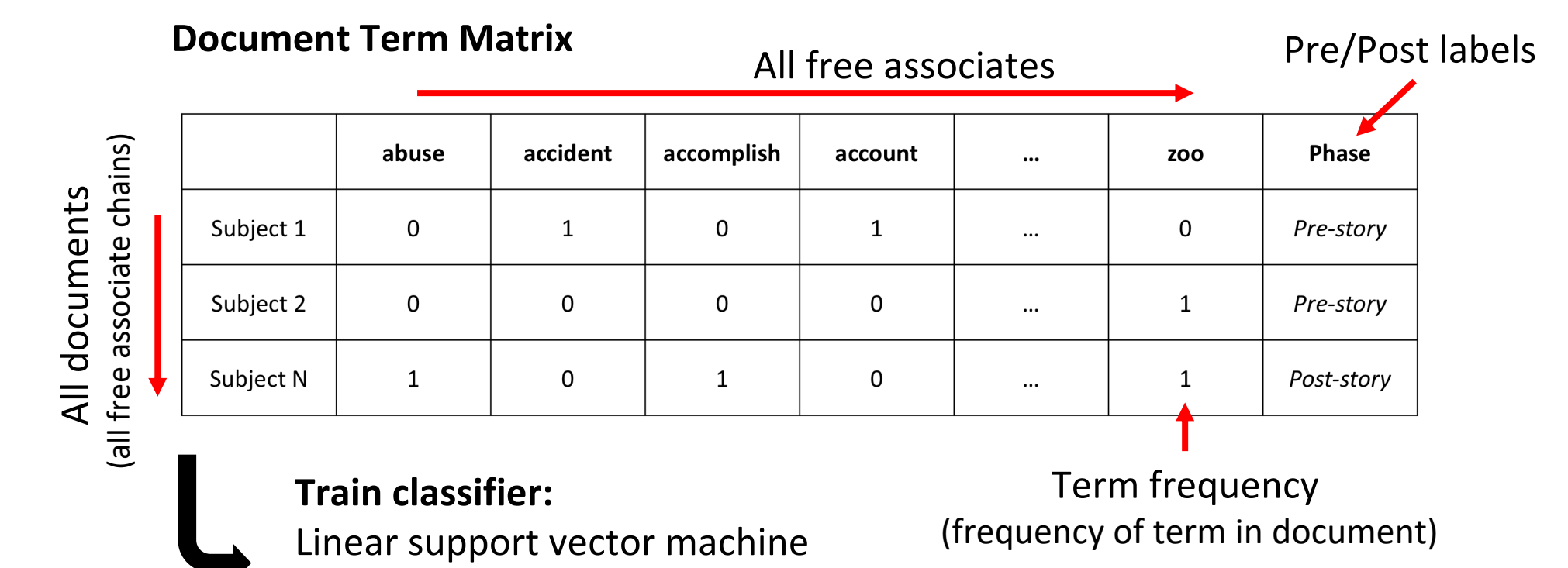
Self-paced Reading



Document Classification



Can we tell the difference?

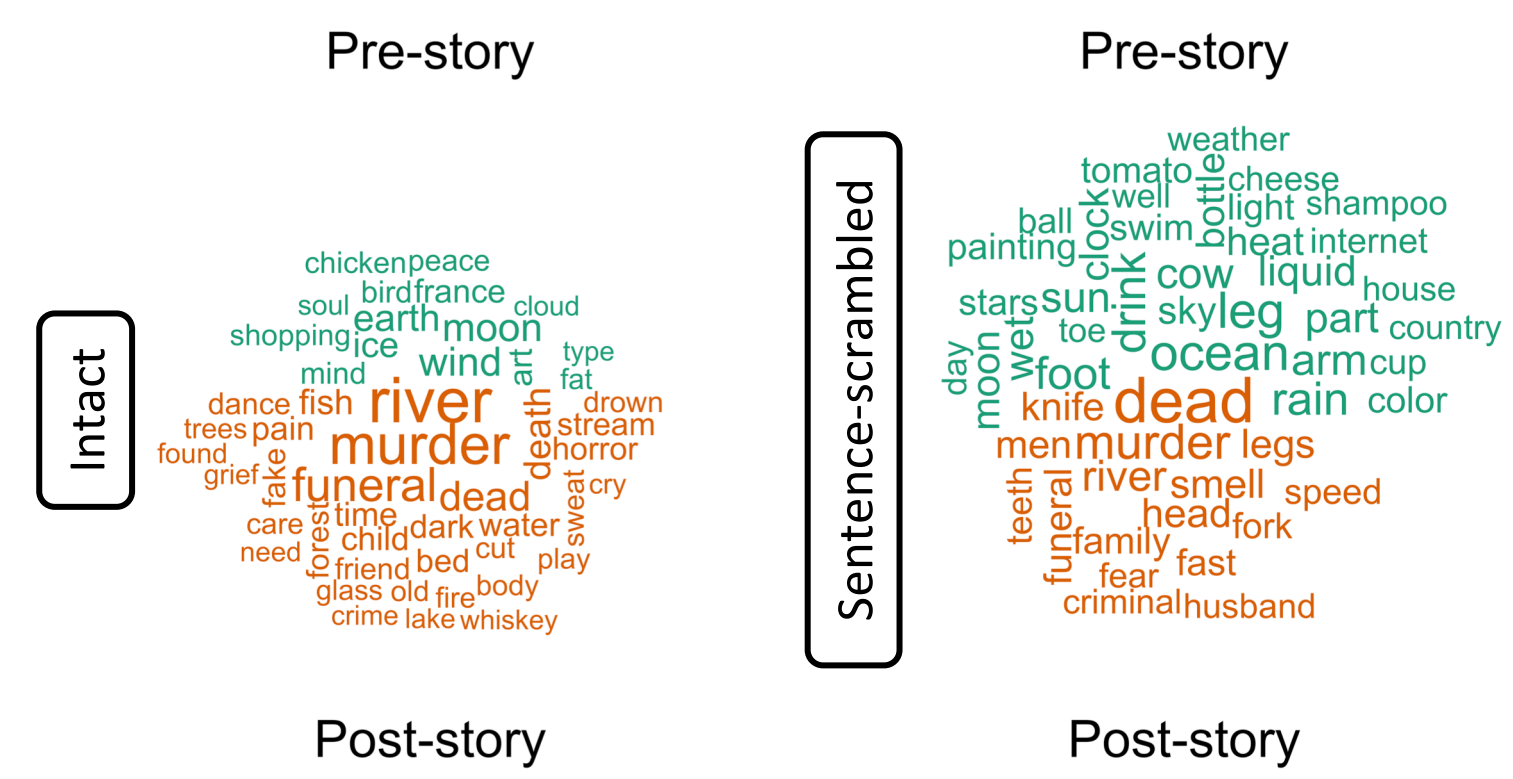


Train classifier: Linear support vector machine

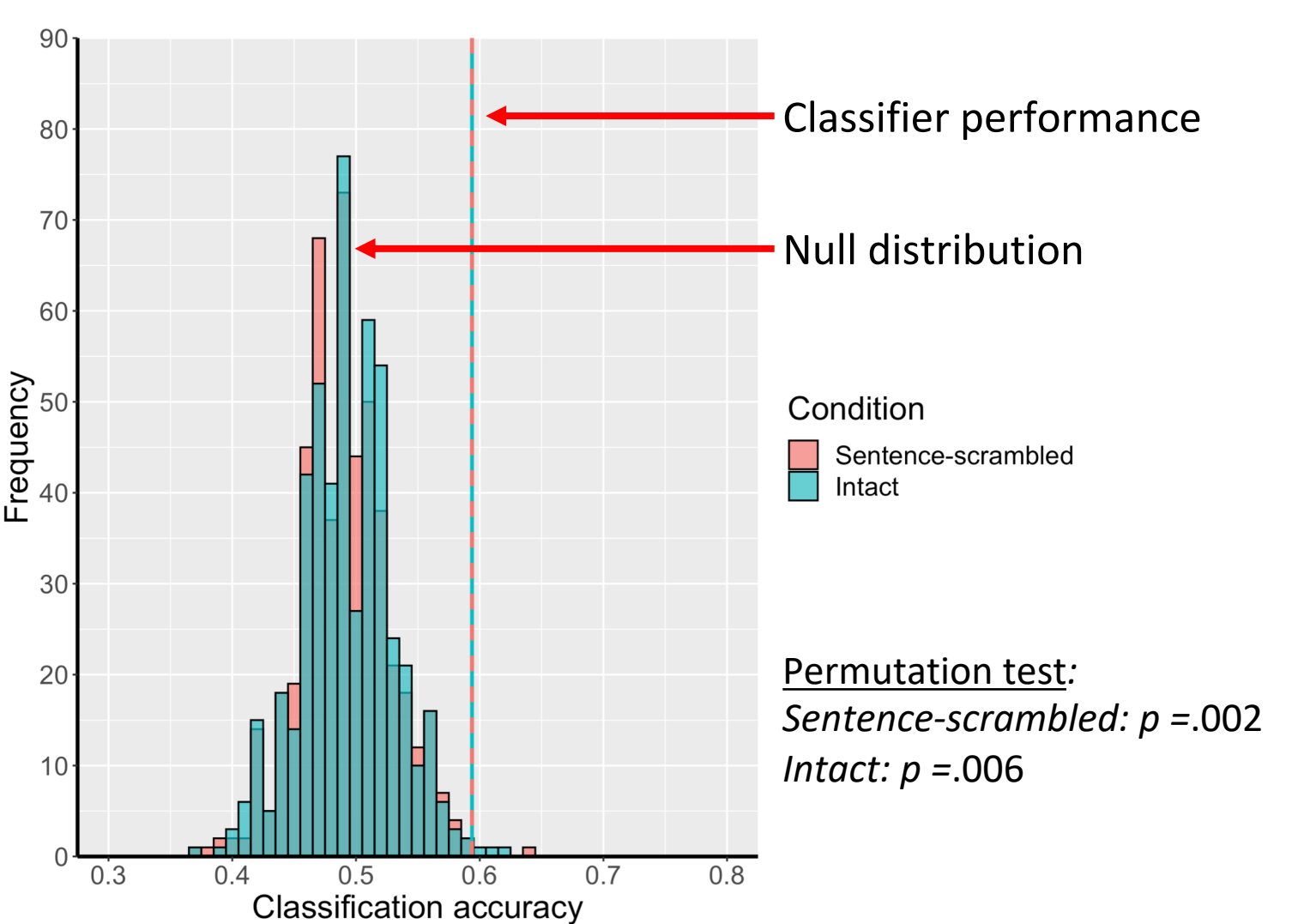
- Classification Details:**
- Training *within* experimental condition (e.g., Intact-only)
 - Testing via LOOCV at the subject-level
 - Null distribution via 500 resamples + shuffling test labels

Results

Word-clouds (based on term frequency)



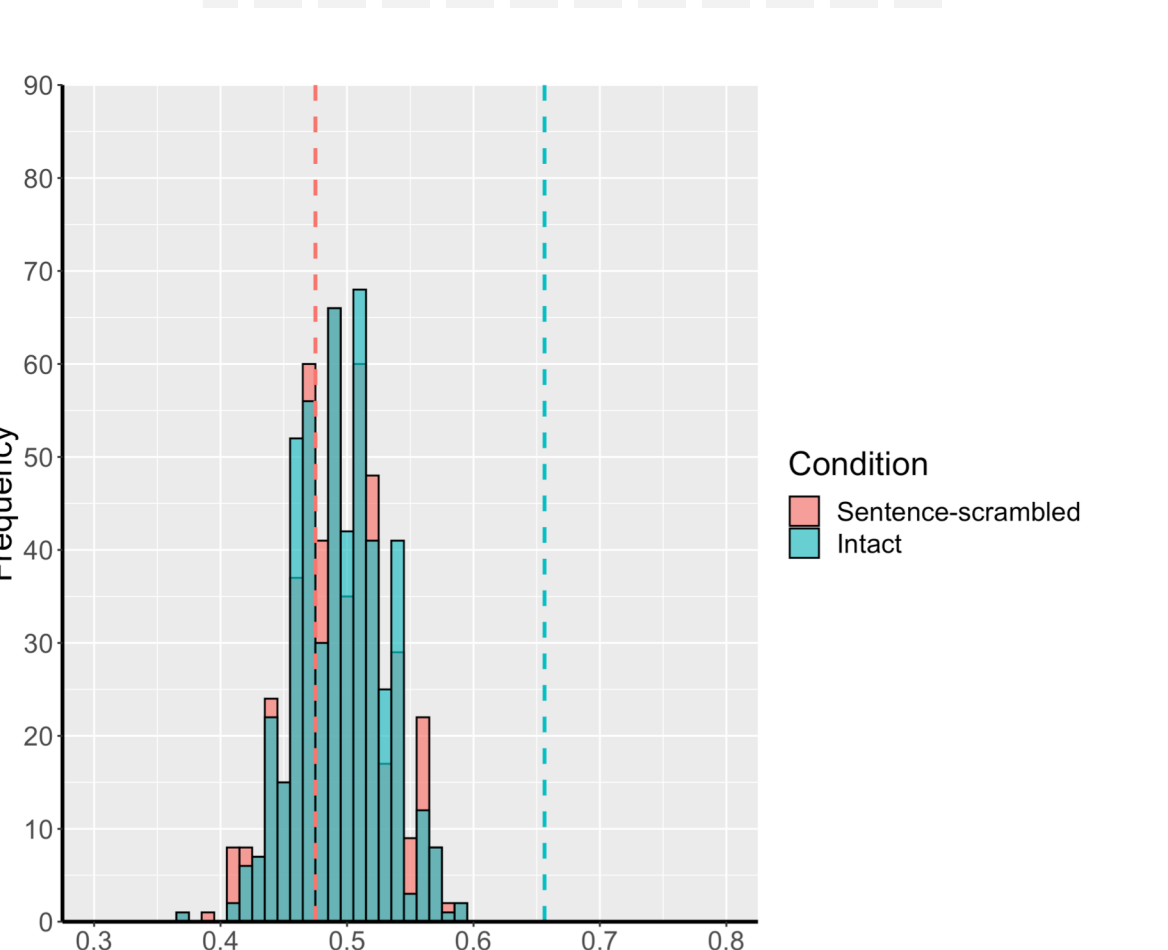
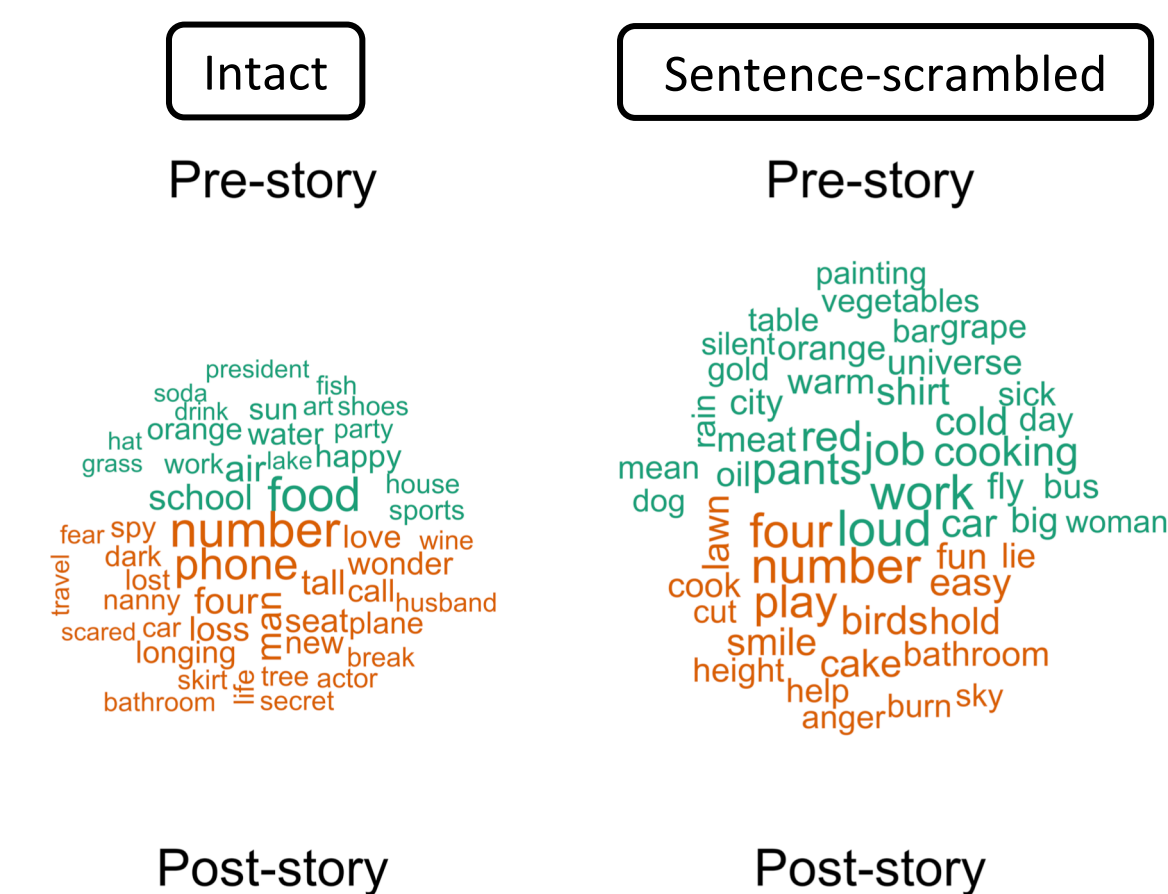
Document classification accuracy



Summary: Pre- vs. Post-story free association is discriminable, and it may be via story-themes.

Replication

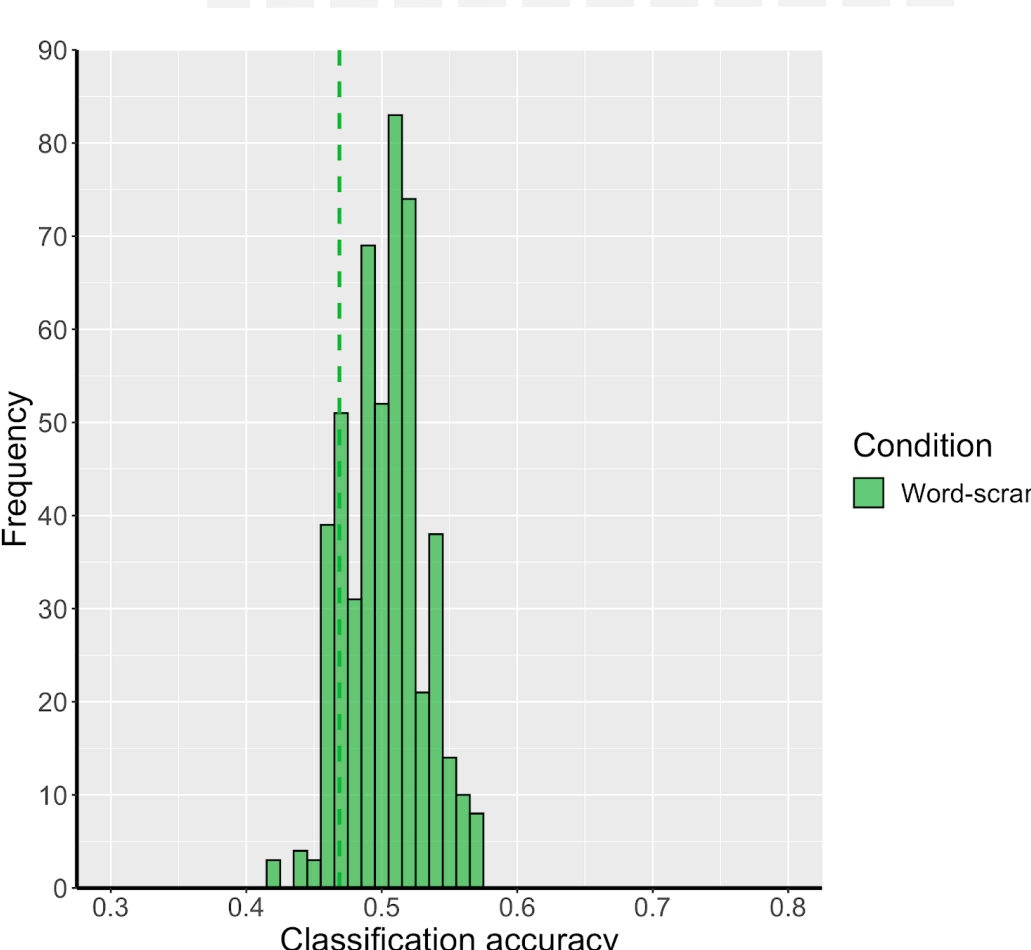
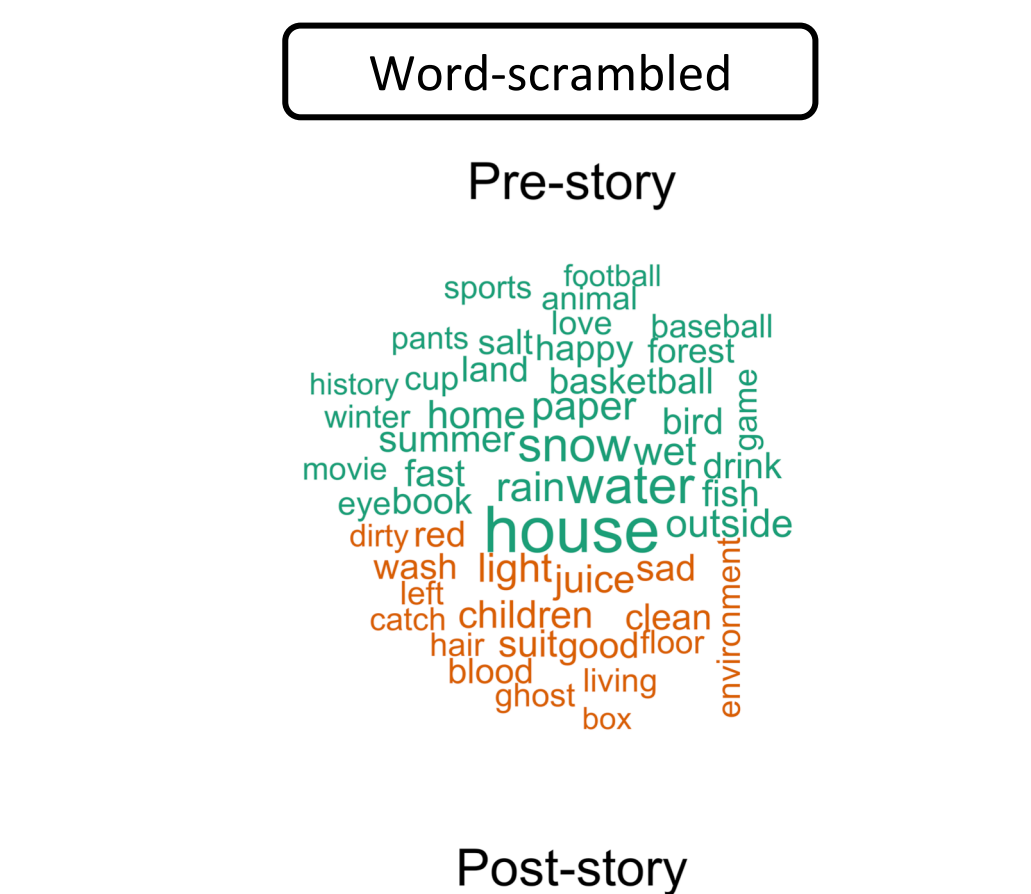
Sample: N = 160
Story: *Roy Spivey* by Miranda July
Summary: A women and a famous actor flirt on an airplane. He gives her a secret number: four.
Length: 2798 words; 266 sentences



Permutation test: Sentence-scramble: p = .68; Intact: p < .002

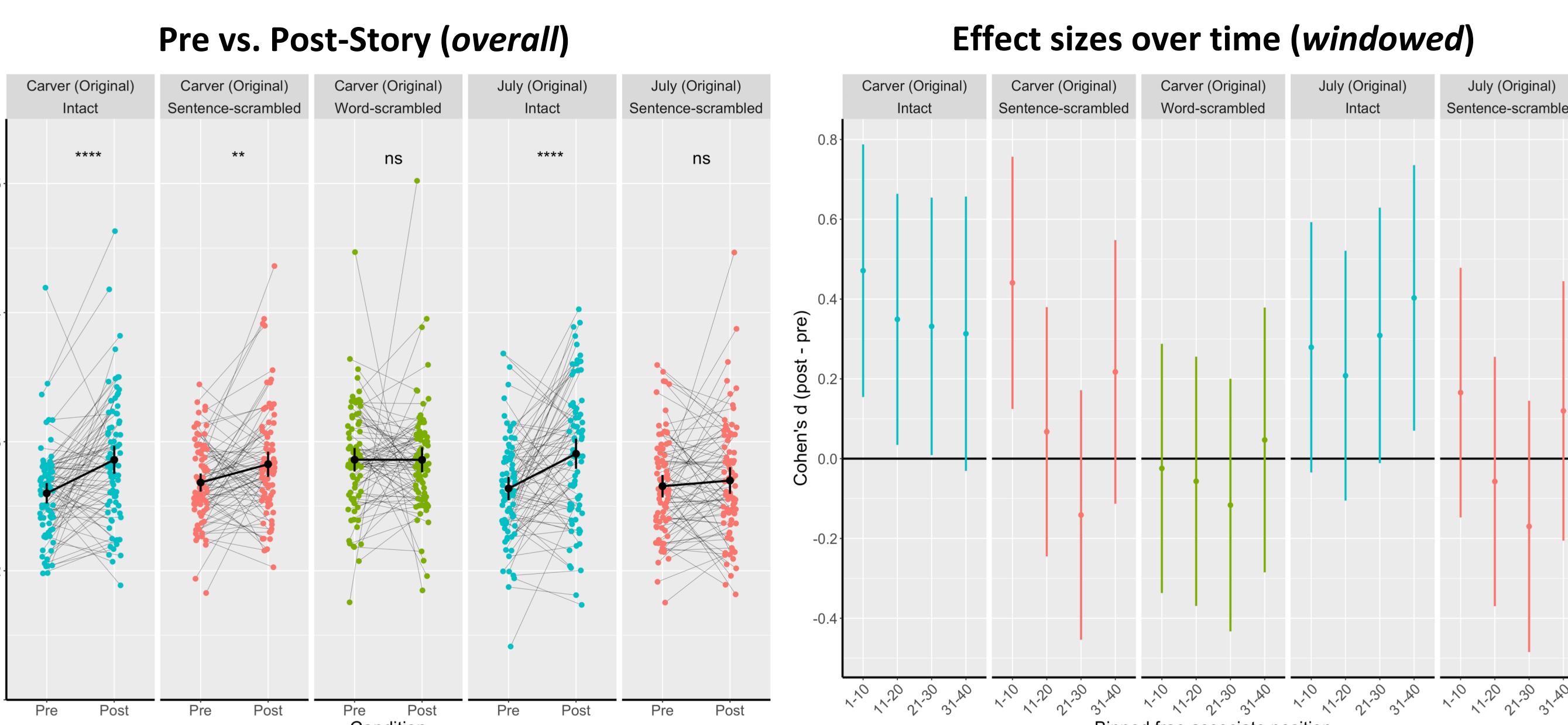
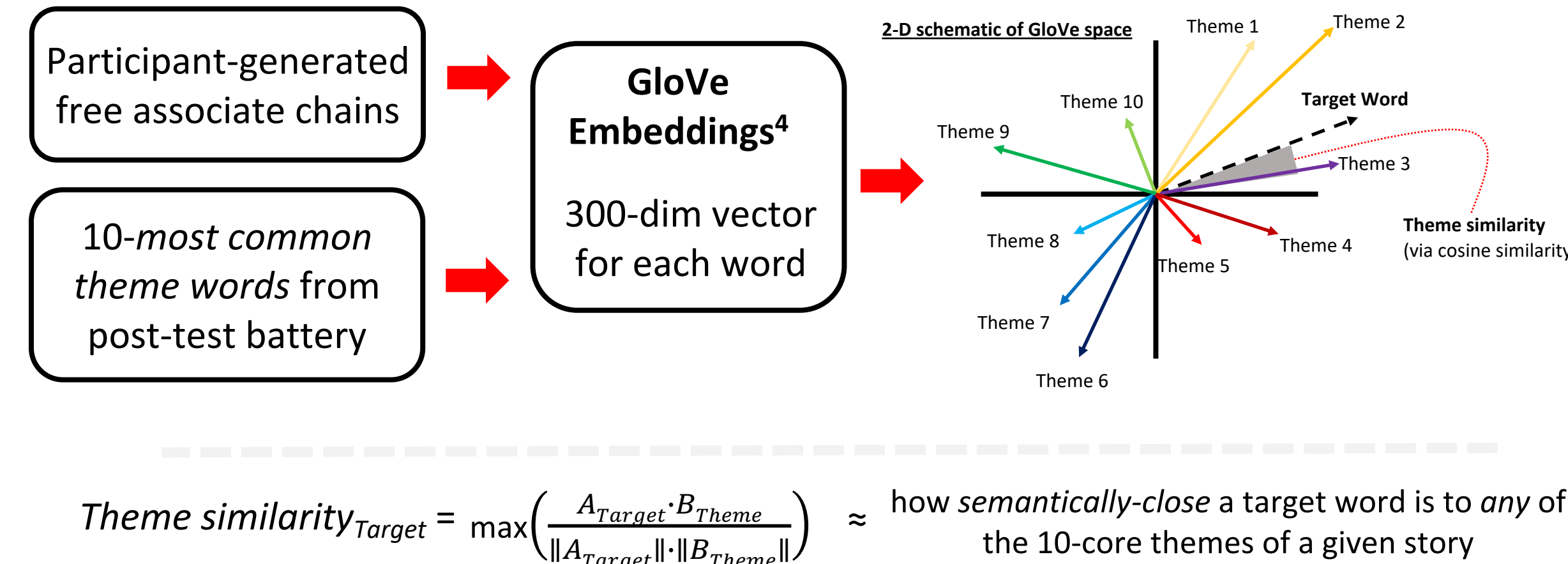
Word Priming?

Sample: N = 80
Story: *Word-scrambled* version of the Carver story
Details: Scrambling within 5-sentence windows from intact story to preserve order.



Permutation test: Word-scramble: p = .85

Theme Similarity



Summary: Story-themes continue to influence/intrude into spontaneous free association even after the story ends. Also, this effect persists longer into free association when the story is intact.

Summary

Stories have a lasting ability to shape our spontaneous thoughts, even extending beyond when the story ends. **The coherence (or meaningfulness) of the text predicts the strength of this lingering context**, which suggests that word-level priming accounts are inadequate.

We propose that the extent to which a recent experience is processed *deeply*, may determine its ability to restructure existing knowledge networks. This restructuring of existing association networks can then affect how we spontaneously traverse them during spontaneous thought⁶.

References

- Green & Brock (2000). *J. Pers. Soc. Psychol.*, 79(5), 701-721.
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