

## **Revisiting recall effects of filler particles** in German and English



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Introduction

Partial replication of Fraundorf & Watson (F&W) [1]

- retelling short passages of Alice in Wonderland [2]
- web-based experiments using Labvanced [3]

Filler particles (FPs)...

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orientate listener's attention to upcoming speech

Fraundorf & Watson (2011)

Do FPs affect the recall on discourse level?

- 3 stories in 3 conditions (fluent, FP, cough)
- manipulation: before 6 sentences occurs a
  - filler/cough (fluent condition unmanipulated)
- participants retell the story after listening
- material [4].
- improve recollection of the following word [5].

Experiment 1 - German

- 45 native German participants
- 3 conditions: fluent, FP, long silence
- statistical modelling using contrast coding
- C1: fluent vs FP/long silence; C2: FP vs long silence glmer(Answer ~ C1 + C2 + (1 + C1 + C2 | Subject) + (1|Story) + (1|Plotpoint), family = binomial)
- significant effect for C1 (fluent condition better recalled); tendency for C2 (long silence condition

result: FPs improve recall while coughs impair recall (on discourse level)

**Experiment 2 - English** 

58 native English participants

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- original stimuli from F&W in fluent and FP condition, manipulation for short FP
- 3 conditions: fluent, long FP, short FP
- statistical modelling using contrast coding
- C1: fluent vs long FP/short FP; C2: long FP vs short FP glmer(Answer ~ C1 + C2 + (1 + C1 + C2 | Subject) + (1|Story/Plotpoint), family = binomial)

## is better recalled than FP condition)



no significant effects for C1 or C2



## References

improved recall for fluent condition for German

Discussion

no effect of condition for English

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- both results do not confirm F&W's findings
- different study design (reduced concentration of

subjects for web-based experiment)

[1] Fraundorf, S. H. and Watson, D. G. "The disfluent discourse: Effects of filled pauses on recall," Journal of Memory and Language, (65.2,) pp. 161–175, 2011. [2] Carroll, L. Alice's Adventures in Wonderland. New York: Sam'l Gabriel Sons & Company, 1916.

[3] Finger, H., Goeke, C., Diekamp, D., Standvoß, K., and König, P. "LabVanced: A unified JavaScript framework for online studies," 2017 International Conference on Computational Social Science IC2S2, pp. 2016-2018, 2017.

- [4] Collard, P., Corley, M., MacGregor, L. J., and Donaldson, D. I. "Attention orienting effects of hesitations in speech: Evidence from ERPs." Journal of Experimental Psychology: Learning, Memory, and Cognition, (34.3), p. 696, 2008. [5] Corley, M., MacGregor, L. J., and Donaldson, D. I. "It's the way that you, er, say it :
  - Hesitations in speech affect language comprehension," Cognition, (105), pp. 658– 668, 2007.

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