Metamemory Judgments and Design Effects: JOL Reactivity is Greater for Mixed than Pure Lists

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Introduction

- Judgments of learning (JOLs) are people's predictions about their future memory performance. They correspond to the subjective likelihood of remembering an item on the upcoming test.
- Eliciting JOLs can alter memory performance as opposed to just studying, a phenomenon known as **JOL reactivity**. Previous research has suggested that JOL reactivity can arise under different circumstances. Yet, a systematic examination of how list composition affects JOL reactivity is still lacking.
- Numerous memory phenomena (e.g., generation, bizarreness) that are accommodated by item-specific and relational processing are moderated by list composition: their effects on free recall are much stronger in mixed compared to pure lists – which is referred to as the **design effects** (McDaniel & Bugg, 2008).

References

McDaniel, M. A., & Bugg, J. M. (2008). Instability in memory phenomena: A common puzzle and a unifying explanation. *Psychonomic Bulletin & Review*, *15*(2), 237-255. https://doi.org/10.3758/pbr.15.2.237

Aims and Hypotheses

- This is the first experiment of a series of three experiments examining the item-specific/relational account of JOL reactivity.
- Specifically, we want to examine if JOL reactivity is moderated by list composition.

Methods

Participants

N = 30, all UNC students

Materials

A total of 24 word-pairs in each block that are semantically related in meaning. The first is the cue word and the second is the target

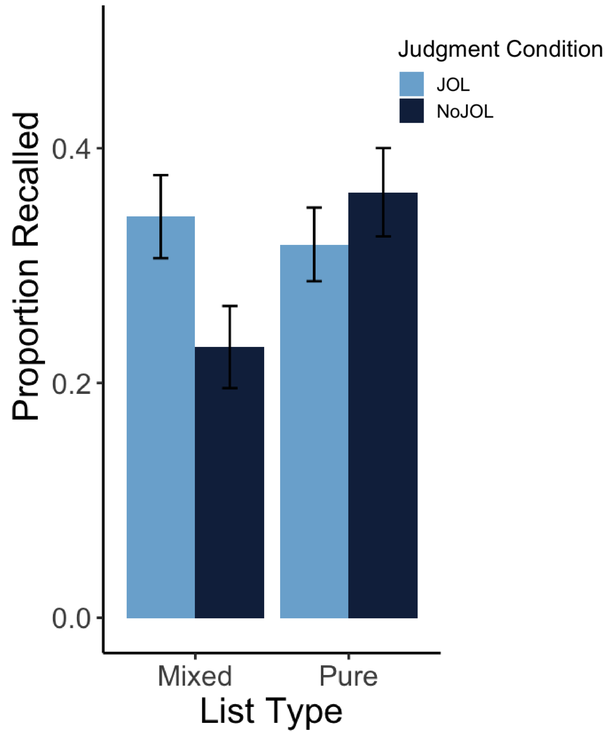
Design

2 (list type: mixed vs. pure) x 2 (encoding task: JOL vs. No JOL) within-subjects

Procedure

- 3 blocks: JOL block | No JOL block | Mixed block (half JOL and half No JOL).
- Distractor task (arithmetic) for 2 minutes
- Free recall (of target word)

Results & Discussion



$F(1, 29) = 8.216$, $p = .008$, $\eta_p^2 = .22$

- The critical list type X encoding type interaction was significant in the experiment: as expected, JOL reactivity was larger in the mixed compared to the pure lists.
- The main effect of encoding task was not significant, $F(1, 29) = 1.49$, $p = .232$. The main effect of list type was also not significant, $F(1, 29) = 3.80$, $p = .061$.
- This study shows that JOL reactivity is subject to design effects by demonstrating how it is moderated by list composition.