

Background and Rationale

Judgments of learning (JOLs) refer to an individual's predictions of future memory performance based on their evaluation of prior learning.

Increased *perceptual fluency* (i.e., subjective ease of processing) has been shown to inflate individuals' JOL ratings.

Experience-based influences: JOLs can be impacted by in-the-moment processing experiences that reflect properties intrinsic to experimental stimuli (i.e. perceptual fluency).

Theory-based influences: JOLs can be impacted by deliberate applications of prior knowledge or beliefs concerning how a given experimental manipulation affects memory performance (i.e. a belief that more fluent stimuli are easier to remember).

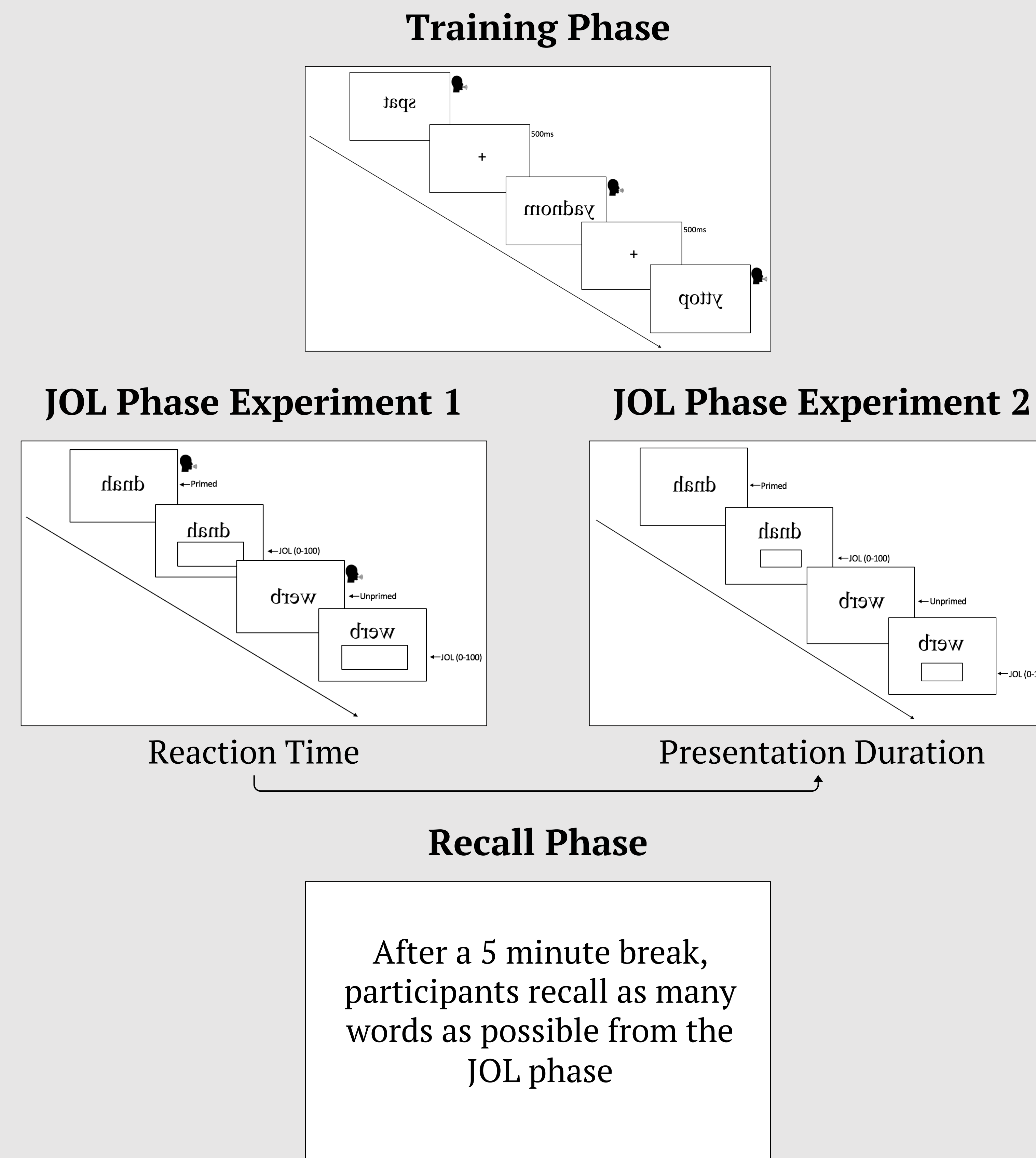
Experiment 1

- Creating a manipulation of perceptual fluency that participants are unaware of
- Allows for examination of an exclusively experience-based influence of perceptual fluency on JOLs
- Any observed influences cannot be attributed to intuitive theories

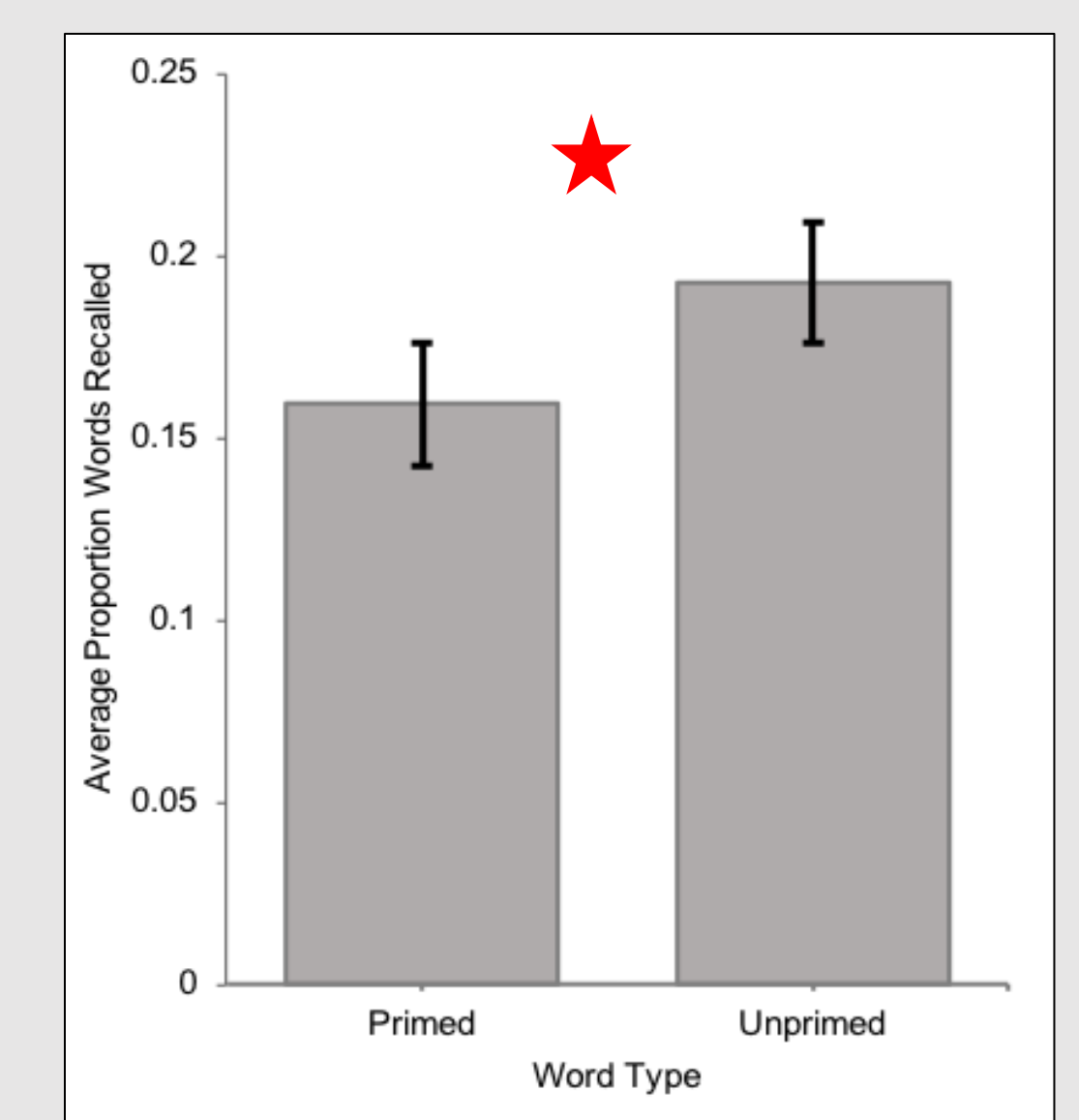
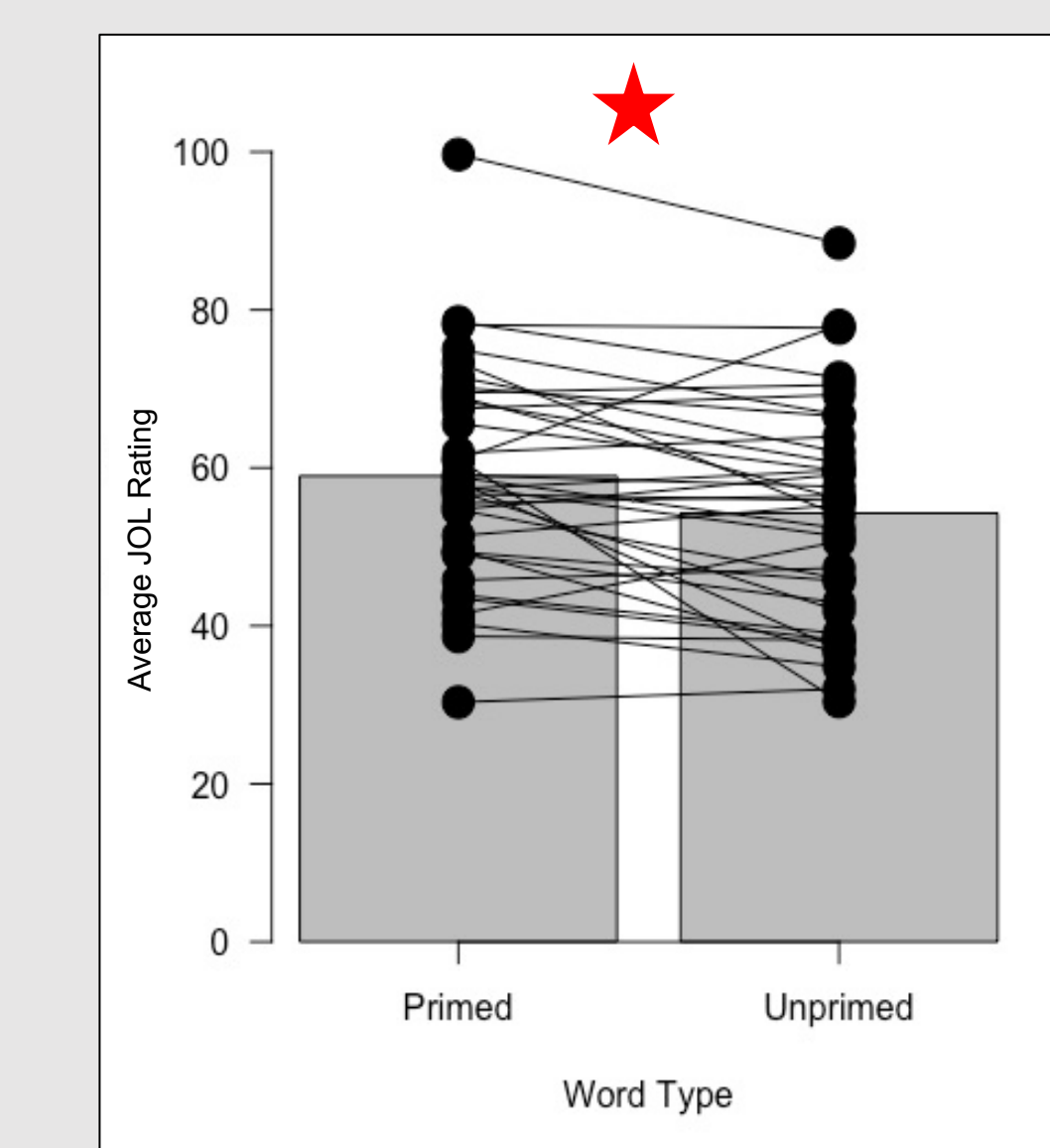
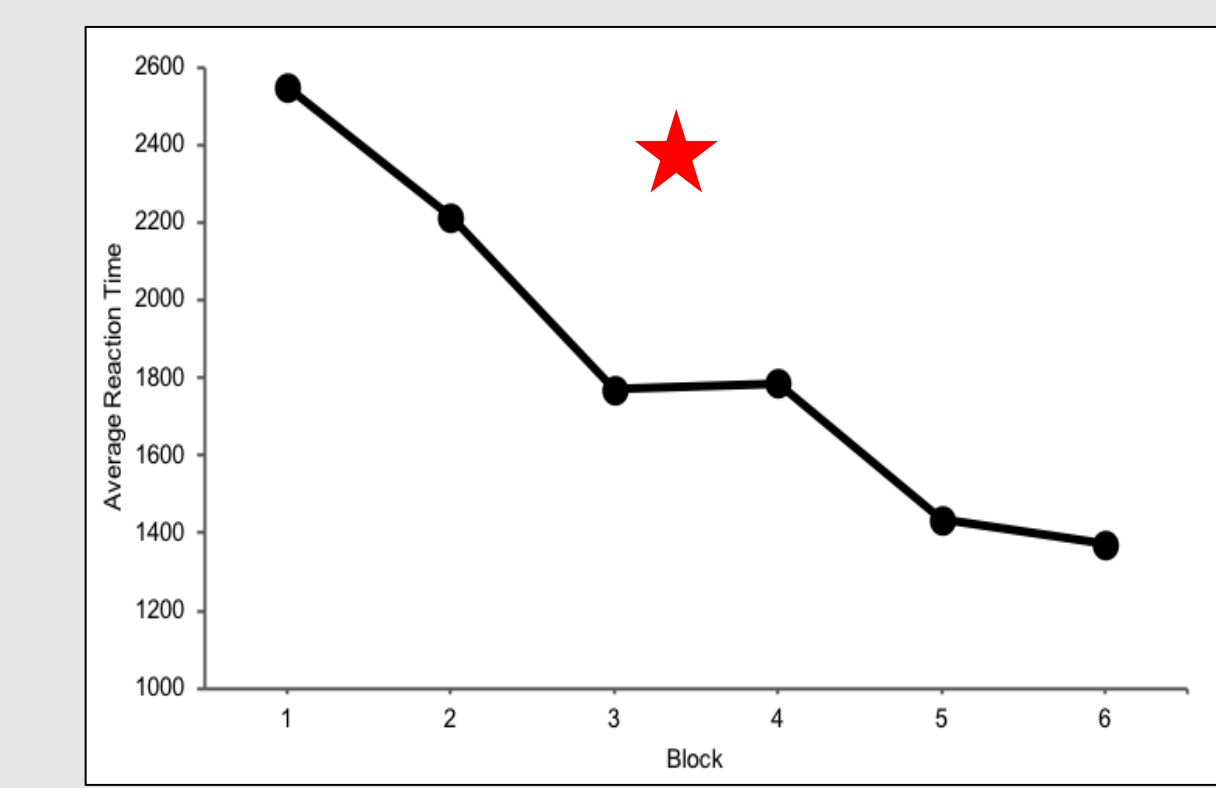
Experiment 2

- Removing pronunciation requirement may allow participants to use the increased perceptual fluency to guide JOLs

Methods and Procedure Cont'd



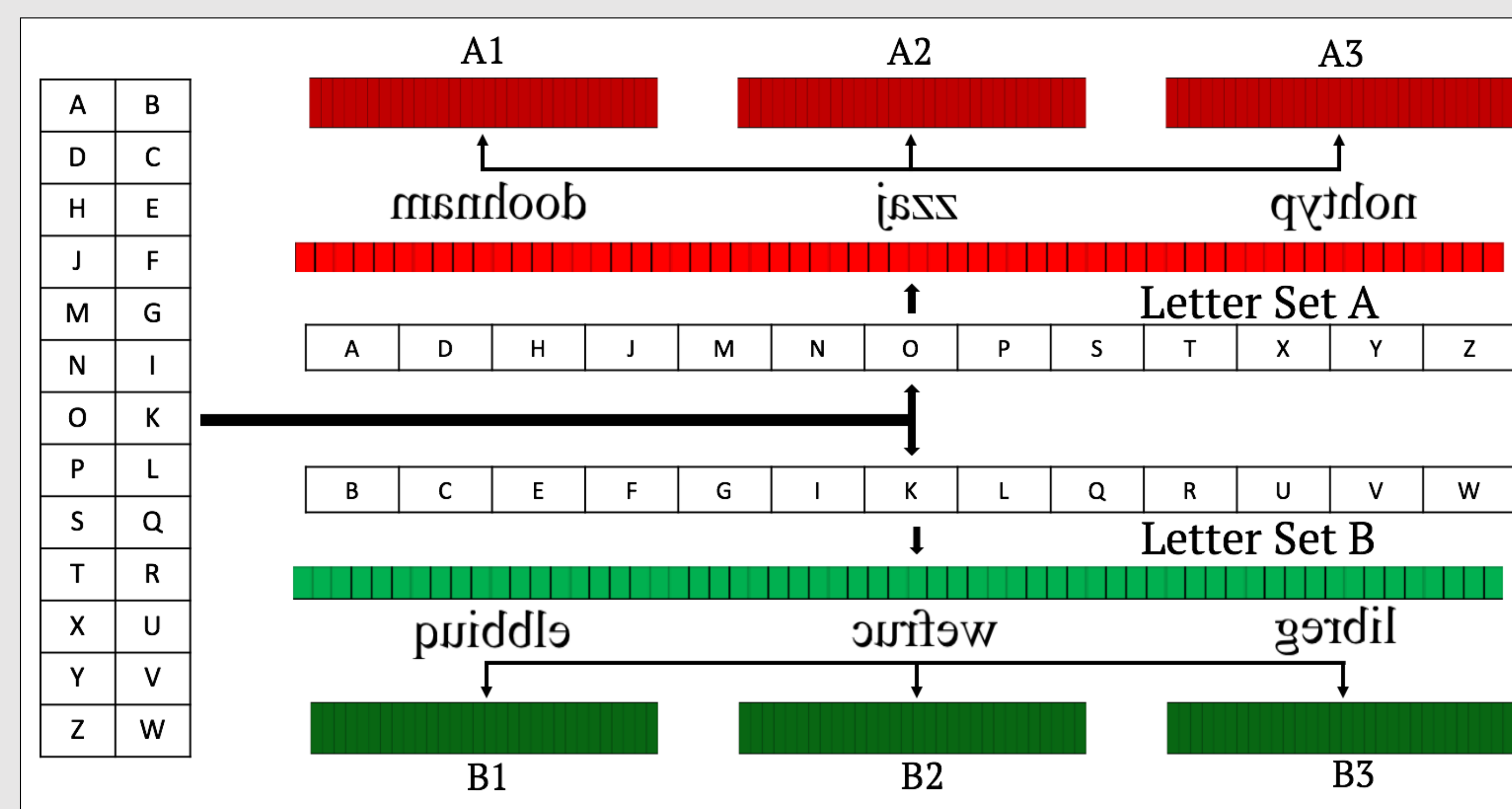
Results Experiment 2 (n = 36)



Significant difference between JOL ratings for primed versus unprimed words

• $t(35) = 3.23, p = .0027, d = .33, CI [.12, .56]$

Methods and Procedure

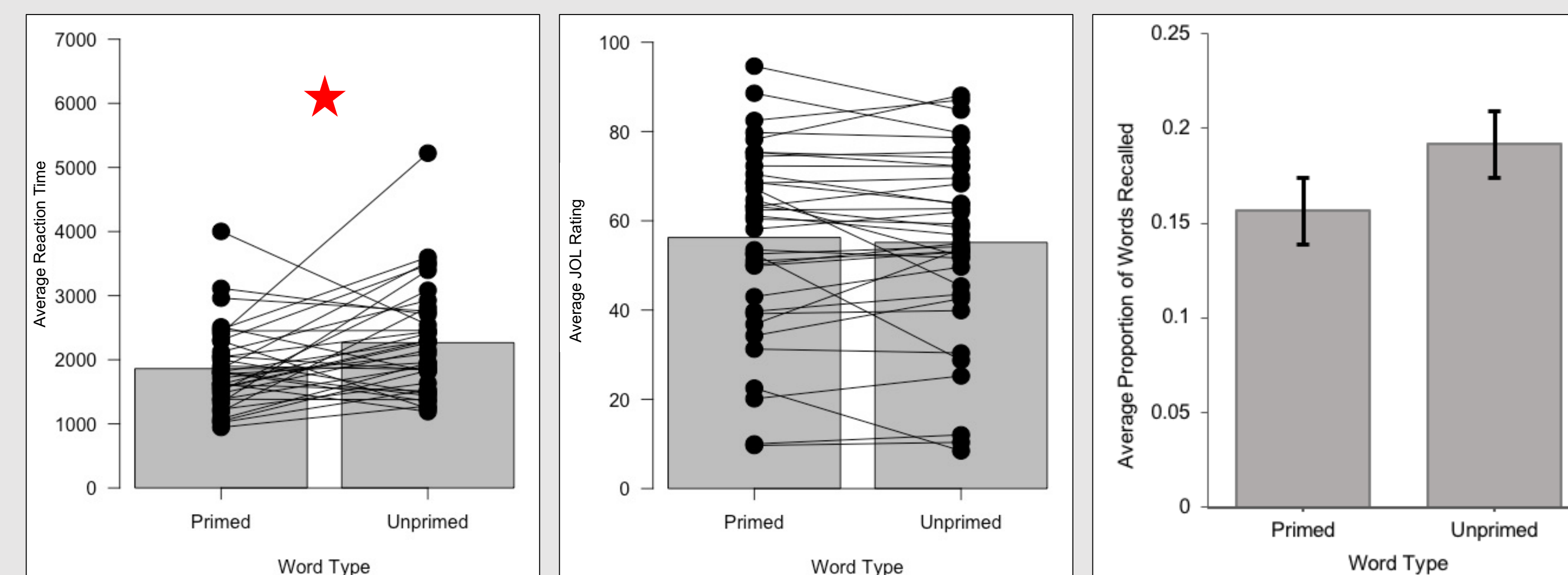
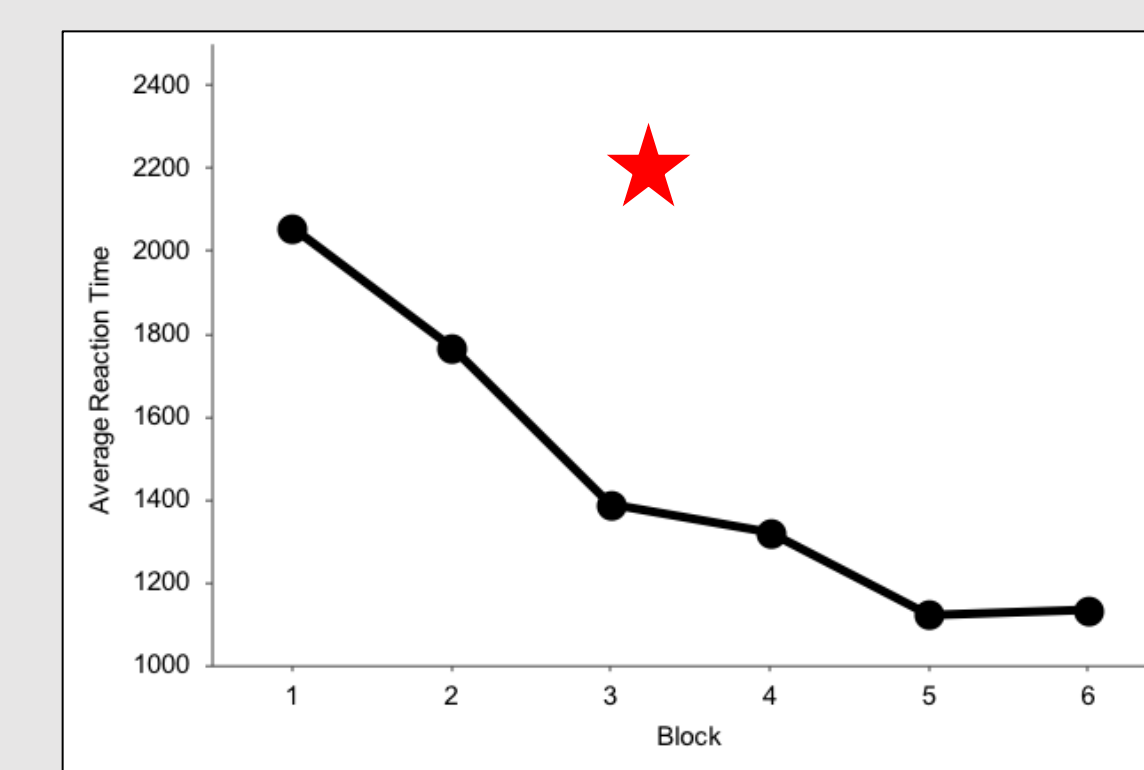


Training Phase
(60 words; 6 blocks; 30 trials each)

JOL Phase
(60 new words [30 primed, 30 unprimed])

Recall Phase

Results Experiment 1 (n = 36)



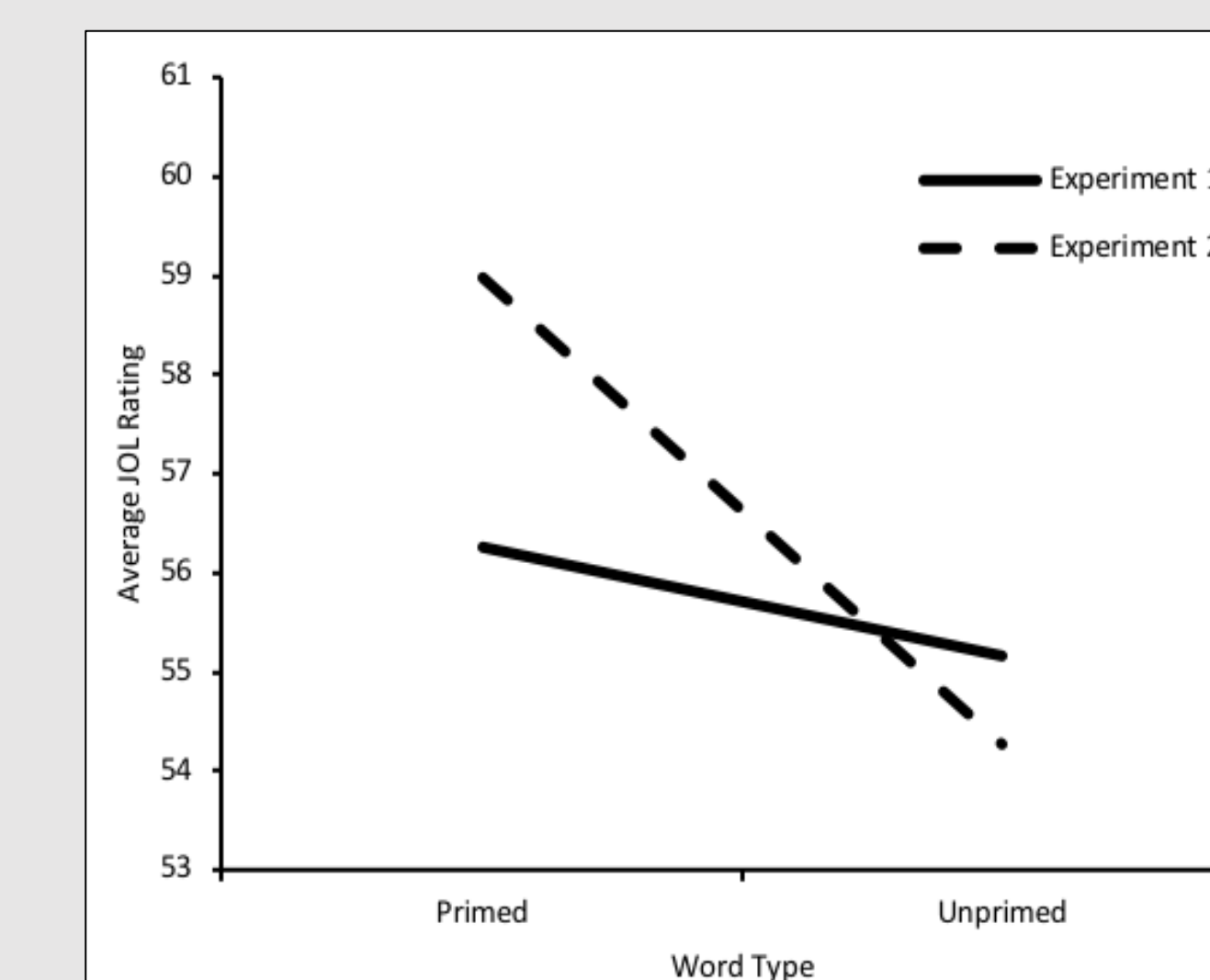
Significantly faster RTs for primed versus unprimed words

• $t(35) = 2.76, p = .005$ (one-tailed), $d = .54, CI [.13, .93]$

Non-significant difference between JOL ratings for primed versus unprimed words

• $t(35) = .81, p = .42, d = .05, CI [-.05, .61]$

Interaction between JOL Ratings in Exp. 1 and Exp. 2



Interaction was trending

• $t(70) = 1.81, p = .074, d = .43, CI [.0018, .85]$

Bayesian analyses demonstrated that the null hypothesis was moderately supported in Experiment 1

• $BF_{10} = .24$

and the alternative hypothesis was very strongly supported in Experiment 2,

• $BF_{10} = 13.04$

Conclusions

- Perceptual fluency can influence predictions of future memory performance
- Task requirements are important to consider when investigating how individuals make JOLs
- The act of measuring perceptual fluency may change how it is used to inform JOLs

References

- Fiacconi, C. M., Mitton, E., Laursen, S. (in revision). Isolating the Contribution of Perceptual Fluency to Judgments of Learning. *Journal of Experimental Psychology: Learning, Memory, and Cognition*
- Koriat, A. (1997). Monitoring one's own knowledge during study: A cue-utilization approach to judgments of learning. *Journal of Experimental Psychology: General*, 126(4), 349-370. doi:10.1037/0096-3445.126.4.349

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