

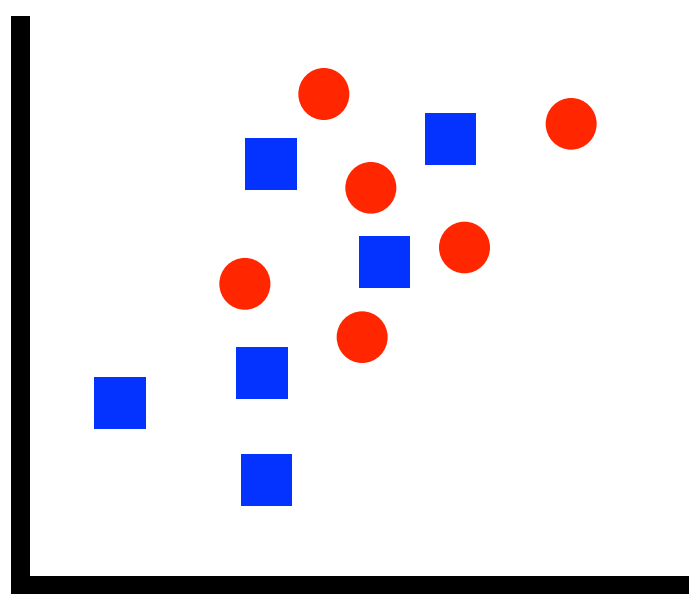
Rapid feature-selection benefits from feature redundancy

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Introduction

- Selective attention to visual features¹ can be inefficient when features are conjoined^{2,4}
- Data displays often encode data redundantly with multiple features⁵

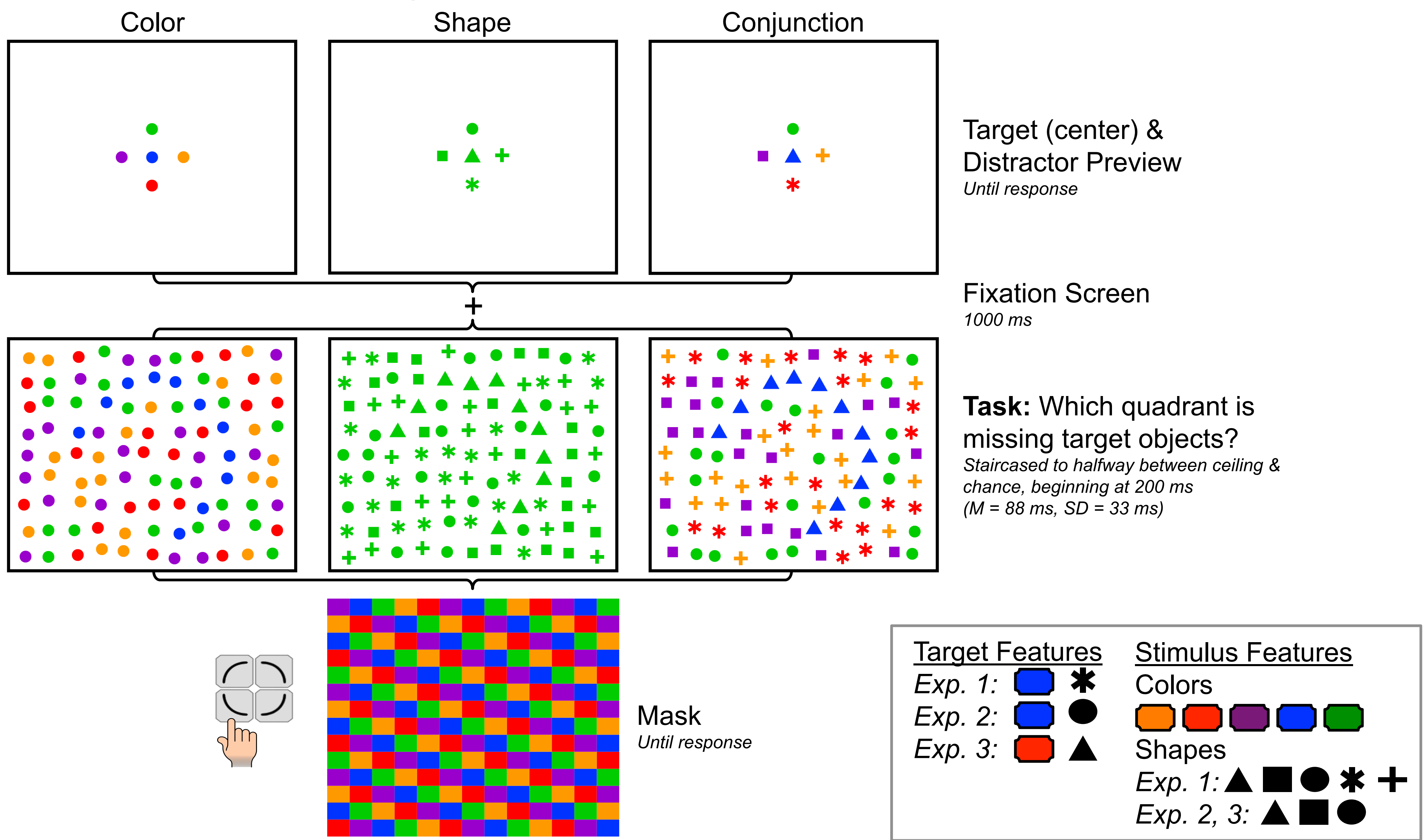


- Redundant features may improve selection/grouping of collections⁶
- On the other hand, adding complexity can be harmful⁷

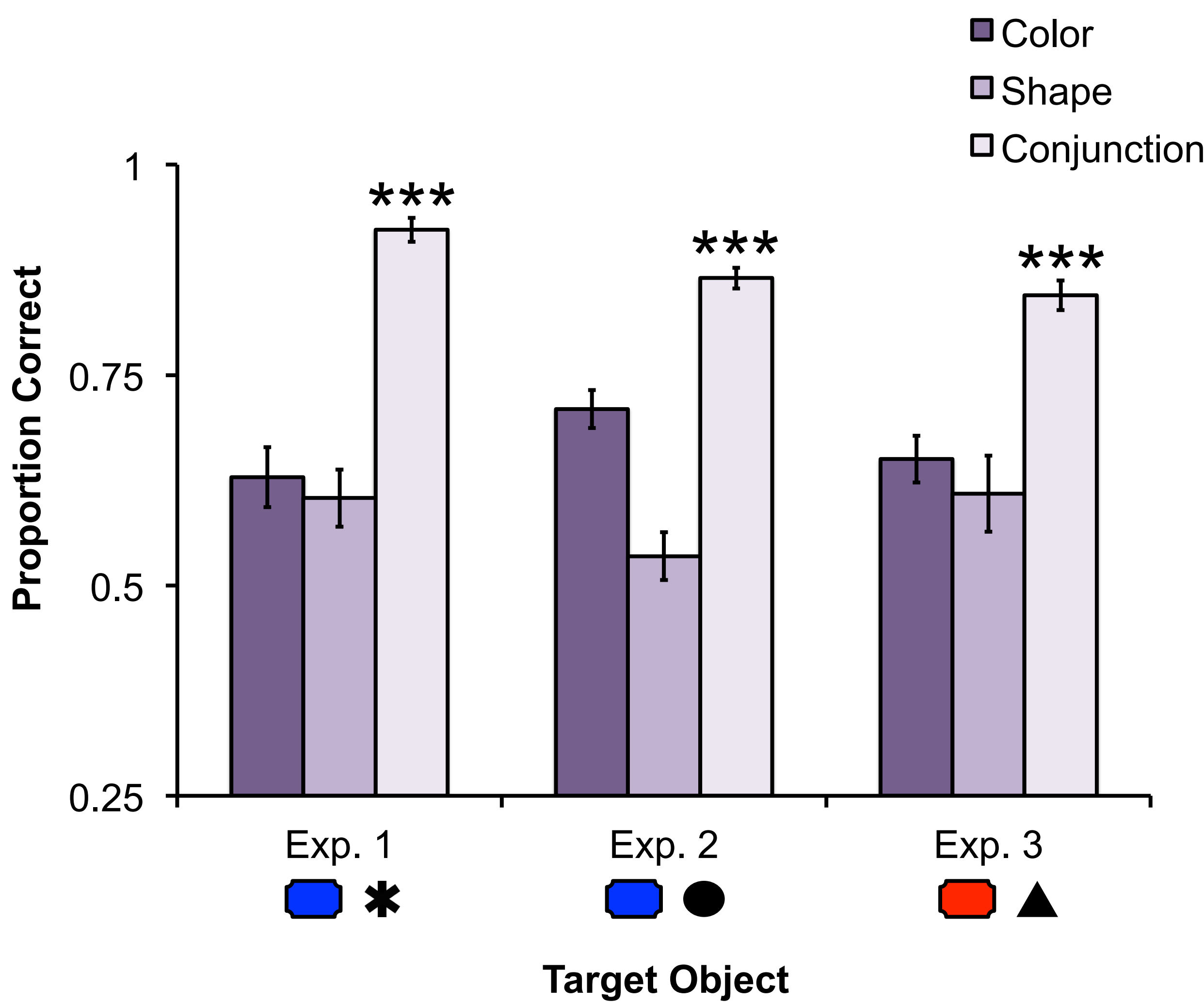
Questions

- Is conjunctive selection helpful, even when the extra feature is redundant?
- Does perceptual organization benefit from redundant features?

Exp. 1-3 Design



Exp. 1-3 Results

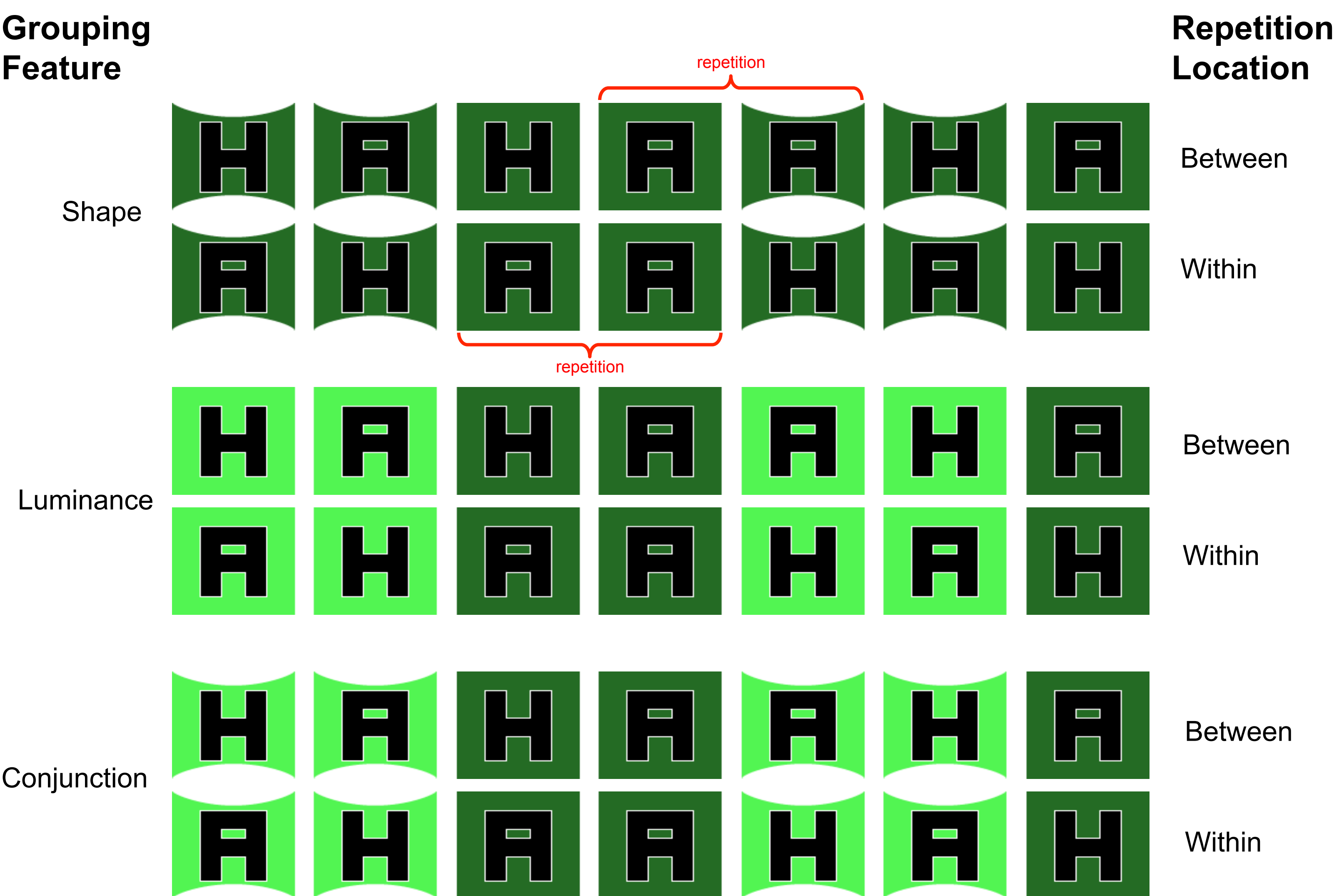
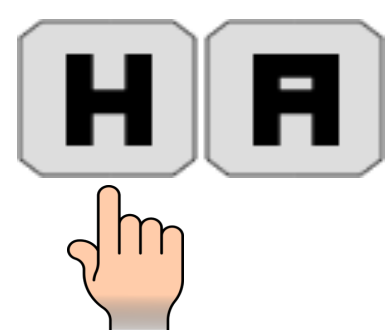


Multiple features > either feature alone

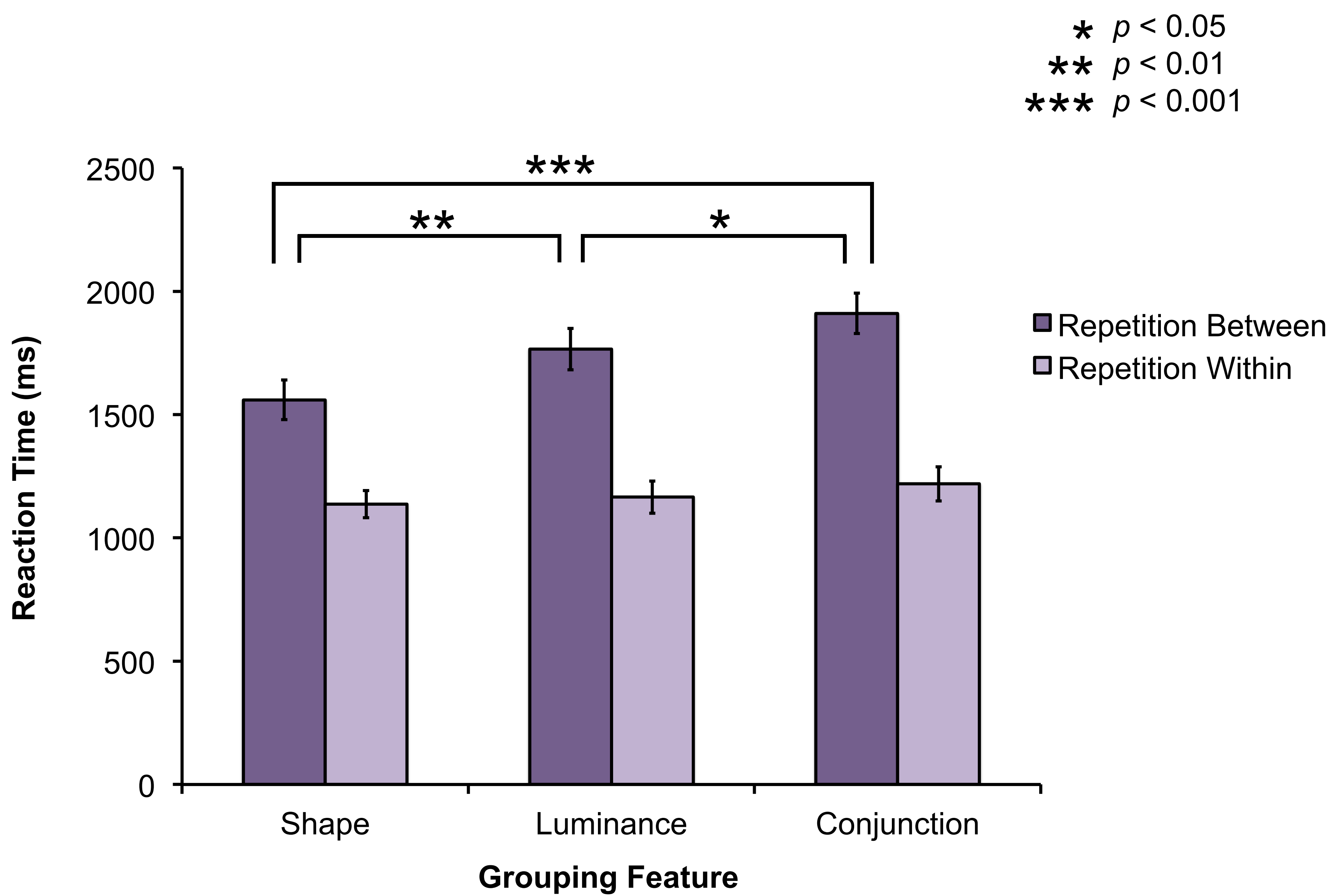
Exp. 4 Design

Repetition Discrimination Task⁸
tests grouping cue strength

Task: Which letter repeats?



Exp. 4 Results



Multiple features > either feature alone
... but results are preliminary – stay tuned.

Conclusions

- Selection & grouping benefit from feature redundancy
- Implications for data displays (e.g., Microsoft Excel defaults to redundant shape/color for graphs)

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Acknowledgements: We thank Zoe Lister-Nick for assistance in data collection and IIS-1162067 for support.



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