

Left Visual Field Advantage for Non-Salient RSVP Targets

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Related PubMed Abstract



Poster



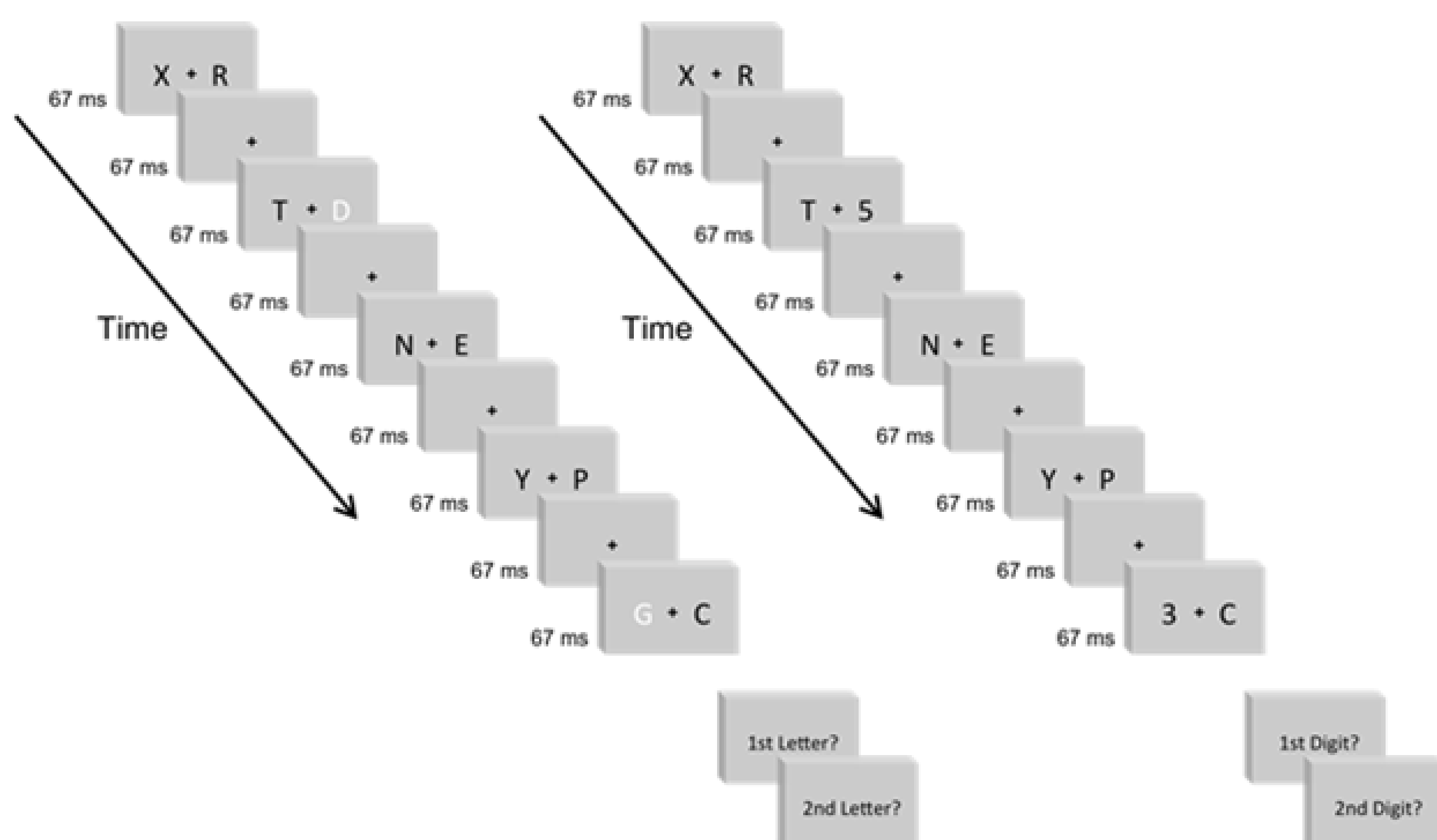
Introduction

Significant Left Visual Field (LVF) advantages in target identification have been reported in several earlier studies (Verleger et al., 2009; Śmigasiewicz et al., 2010; Verleger et al., 2010; Verleger et al., 2011; Verleger et al., 2013, Clement & Matthews, 2016). Stimuli from those studies consisted of dual-stream Rapid Serial Visual Presentations (RSVPs) with salient T1's (red letters among black letters), and non-salient T2's (black digits among black letters). However, it remains unclear whether the significant LVF advantages in those studies arose from target order (T1 versus T2) or target type (salient versus non-salient). We therefore conducted the present experiment to disentangle the previously confounded influences of target order and target type.

Method

Participants: 28 Denison University undergraduate students.

Dual-Stream RSVP Stimuli



Task: Identify T1 and T2 in the correct sequence.

Design: Completely within-subject 2x2x2:

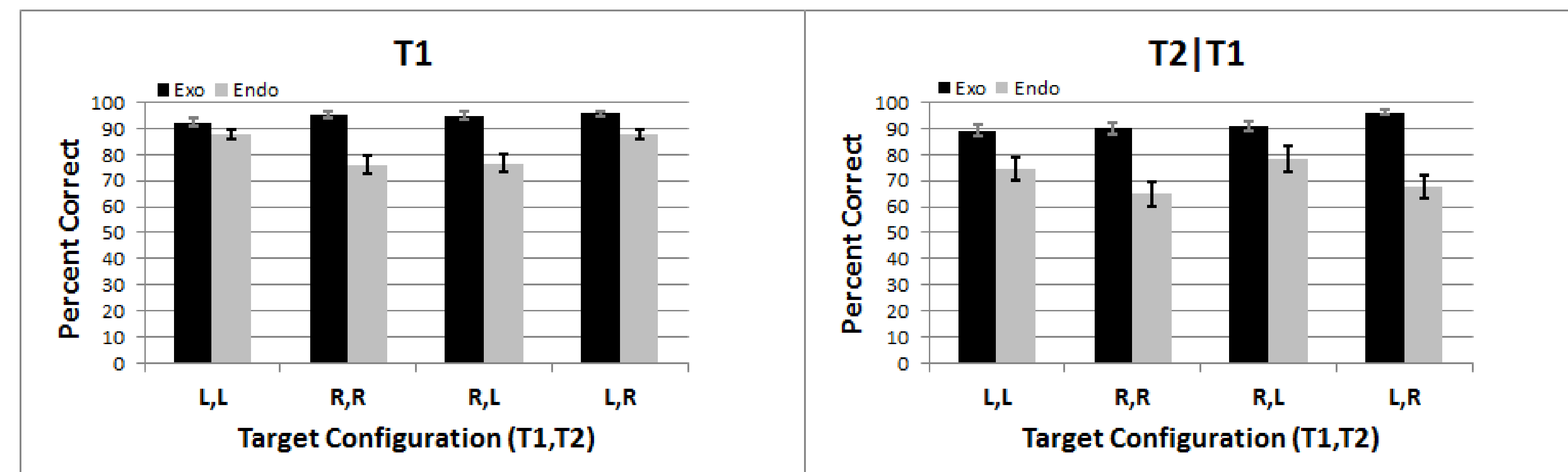
Exo-Endo (salient versus non-salient);

Side-Change (ipsilateral targets versus contralateral targets);

T2-Side (left versus right).

D.V. = %Correct for T1, and T2 | T1 (10 trials per condition for each participant).

Results



T1

Significant 3-Way Interaction

Exo-Endo x Side Change x T2-Side

$F(1,27)=27.665, p<0.001^*, \eta^2=0.506$

*Bonferroni Corrected

T2|T1

Significant 2-Way Interaction

Exo-Endo x T2-Side

$F(1,27)=15.045, p=0.015^*, \eta^2=0.358$

*Bonferroni Corrected

Discussion

1. We found significantly larger LVF advantages for non-salient ("Endo") targets than for salient ("Exo") targets.
2. The data argue against attributing the LVF advantage to the attentional blink, given the significant LVF advantages observed in non-salient T1-identification and the failure to observe LVF advantages in salient T2 | T1-identification.
3. Our findings parallel earlier RSVP identification results that showed larger LVF advantages for black targets and black distractors than for red or green targets and black distractors (Scalf et al., 2007, experiment 4).

References

1. Verleger et al., 2009 - [PMID: 18564053](https://pubmed.ncbi.nlm.nih.gov/18564053/)
2. Śmigasiewicz et al., 2010 - [PMID: 20546763](https://pubmed.ncbi.nlm.nih.gov/20546763/)
3. Verleger et al., 2010 - [PMID: 20401472](https://pubmed.ncbi.nlm.nih.gov/20401472/)
4. Verleger et al., 2011 - [PMID: 21265863](https://pubmed.ncbi.nlm.nih.gov/21265863/)
5. Verleger et al., 2013 - [PMID: 23451226](https://pubmed.ncbi.nlm.nih.gov/23451226/)
6. Clement & Matthews, 2016 - [PMID: 26603040](https://pubmed.ncbi.nlm.nih.gov/26603040/)
7. Scalf et al., 2007 - [PMID: 17469970](https://pubmed.ncbi.nlm.nih.gov/17469970/)

Poster: <http://personal.denison.edu/~matthewsn/apsresearch2016>