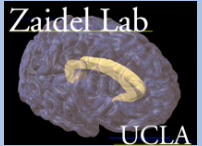




The Automatic Nature of Social Stimuli on Spatial Orienting of Attention: Can Social Cues Generate Inhibition of Return?

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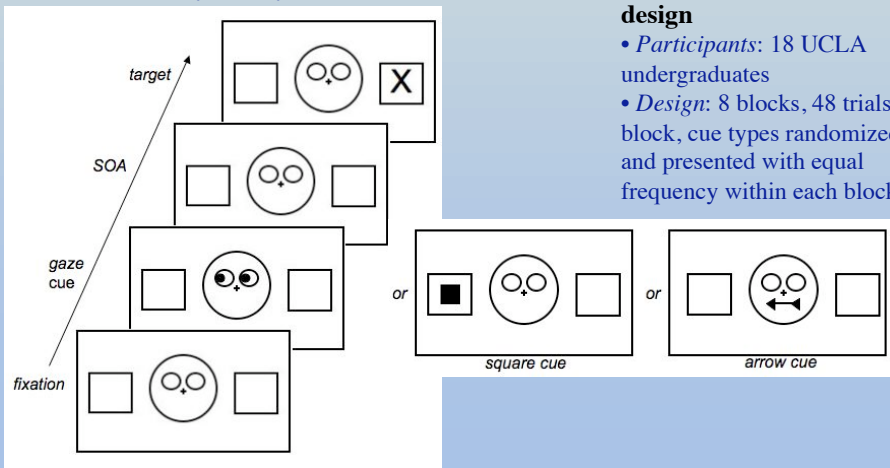
Introduction

- Directional social cues, such as eye gaze, cause automatic shifts in attention following the direction of the gaze (Driver et al., 1999; Friesen & Kingstone, 1998).
- Eye gaze cues, like typical automatic cues (e.g. a peripheral luminance change), lead to faster responses to validly cued targets than invalidly cued targets (facilitation) even when the cue is not predictive of the impending target location.
- However, in most cases social cues have failed to exhibit the inhibitory effect (inhibition of return: IOR) generated by automatic cues when the interval between the cue and the target is longer than ~300msec (McKee et al., 2007).
- Peripheral cues yield IOR only when presented briefly (Collie et al., 2000). Instead, eye gaze (social) cues have been presented until a response is made.
- Here, we investigated whether or not presentation of brief social cues yields IOR.

Methods

Spatial Cueing Paradigm:

- Target: 'X' within the left or right peripheral box
- Task: Target localization (left or right)
- Cue: *non-predictive* warning stimulus precedes the target:
 - Cue on for 125msec
 - 3 cue types: peripheral square, central gaze, central arrow
 - 2 possible intervals between cue onset and target onset (stimulus onset asynchrony: SOA): 150 or 950 msec



Experiment 1: blocked design

- *Participants:* 18 UCLA undergraduates
- *Design:* 9 blocks, 40 trials per block, one of the 3 cue types (square, gaze, arrow) per block

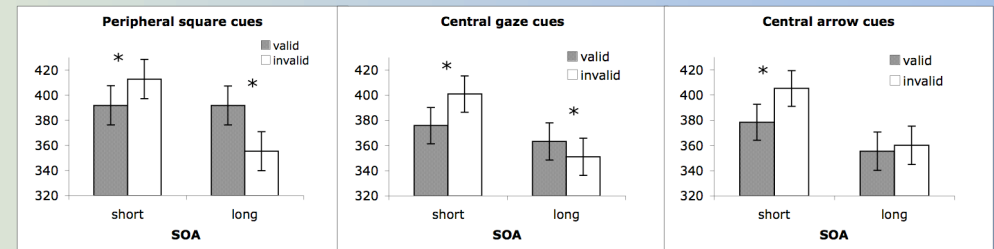
Experiment 2: mixed design

- *Participants:* 18 UCLA undergraduates
- *Design:* 8 blocks, 48 trials per block, cue types randomized and presented with equal frequency within each block

Results

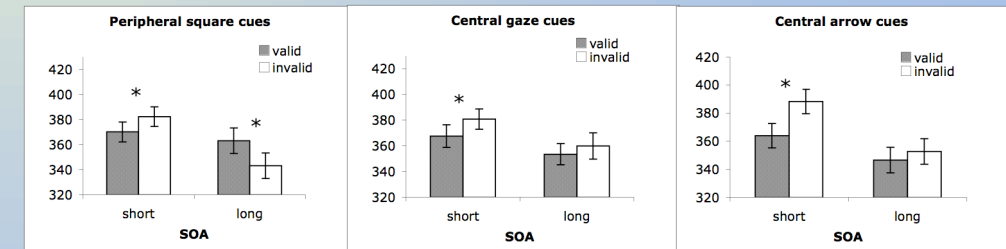
Experiment 1: blocked design

- All cue types revealed significant facilitation at the short SOA
- Inhibition of return was found for the peripheral square cue and the central gaze cue, but not the central arrow cue



Experiment 2: mixed design

- Again, all cue types revealed significant facilitation at the short SOA
- Inhibition of return was found for the peripheral square cue, but not for the gaze cue or arrow cue



Conclusions

- Gaze cues can elicit IOR, implicating an automatic component in gaze cueing.
- However, the IOR effect from gaze cueing is weaker than from peripheral cueing, suggesting a different underlying mechanism.

References

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4. McKee, D., Christie, J., & Klein, R. (2007). On the uniqueness of attentional capture by uninformative gaze cues: facilitation interacts with the Simon effect and is rarely followed by IOR. *Can J Exp Psychol*, 61(4), 293-303.