Questions and Hypotheses

Idiosyncratic Search: Biases in the deployment of covert attention

Nathan Trinkl¹, Ava Mitra¹, Jeremy M. Wolfe¹-²
¹Brigham and Women’s Hospital, ²Harvard Medical School

• Target eccentricity is positively correlated with both reaction time and error rates in visual search (Carrasco, et. al, 1998).
• The probability of making a saccade to a target at any given fixation point is only ~50% (Wu & Wolfe, 2022).
• The Functional Visual Field (FVF) is the area of a scene around fixation that can be processed (Sanders, 1970).

Background

• Our results suggest that processing within the FVF is heterogeneous.
• Pop-out search largely abolishes idiosyncratic error patterns, suggesting that heterogeneous FVF processing is a result of idiosyncratic biases in covert attention deployment (either in series or in parallel, you choose)
• The saccades between trials do not markedly affect idiosyncratic patterns of errors.
• Could these idiosyncrasies produce errors? Might we have attentional blindspots?

Results


Conclusions

• Our results suggest that processing within the FVF is heterogeneous.
• Pop-out search largely abolishes idiosyncratic error patterns, suggesting that heterogeneous FVF processing is a result of idiosyncratic biases in covert attention deployment (either in series or in parallel, you choose)
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References

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Contact Email: jwolfe@bwh.harvard.edu