Contextual control of saccadic reaction times using a latency-contingent paradigm

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INTRODUCTION

Saccades are conventionally regarded as being mostly concerned with the spatial position of objects. However, recent studies have shown that they are also affected by the temporal regularities in dynamic environments (e.g. Hoppe & Rothkopf, 2016; Vullings & Madelain, 2016).

Here, we probe whether contextual control of saccadic latencies in a search task can be established using reinforcement learning.

RESULTS

- Saccadic latencies can be placed under contextual control, which supports the extent of reinforcement learning for saccades.
- Further research should probe the extent of contextual control over latencies.
- Saccade triggering is finely controlled by learned temporal and spatial properties of the environment.

REFERENCE

Hoppe & Rothkopf (2016). Learning rational temporal eye movement strategies. PNAS.

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CONCLUSION

- Saccadic latencies can be placed under contextual control, which supports the extent of reinforcement learning for saccades.
- Further research should probe the extent of contextual control over latencies.
- Saccade triggering is finely controlled by learned temporal and spatial properties of the environment.

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