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Dear Editorial Board members,

Previous work across a range of tasks has revealed large variation between participants in terms of their search efficiency; people were found to be optimal, random, or even counter optimal when allocating fixations during search. Here we tested the hypothesis that surface-level properties of object might lead to substantial changes in search behavior. Participants in the current study searched both through simple line segment stimuli and through a set of complex desktop computer icons. We observed striking shift from highly variable strategies in line stimuli condition, to uniformly efficient search behavior in icon condition.

Visual search is a popular tool for understanding many aspects of human behaviour and our results could be relevant to any context in which humans perform visual search. This encompasses nearly every sector of society, but security, search and rescue, and healthcare are contexts in which accurate and efficient visual search is of particular importance. Our study provides evidence that changing what may initially appear to be irrelevant, surface-level details of the task can lead to large changes in measured behaviour, and that visual primitives are not always representative of more complex objects. These results also challenge the implicit assumption behind many cognitive psychology experiments that one can easily extrapolate the results simple laboratory tasks to real life context.

We believe both the important implications of this robust set of results as well as our open and detailed reporting of the dataset make this study particularly well suited to Psychological Science. We therefore request you to kindly consider our enclosed manuscript, entitled "Failure of intuition when presented with a choice between investing in a single goal or splitting resources between two goals" for publication as a Research Article.

We look forward to your decision and thank you in advance for your consideration,

Anna Nowakowska, Alasdair Clarke, Jessica Christie & Amelia Hunt

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