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Dear Editor,

The effect of target scarcity on visual foraging

We would be grateful if you would consider our Stage 2 Registered Report for publication in *Royal Society Open Science*. This manuscript follows our previously accepted Stage 1 Registered Report (reference RSOS-240060.R1).

In this manuscript, we are interested in better understanding how humans 'forage' for multiple targets sequentially in a scene. In particular, previous studies have investigated how target prevalence affects foraging behaviour, but have reached varied conclusions. In the study, we tested whether participants show a preference for less common targets, in line with commodity theory and implicit value. As a secondary outcome, we also tested our recent state-of-the-art computational model of visual foraging on a novel dataset. Overall, we find no evidence that target scarcity affects participant's behaviour in a foraging task, challenging theories that suggest that participants should implicitly value scarce targets more highly. However, we are able to replicate many of the results from our previous modelling work, suggesting that these findings generalise to a new set of data.

We provide the URL for the archived study data, digital materials and code and lab log on P.16 of the submitted manuscript. We also provide the URL for the approved Stage 1 protocol on the same page. No data for any pre-registered study other than the pilot data included at Stage 1 was collected prior to the date of the IPA.

Thank you very much in advance for considering our paper.

Yours sincerely,

Anna Hughes