What determines the next target selection in visual foraging? New insights from the study of individual differences

Jérôme Tagu*[1]

[1]Laboratoire de Psychologie EA4139 – Université de Bordeaux – France

Résumé

While in "classic" single-target visual search tasks observers are asked to report whether a single target is present or absent, in visual foraging tasks they are asked to select multiple instances of multiple target types, as fast as they can. Research on human visual foraging has increased our understanding of how attention is allocated in the visual environment, and has highlighted important individual differences in foraging behaviour. Specifically, as participants are free to select the targets in any order, important individual differences may arise on selection order and selection time. Our aim is to better understand these individual differences by characterizing the mechanisms that drive target selection in visual foraging. In three experiments, we tested the influence of target proximity, value, reward and emotional valence on foraging behaviour. The results reveal influences of all manipulations on selection order and selection time. These results and the analysis of individual differences suggest that target selection during visual foraging is determined by the competition between several factors, including target value, target proximity, priming of features, and emotional valence, that orient attention towards one particular target in the environment. We suggest that individuals may show different by-default internal biases towards these factors that determine their foraging strategy and behaviour.

Mots-Clés: Foraging, Visual search, Visual attention, Target selection

*Intervenant