Compensating the size-eccentricity effect with saccade generation

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Résumé

Visual attention is known to enhance perception of saccadic targets' orientation, contrast and spatial resolution. In this pre-registered study, we evaluated whether preparing a saccade could improve size perception of objects appearing before the saccadic compression timeframe. Participants (N=19) performed a judgment task in which they had to compare a test disk of varying size briefly presented in peripheral vision to a reference disk appearing about 550 ms later in foveal vision. Psychometric function parameters were computed. When no saccade was made toward the test disk location, its size was underestimated, as expected for objects presented in the periphery. However, Points of Subjective Equality were near objective equality when participants initiated saccades 200 ms after the extinction of the test disk. This refinement in size perception seems to indicate that attention coupled to saccade preparation could overcome perceptual distortion (size-eccentricity effect) in the visual field, likely by magnifying peripheral objects' size.

Mots-Clés: Action, perception, Visual attention, Saccades

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