Illusory Contour Clarity does not guide visual search but Surface Representations do

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Abstract

This study investigated the impact of illusory contour clarity and surface representations on visual search for Kanizsa figures. Experiment 1 manipulated illusory contour clarity through inducer size, while Experiment 2 manipulated clarity by varying the number of arcs in the inducer pacman. Both experiments compared Kanizsa figures with non-illusory figures under the same manipulation conditions. The findings from both experiments suggested that illusory contour clarity did not significantly influence Kanizsa figure search performance, but rather suggested a Kanizsa advantage over non-illusory figures, underscoring the importance of surface representations. Experiment 3 explored the effects of surface alterations on Kanizsa figures and smoothed counterparts, and confirmed that surface alterations had discernible effects on visual search for Kanizsa illusory contours. The results indicated that visual search for Kanizsa illusory contours remained robust, unaffected by variations in illusory contour clarity, thereby emphasizing the role of surface representations in guiding visual search processes.

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