Long-range interactions among local competitions for figural status

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Experiment 1

Purpose: To investigate whether context affects the likelihood of seeing a symmetric region as figure.

Experiment 2

Purpose: To test the spreading inhibition hypothesis

Methods:

Four groups of observers (30/group) were randomly assigned to 1, 2, & 3 symmetric region conditions (3, 5, & 7 edges). The procedure was identical to Kim & Peterson (2002).

Results & Discussion

Cross-edge inhibition is a component in many models of figure-assignment (Kutscher et al., 1986; Peterson et al., 2000; Vecera & O'Reilly, 2001). We have presented empirical evidence for inhibition (See also Peterson & Kim, 2001; Peterson & Skow-Grant, 2003; Skow-Grant et al., 2003).

These results also support the hypothesis that inhibition to the concave side of a curved edge spreads across the concave region to its distant edge and affects the competition occurring there. For rectilinear displays, global symmetry is not a cue to figural status. Previous evidence for symmetry as a configurational cue used curved edges with local convexities/concavities (Driver et al., 1992) or defined symmetry as texture regularity rather than as border reflection (Harrower, 1936).

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References