Visual patterns with rotational symmetry activate distinct cortical regions

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Research Questions
• How does the brain process visual symmetry beyond 2- or 4-fold reflection?
• What brain mechanisms are involved in processing other types of symmetry?
• Do brain responses reflect regularities from group theory?

Wallpaper Groups

Methods

Results

• Activation varies by symmetry type
• Activation differentiates 4-fold rotational from rotation + reflection symmetry (P4M vs. P4G)

• Activation represents rotation vs. no-rotation.
• Networks reflect aspects of the structure of symmetric patterns described in mathematical theory of wallpaper groups

References