

GESTALT PERCEPTION FOR DECOMPOSITION OF IMAGES

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Introduction

- What does Gestalt mean?
 - form, shape, pattern
- What does Gestalt theory mean?
 - described in 1910
 - perceptual theory for perceptual organisation
 - explains how we perceive and recognise patterns
 - “whole is more than the sum of their parts” (Kohler, 1920)
 - Six main factors
 - Proximity
 - Similarity
 - Closure
 - Symmetry
 - Common Fate/Motion
 - Continuity

Experiment

- Total 14 subjects
 - 4 were asked to observe the image
 - 10 were asked to observe and draw the decomposition
- about 5 sec per image
- eye gaze tracking system is used to trace the saccadic eye movements
- total of 10 images were used in the experiments

Conclusion

- Different laws are dominant in different situations
- Sometimes few weak laws combines to over-rule the stronger laws
- In few cases the eye gaze tracked image supports the reason for decomposition

References

- Dejan Todorovic (2008) Gestalt principles. Scholarpedia, 3(12):5345.
- Touretzky, David S., and Ethan Tira-Thompson. “Gestalt perception.” (2008)
- Peterson, Mary A., and Bradley S. Gibson. "Object recognition contributions to figure-ground organization: Operations on outlines and subjective contours." *Perception & Psychophysics* 56.5 (1994): 551-564.
- Image data is self made by Microsoft Word.
- Special thanks to Aravind for helping me out in using the gaze tracking system

Results

