

Lecture 7 - Why is vision (and, by extension, everything else) hard?

PROBLEM 1: There is not enough information in the image

Example 1: The amazing disappearing contour

Edges are important (Craik-O'Brien-Cornsweet illusion)

Example 2: You make edges when you can. Subjective contours

Example 3: Shadow letters

Example 4: Mooney faces

Example 5: Contour completion ... rules

Example 5: Good continuation ... more rules

Gestalt Psychology (see the text)

Big Example 6: 2D ---> 3D

How many depth cues can you name (and illustrate/describe)?

- 1.
 - 2.
 - 3.
 - 4.
 - 5.
- more....

PROBLEM 2: There is too much information in the image: Where is Waldo?

"Parallel" Search

Basic Features (like what?)

Preattentive processing

"Serial" Search

"Guided" Search

What is attention for?

The "binding problem" (the field's jargon)