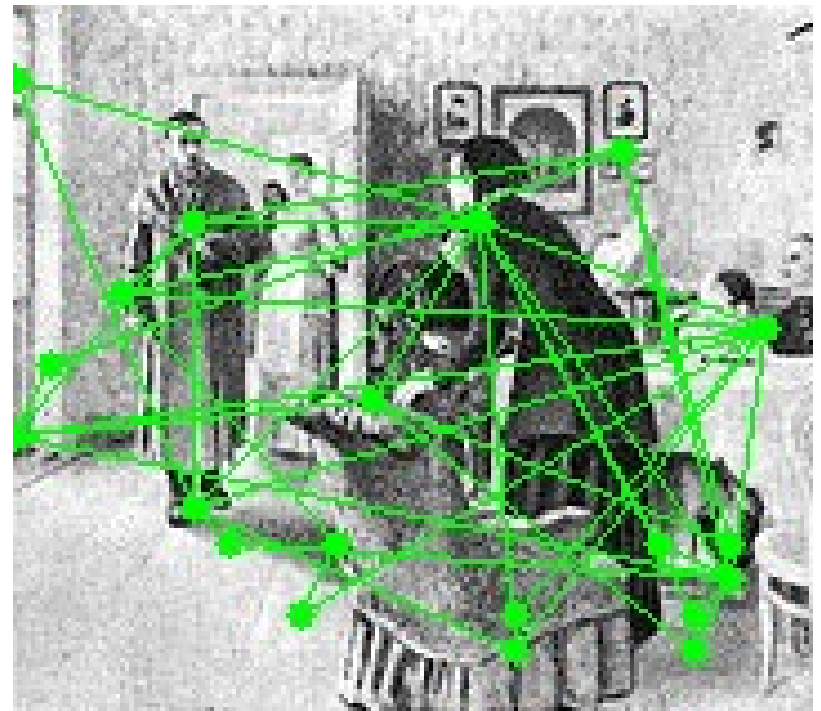


Perception

Sense out of Blooming Buzzing Confusion



Ilya Repin: Unexpected Visitor

Sense out of Blooming Buzzing Confusion

- Piagetian theory:
 - no understanding of perception without experience
 - infants make sense of sensory information through interaction with environment
- Ecological theory:
 - Eleanor and James Gibson
 - direct perception - AFFORDANCES - environment provides information
 - perceptual learning:
 - process of increased efficiency
 - process of distinguishing finer discrimination

3D perception





Depth Perception

The Visual Cliff

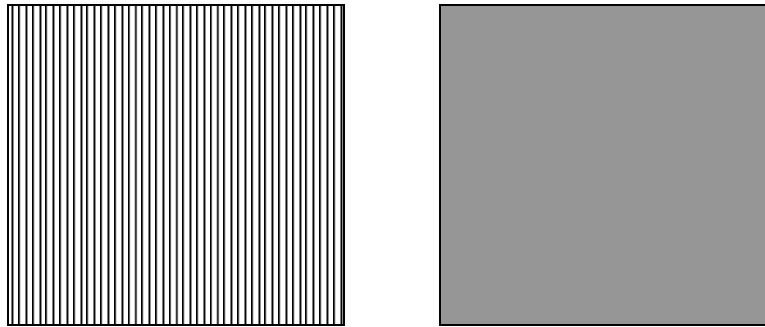
(Bee & Boyd, 2004)

Perceptual development : Theories

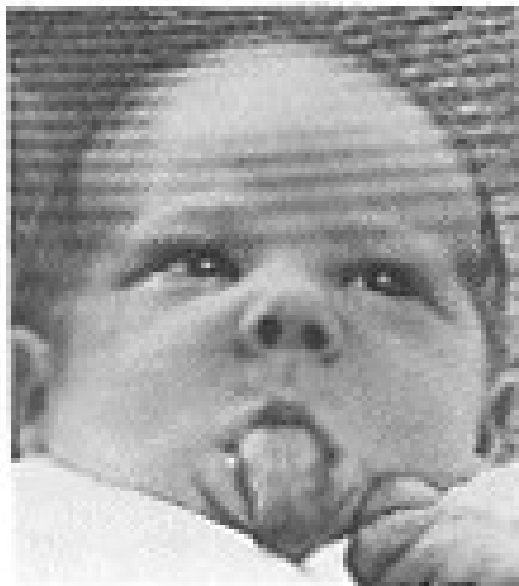
- Nativism:
 - Spelke
 - innate core principles:
 - e.g. impenetrability, object identity, spatiotemporal continuity
- Constructivism?:
 - Baillargeon
 - innate mechanisms + learning
 - preliminary concepts -> adultlike concepts

Visual perception

- Newborns
 - Can discriminate between stripes and a uniform surface

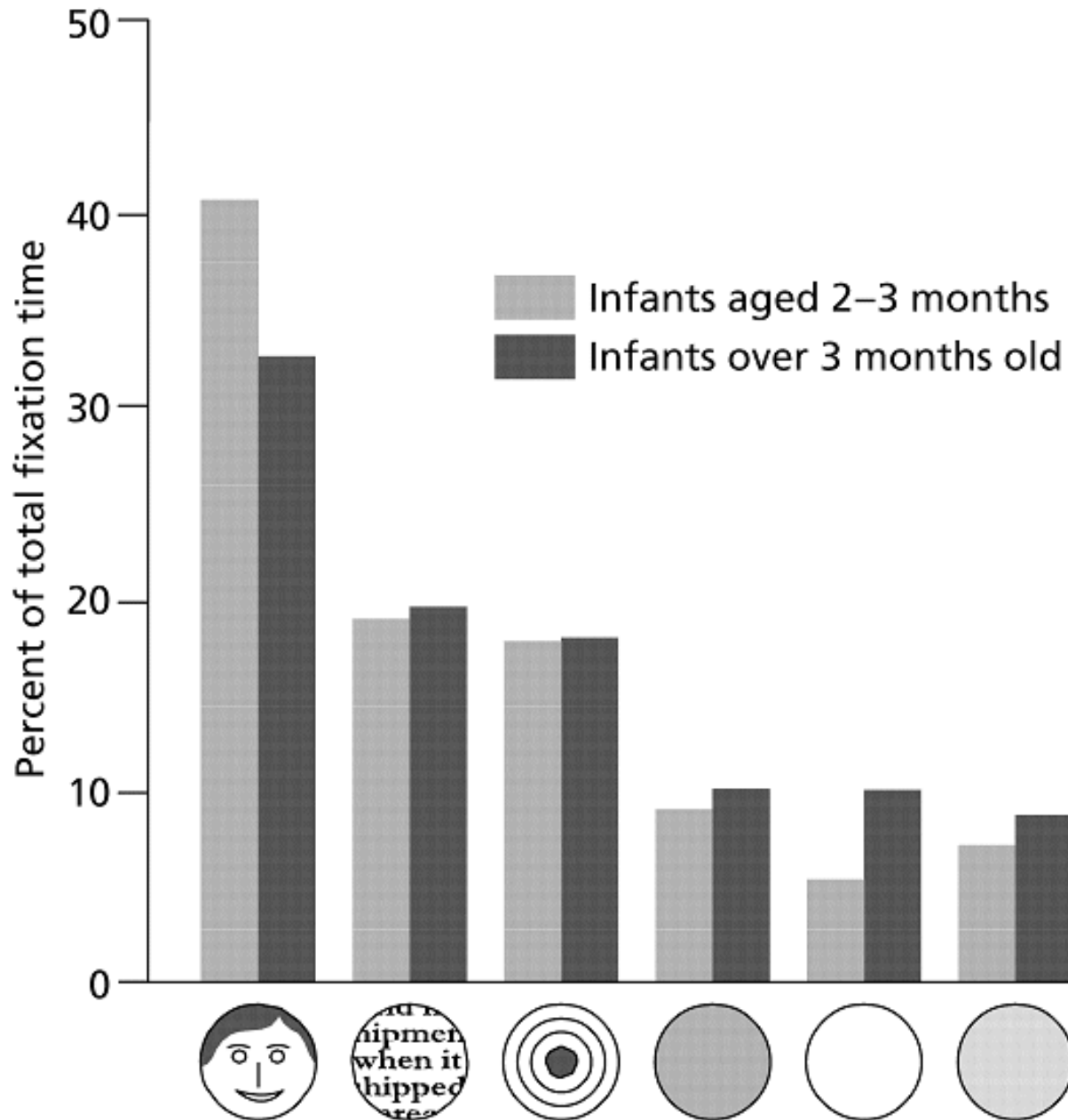


- Fixed focal length – 21cm



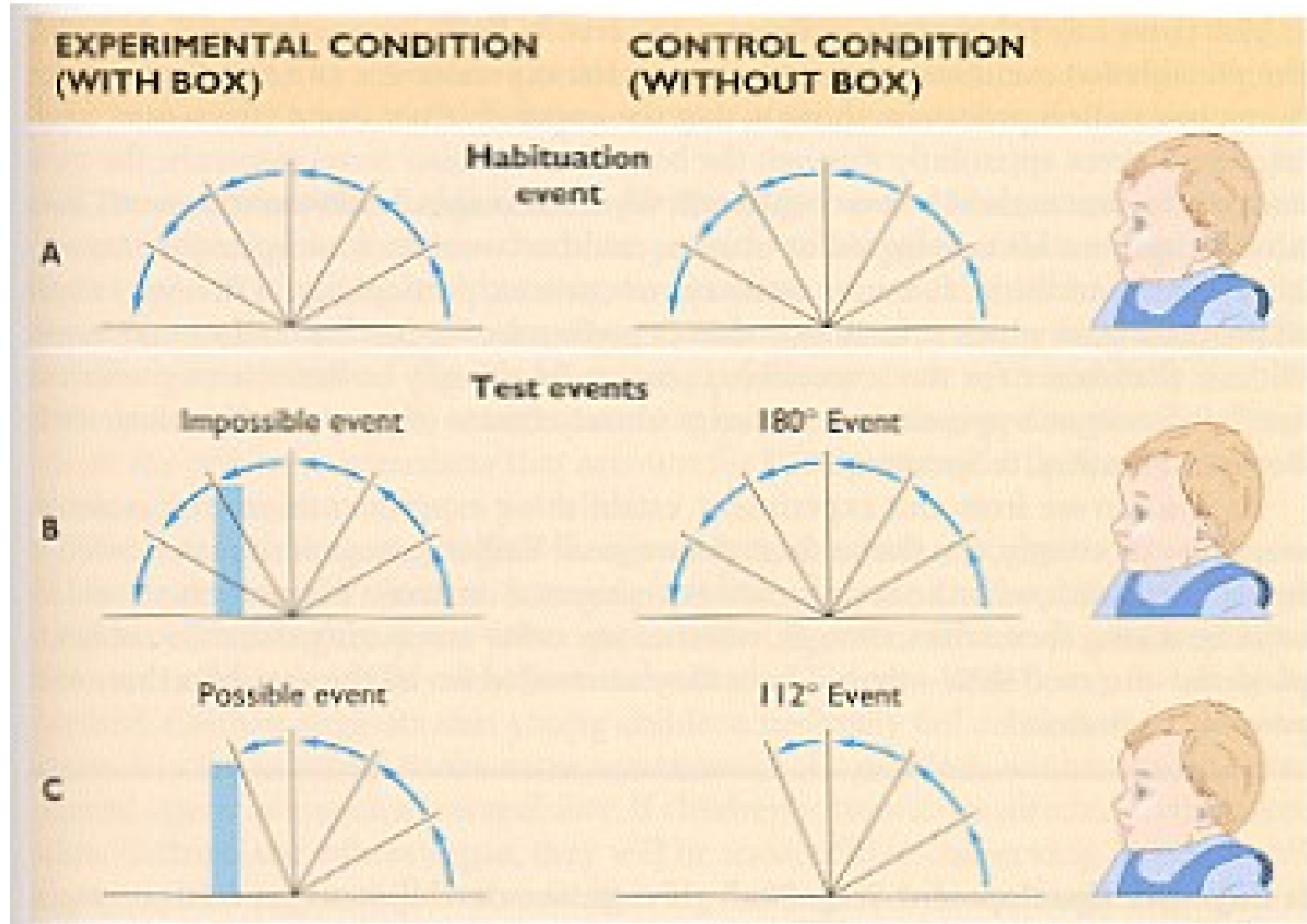
Infants' imitation of facial expressions (Meltzoff & Moore, 1977)

Visual preferences in infancy demonstrated by Fantz (1961)



Innate
Preference
for
Face
images

Baillargeon's Drawbridge Experiment

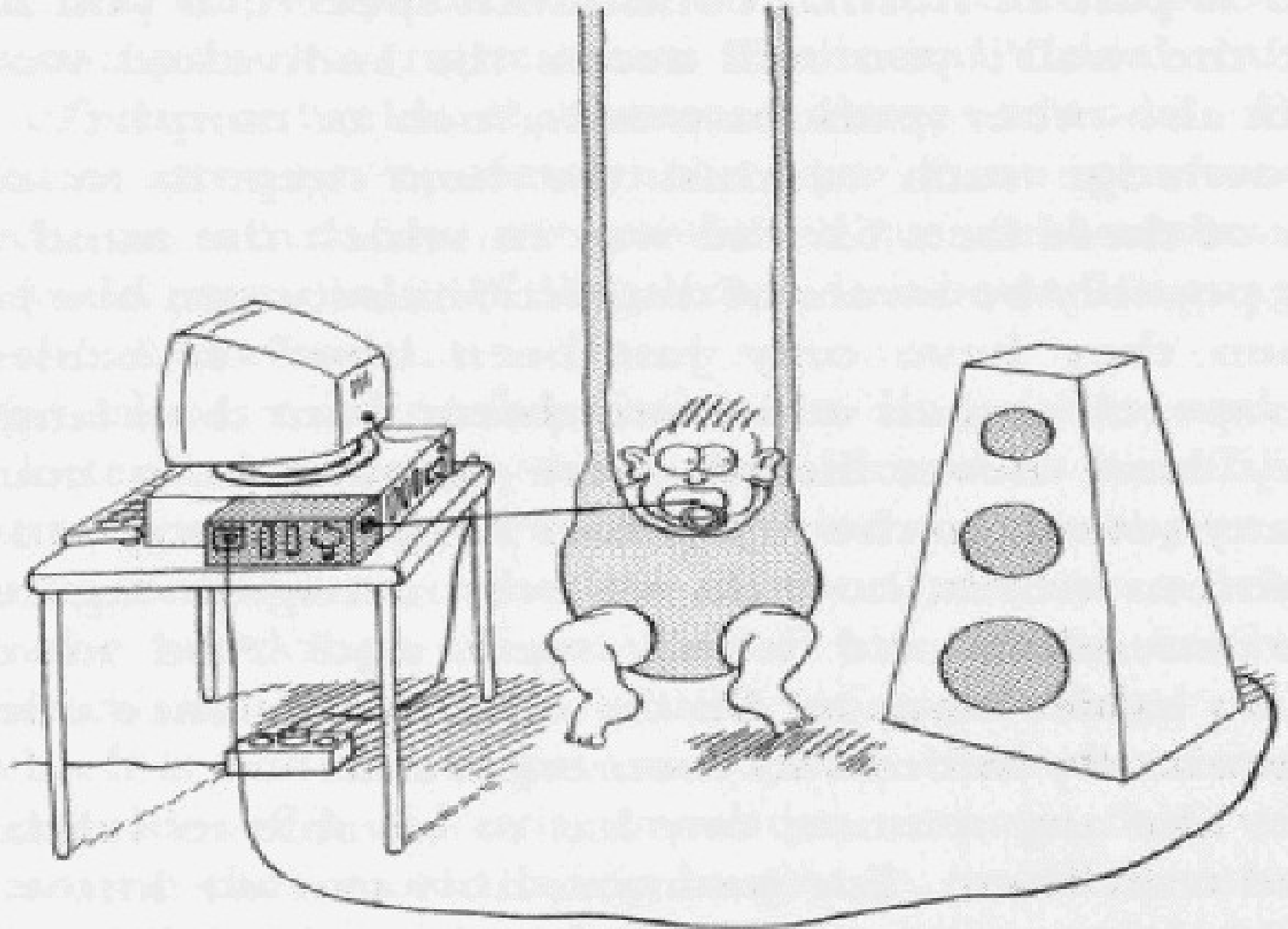


Visual perception

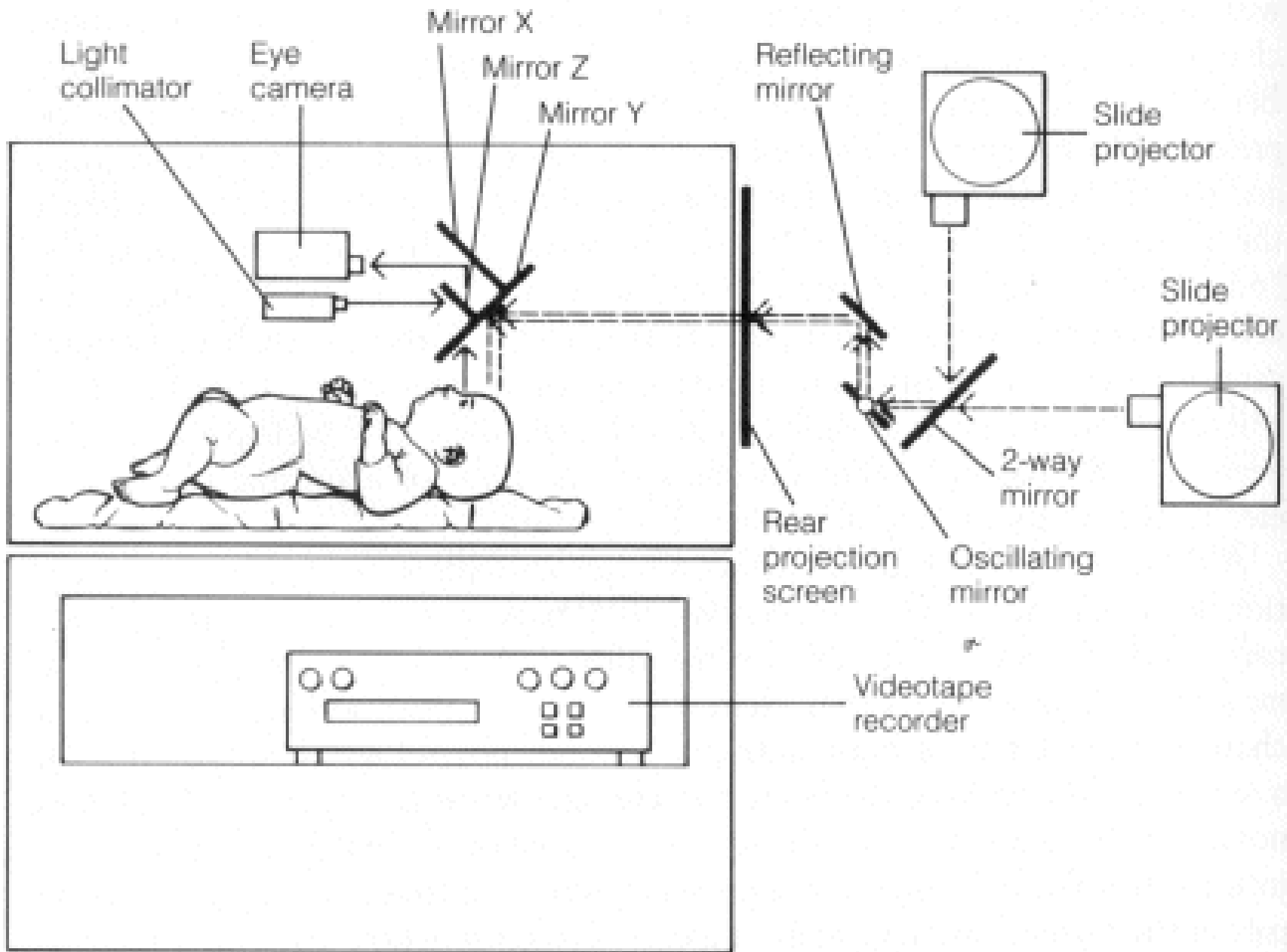
- ability to track the path of moving objects
 - Aslin, 1981
- scanning:
 - Fogel & Melson, 1988

Auditory perception

- loudness:
 - Schulman-Galambos & Galambos, 1979
- pitch
- recognition of mother's voice
 - non-nutritive sucking experiments
 - deCasper & Fifer, 1980

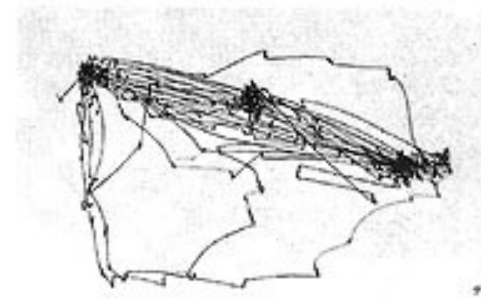
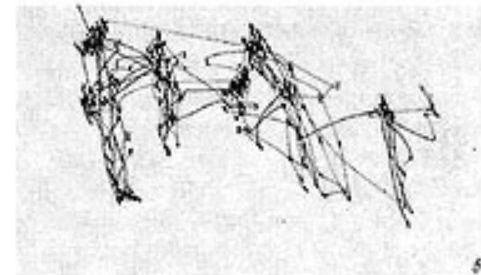
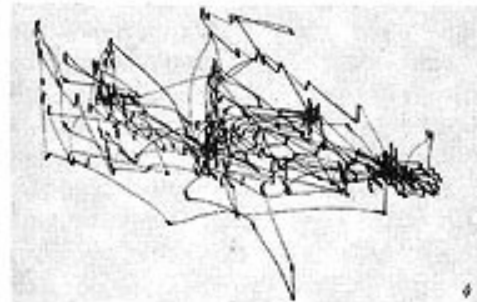
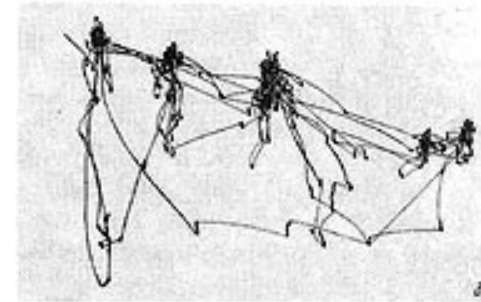
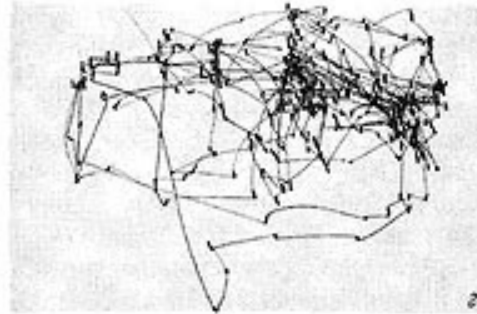
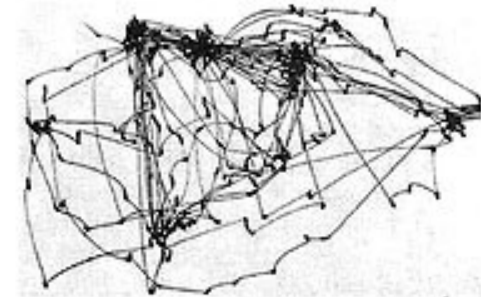


Non-nutritive sucking technique

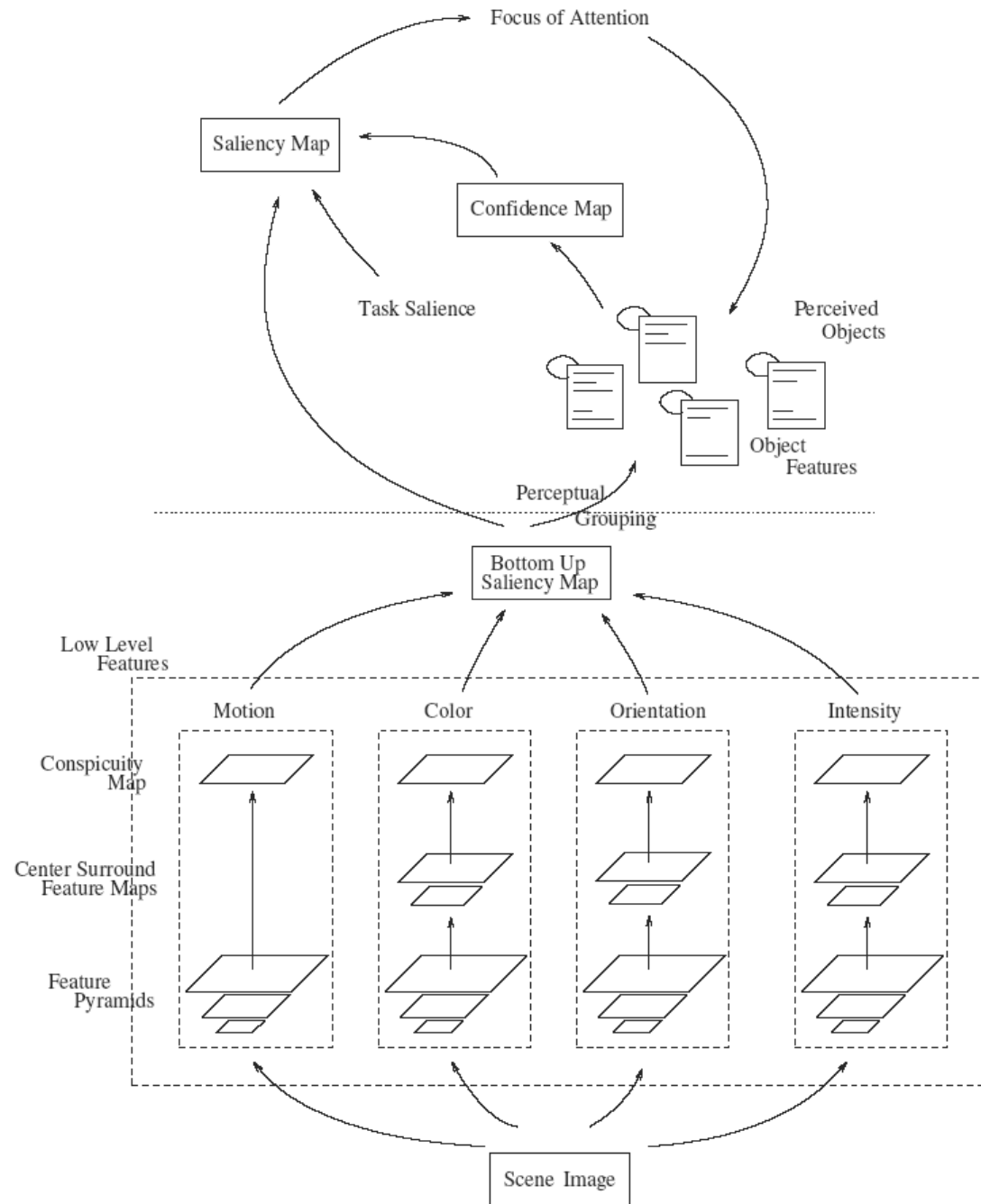


From Fogel, 1991

Attention: Saccades



Synthetic Attention



How do infants interpret what they perceive?

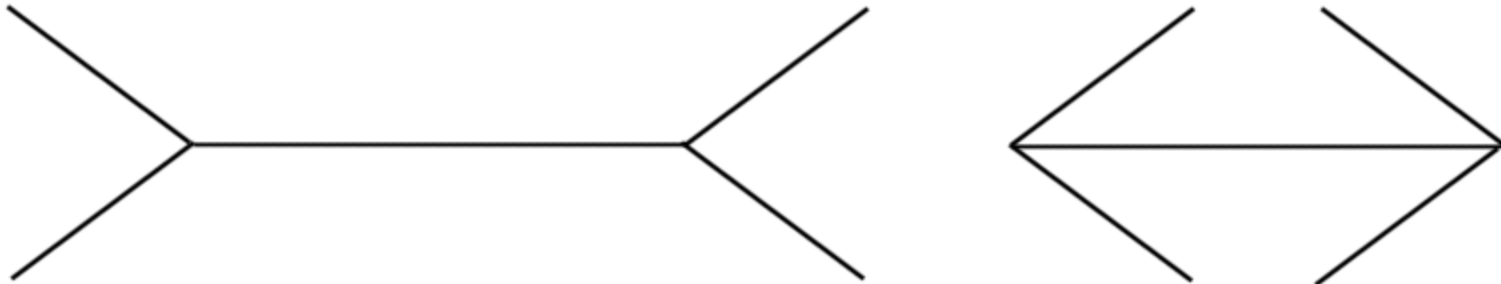
- Object perception:
 - Piaget vs Gibson
 - experiments by Baillargeon
- Perception of moving objects:
 - Gibson et al, 1979
 - Baillargeon, 1987: the drawbridge expt.

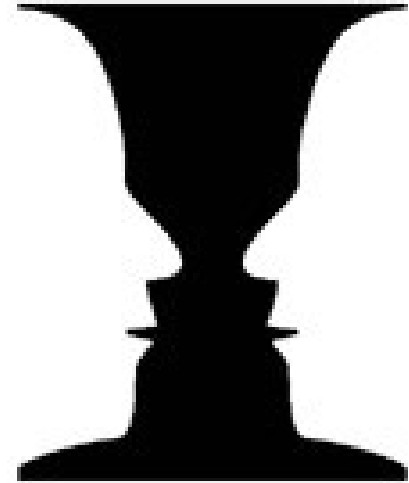
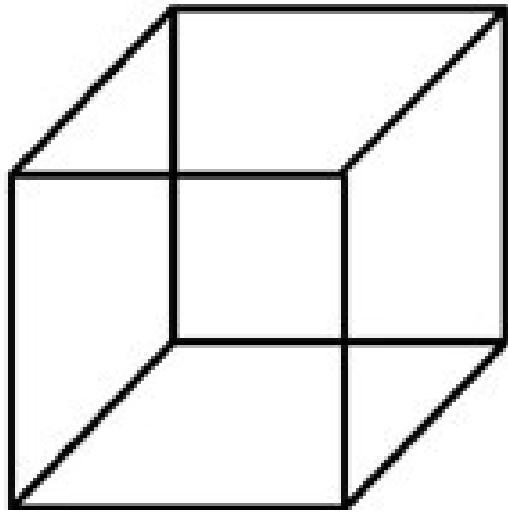
How do infants interpret what they perceive?

- **Categorical perception:**
 - Phonemes and voicing (or voice onset time)
 - ba and pa
 - Aslin, 1987; Kuhl, 1987
 - Kuhl & Miller, 1978
 - Werker & Lalonde, 1988
 - Werker & Desjardins, 1995
- **Imitation**
 - Meltzoff & Moore, 1977

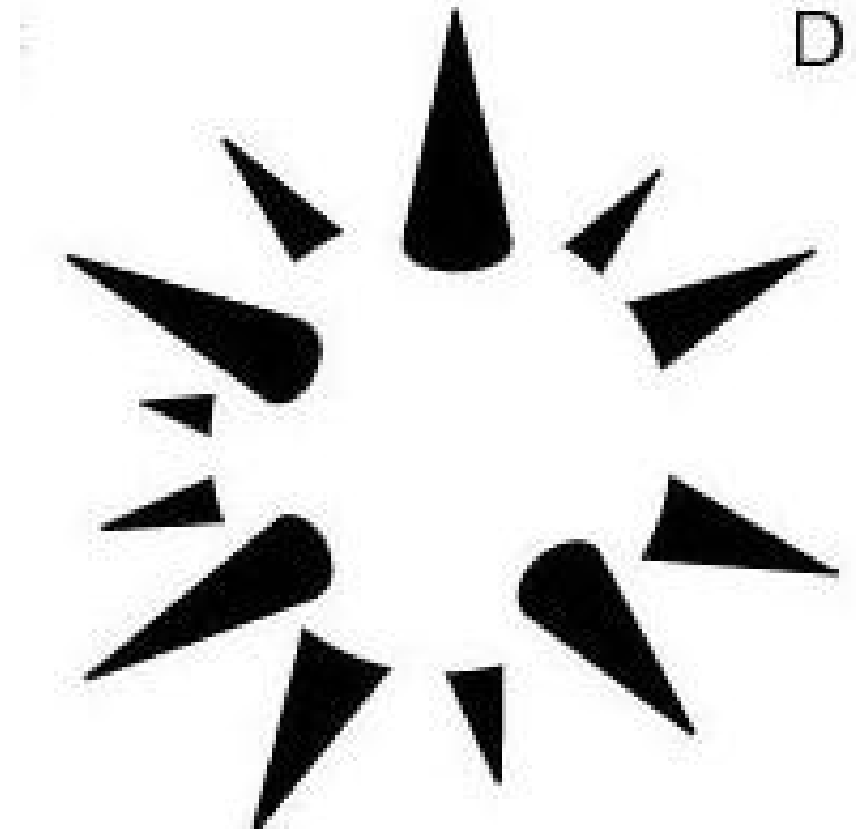
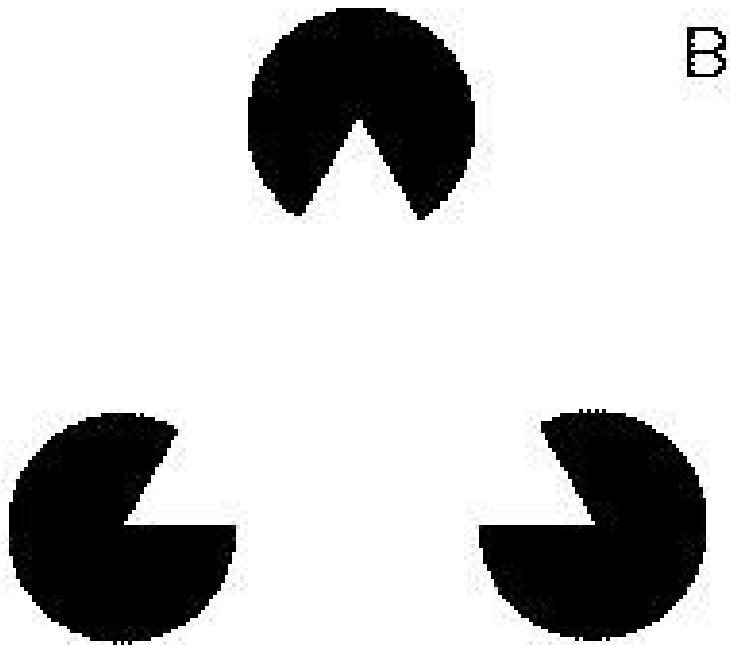
Cultural differences in perceptual development?

- ‘Carpenteredness’ (Segall, Campbell & Herskovits, 1966):
 - Muller-Lyer illusion

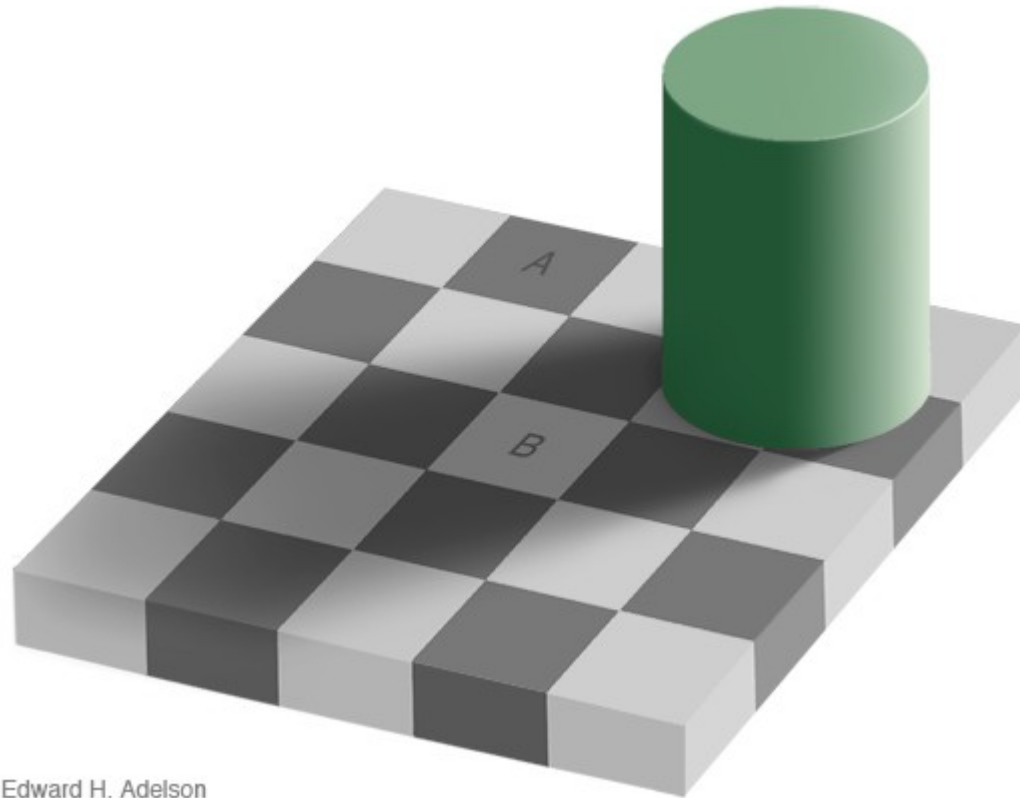




Reification

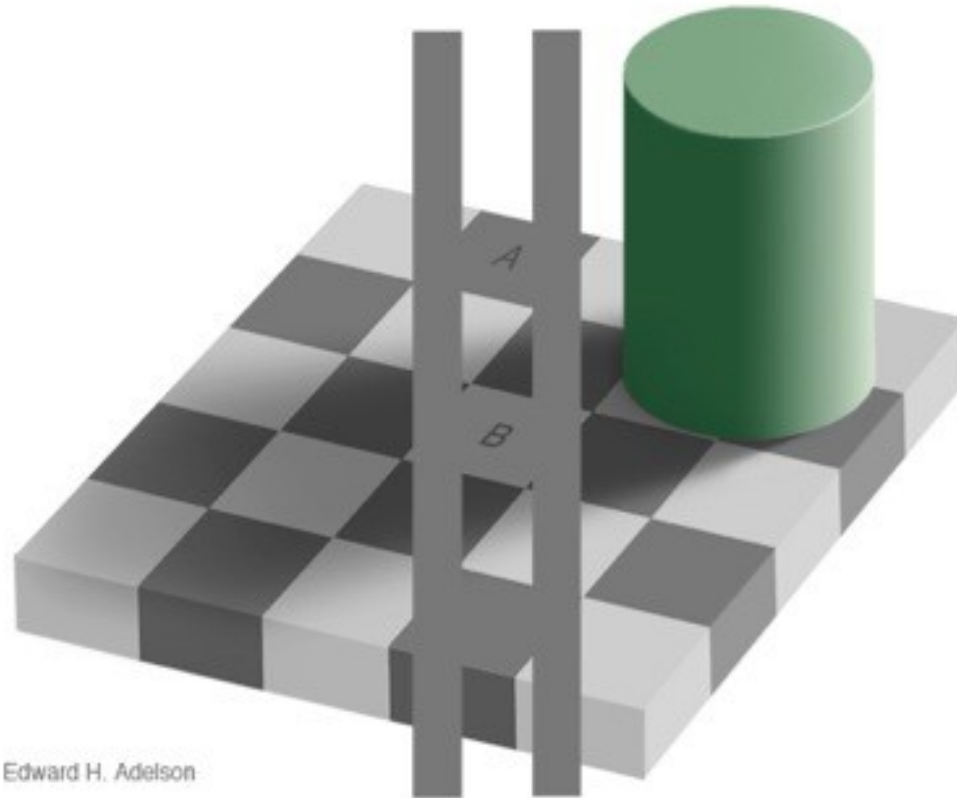


Colours



Edward H. Adelson

Colours



Edward H. Adelson