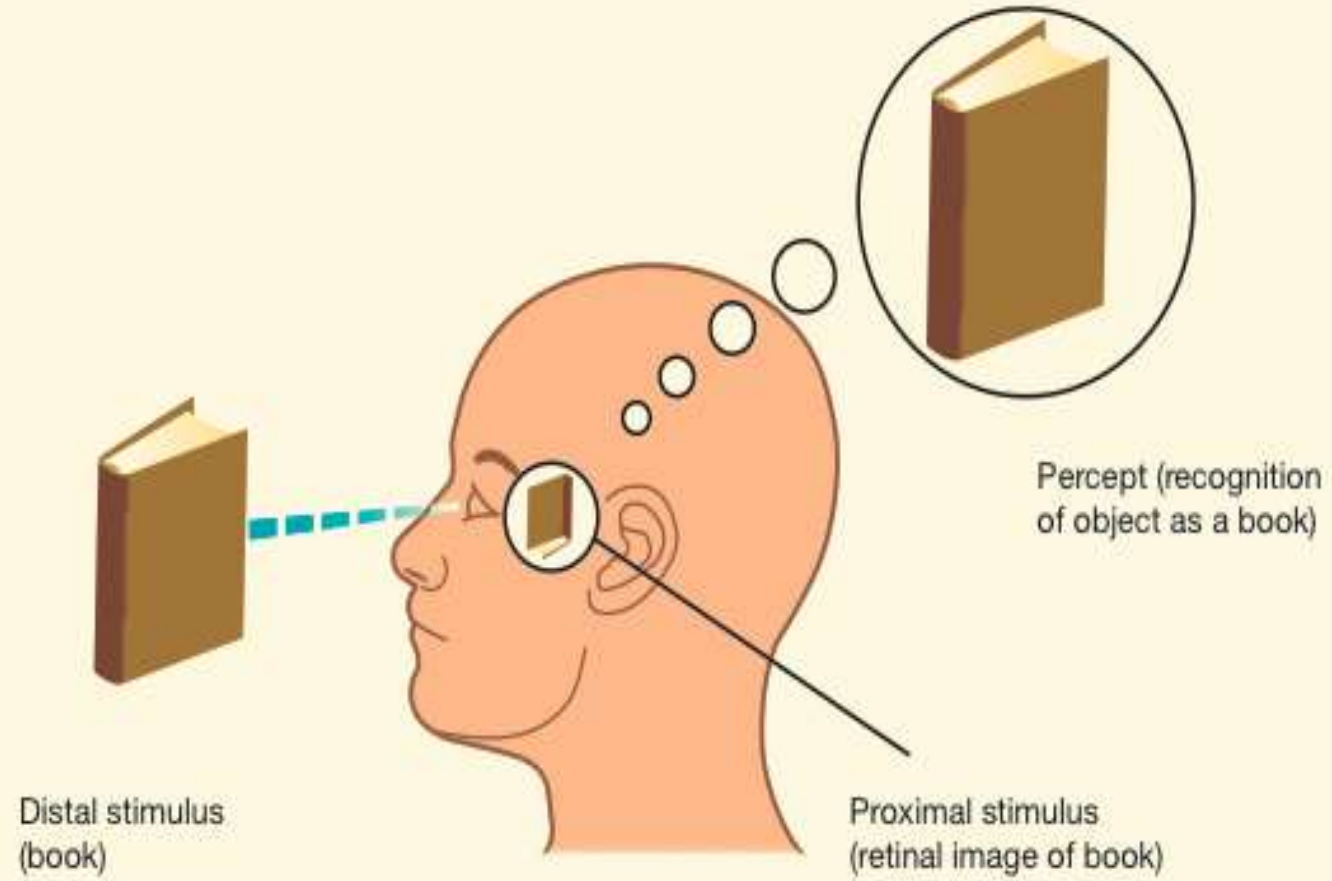
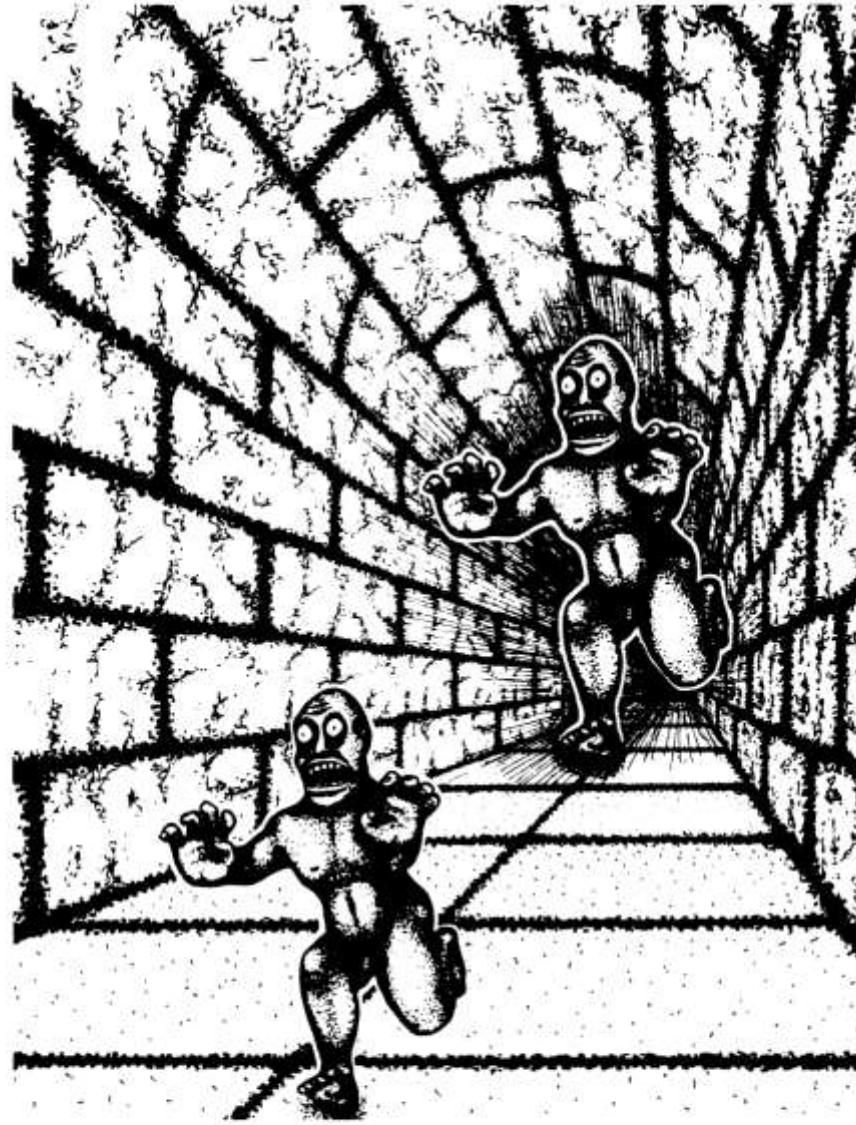


# Perception Processes



# Perception

- Sensation as transduction of physical energy in the environment into an initial mental representation stored in sensory memory.
- Recognition of objects and events is the end result of fast perceptual processing.
- Unconscious perceptual processing actively constructs conscious mental representations.



**Figure 2.1** An illustration of the constructive nature of perception.

SOURCE: From Shepard, R. N., *Mind sights*, copyright © 1990. Reprinted with permission from W. H. Freeman and Company.

2e by.

# Perception

## Gestalt principles of perceptual organization

Some of the most basic perceptual processes operate according to a series of principles that describe how we organize bits and pieces of information into **meaningful wholes**. These are known as **gestalt laws of organization**.

# Perception

## Gestalt principles of perceptual organization

- Figure-ground
  - Organization depends on what we see as figure (object) and what we perceive a ground (context).
- Similarity
  - Objects that have similar characteristics are perceived **as unit**.
- Proximity
  - Objects close together in space or time perceived as **belonging together**.
- Continuity
  - We tend to perceive figures or objects as **belonging together** if they appear to form a **continuous pattern**.
- Closure
  - We perceive figures with gaps in them to be **complete**.

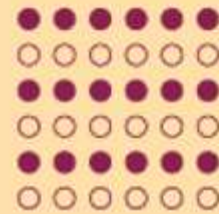
# Perception



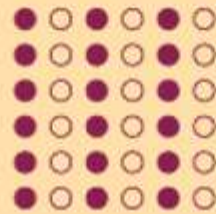
- You can see a white vase as figure against a black background, or two black faces in profile on a white background

# Perception

## ► Laws of Perceptual Grouping



A

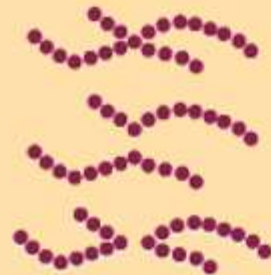


B

Similarity



Proximity



Continuity



Closure



# Influences on Perception

- **Bottom-up processing**
  - Information processing in which individual components or bits of data are combined until a complete perception is formed
- **Top-down processing**: Application of previous experience and conceptual knowledge to recognize the whole of a perception and thus easily identify the simpler elements of that whole
  - E.g. Someone offers you your favorite flavor of ice cream, topped with pickles and hot sauce
  - What will be your response?

1. The two best studied forms of perception are:

- visual and haptic.
- visual and olfactory.
- **visual and auditory.**
- auditory and olfactory.
- auditory and gustatory.

2. Which of the following represents a good example of a proximal stimulus?

- a book on a shelf
- a tree in your yard
- a building on the horizon
- **the retinal image formed by a tree**
- the light rays reflecting off a tree

3. A book on a shelf represents a good example of a:

- **distal stimulus.**
- proximal stimulus.
- retinal image.
- percept.
- visual illusion.

4. The meaningful interpretation of a proximal stimulus is called the:

- \*a. **percept.**
- sensation.
- distal stimulus.
- retinal image.
- illusion.

5. The segregation of a whole display into objects and background is known as:

- size constancy.
- retinal imagery.
- bottom-up processing.
- **figure-ground organization.**
- shape constancy.

6. We see the figure below as a set a columns rather than rows because of the Gestalt principle of:

- **proximity.**
- similarity.
- closure.
- common fate.
- good continuation.

# Let us Discuss:

- Define Percept.
- Enumerate Gestalt principles.
- Illustrate law of closure.
- Analyze the importance of Bottom Up Processing and Top Down Processing.