

Ch. 6 Test review slides

Reminder: practice questions in your
Study Guide and on your CD

Perceptual Adaptation, 256

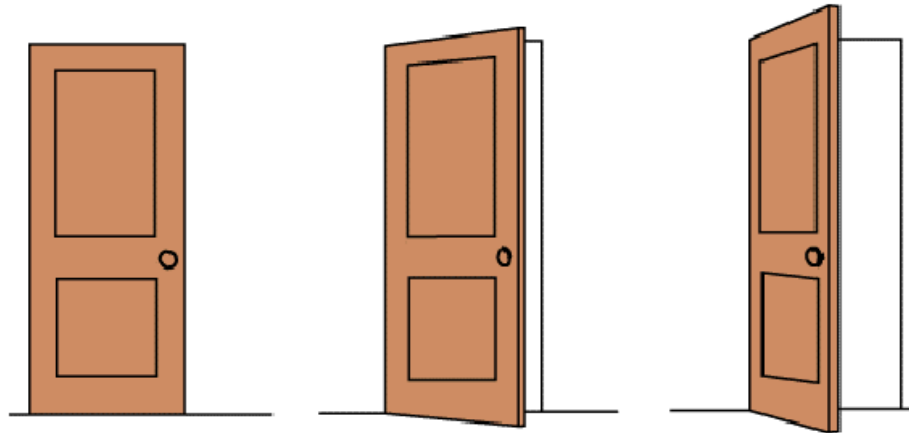
Visual ability to adjust to an artificially displaced visual field, e.g., prism glasses.

Schemas, 258

Schemas are concepts that organize and interpret unfamiliar information.

Perceptual Constancy, 250

Perceiving objects as unchanging even as illumination and retinal images change.
Perceptual constancies include constancies of shape and size.



Shape Constancy

Gestalt psychology, 242

- Founded by Max Wertheimer
- German word: whole or form
- We tend to organize our environmental experience
- The whole is greater than the parts

ESP definitions from Pages 264-265

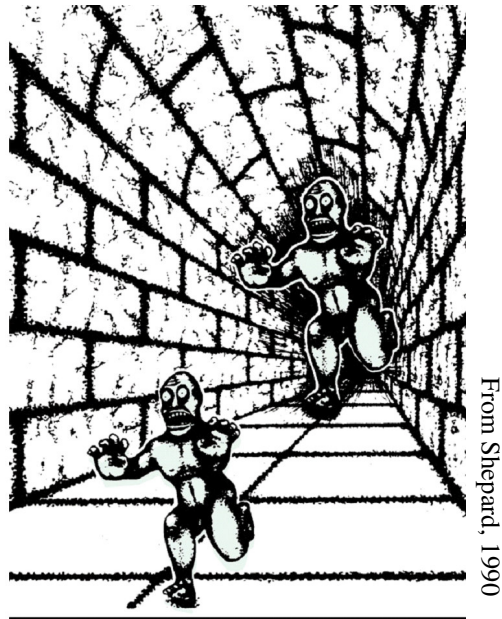
- **Extrasensory Perception**
 - controversial claim that perception can occur apart from sensory input
 - Telepathy: sending thoughts
 - Clairvoyance: remote imaging
 - Precognition: knowing the future
- **Parapsychology**
 - the study of paranormal phenomena
 - ESP
 - Psychokinesis: moving or bending objects

Is There Extrasensory Perception?, 264

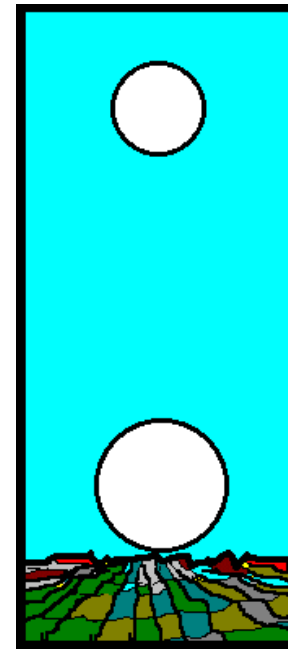
Perception without sensory input is called extrasensory perception (ESP). A large percentage of scientists do not believe in ESP.

The moon illusion and the Size-Distance Relationship, 251

The distant monster (below, left) appear sbigger because of distance cues. Similarly, the moon appears unusually large when we view it near the horizon.



(a)



<http://facstaff.uww.edu/mccreadd/>

Retinal disparity:, 246

Images from the two eyes differ. Try looking at your two index fingers when pointing them towards each other half an inch apart and about 5 inches directly in front of your eyes. You will see a “finger sausage” as shown in the inset.



Perceptual Organization-Muller-Lyer Illusion, 250

The corners in our carpentered world teach us how to interpret the arrow heads attached to the red lines below. They suggest distance away from our eyes and thus, length of the line.

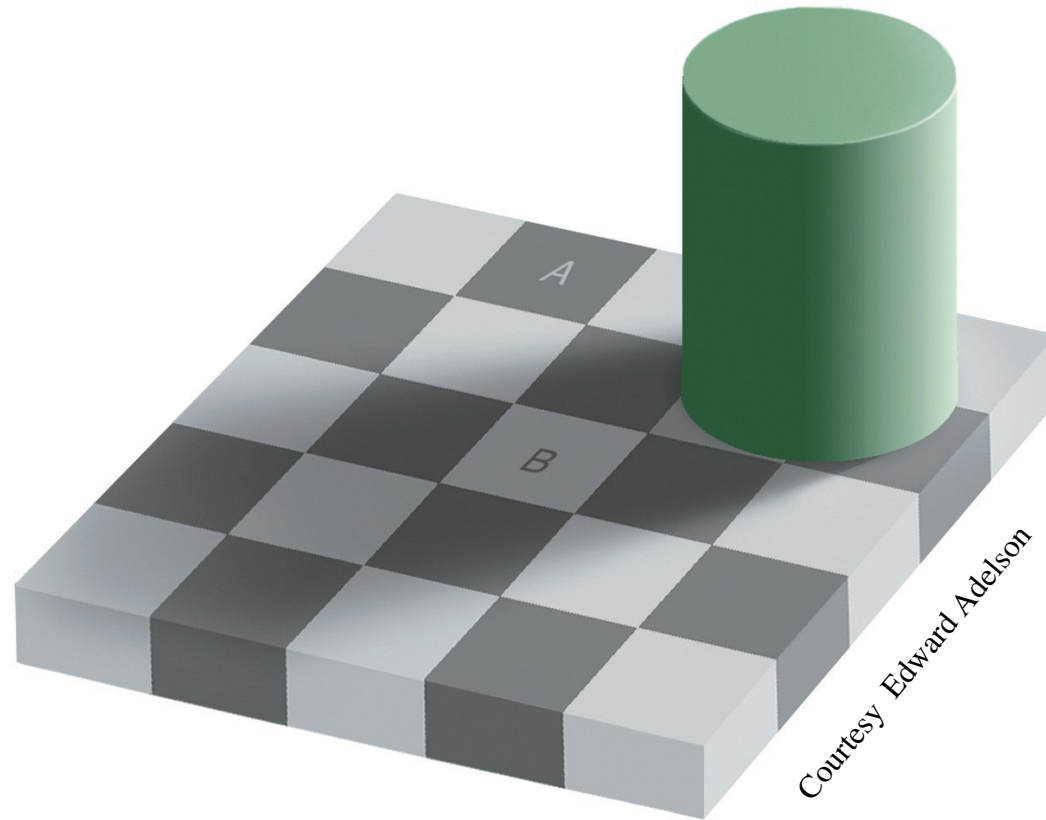


(a)



(b)

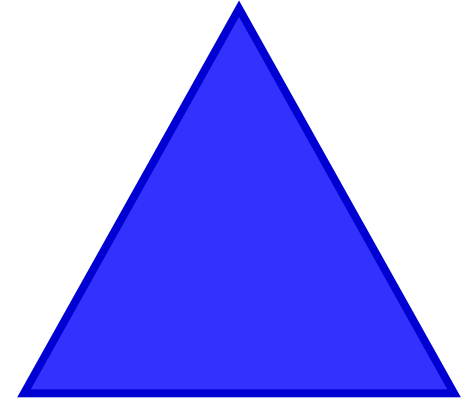
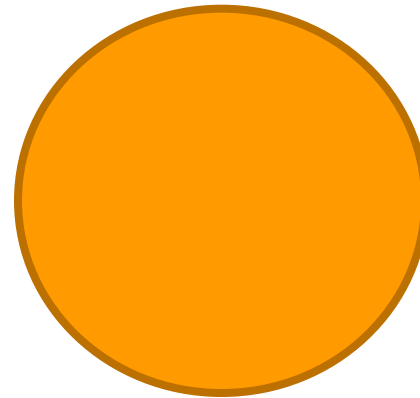
Lightness Constancy, 253



The color and brightness of square A and B are the same.

Restored Vision, 255

After cataract surgery, blind adults were able to regain sight. These individuals could differentiate figure and ground relationships, yet they had difficulty distinguishing a circle and a triangle (Von Senden, 1932).



Monocular Cues, 246

Relative Size: If two objects are similar in size, we perceive the one that casts a smaller retinal image to be farther away.

Monocular Cues, 246

Interposition: Objects that occlude (block) other objects tend to be perceived as closer.

Monocular Cues, 247

Relative Clarity: Because light from distant objects passes through more light than closer objects, we perceive hazy objects to be farther away than those objects that appear sharp and clear.

Monocular Cues, 247

Texture Gradient: Indistinct (fine) texture signals an increasing distance.

Monocular Cues, 247

Relative Height: We perceive objects that are higher in our field of vision to be farther away than those that are lower.

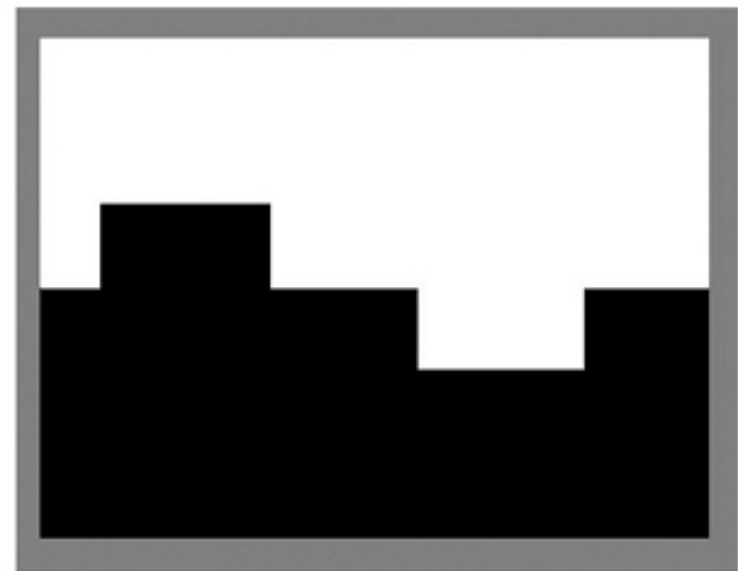
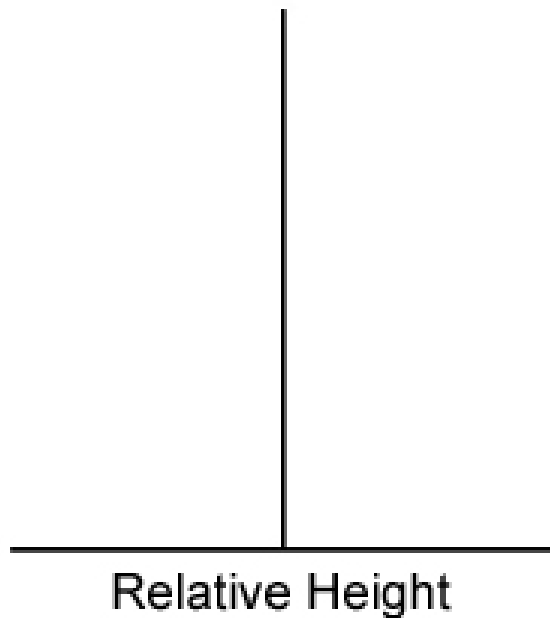


Image courtesy of Shaun P. Vecera, Ph. D.,
adapted from stimuli that appeared in Vecera et al., 2002

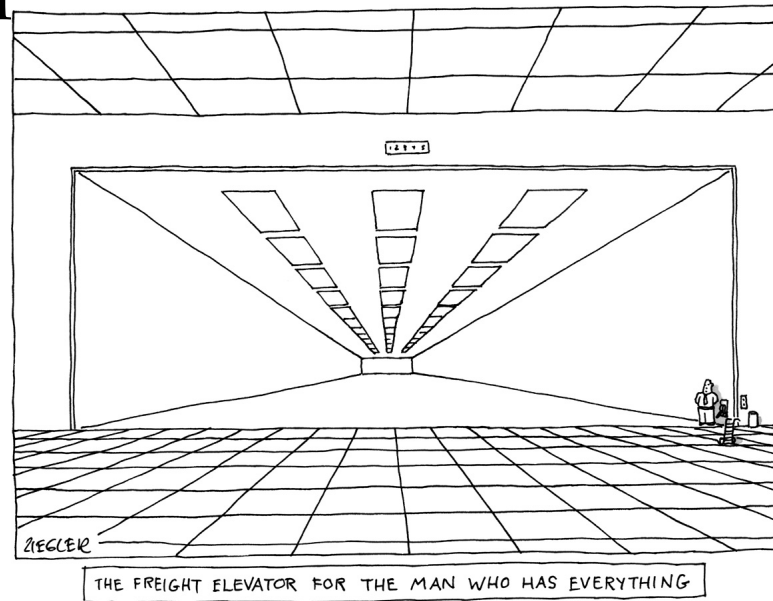
Monocular Cues, 248

Relative motion: Objects closer to a fixation point move faster and in opposing direction to those objects that are farther away from a fixation point, moving slower and in the same direction.



Monocular Cues, 248

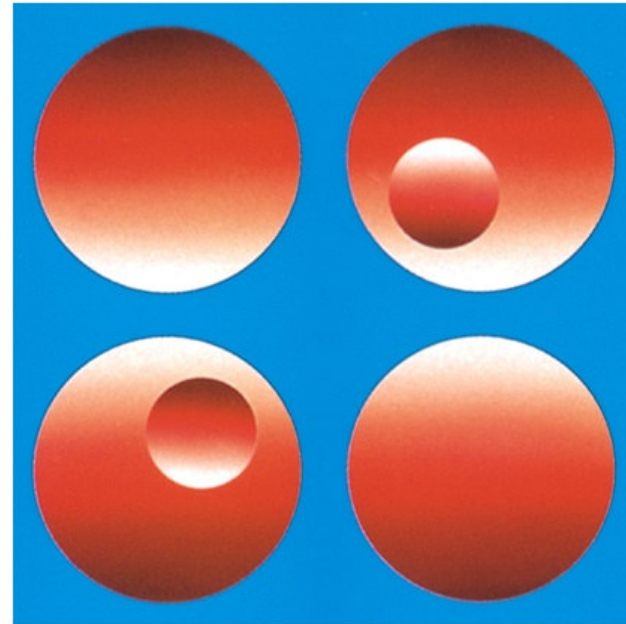
Linear Perspective: Parallel lines, such as railroad tracks, appear to converge in the distance. The more the lines converge, the greater their perceived distance.



© The New Yorker Collection, 2002, Jack Ziegler
from cartoonbank.com. All rights reserved.

Monocular Cues, 248

Light and Shadow: Nearby objects reflect more light into our eyes than more distant objects. Given two identical objects, the dimmer one appears to be farther away.



From "Perceiving Shape From Shading" by Vilayanur
S. Ramachandran. © 1988 by Scientific American, Inc.
All rights reserved.

Perceptual Set, 257

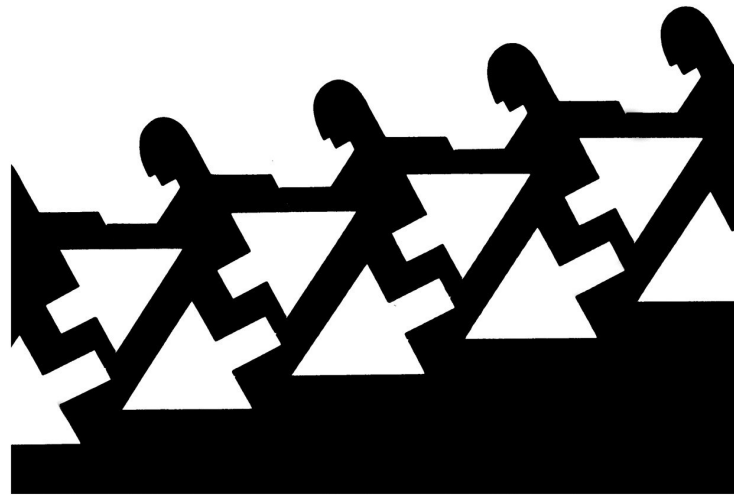
- a mental predisposition to perceive one thing and not another

Apparent Motion, 250

Phi Phenomenon: When lights flash at a certain speed they tend to present illusions of motion. Neon signs use this principle to create motion perception.

Figure-ground, 243

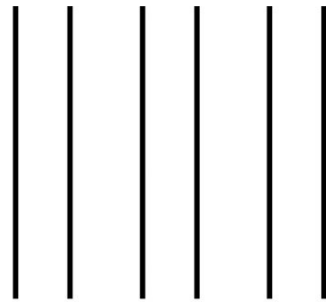
Organization of the visual field into objects (figures) that stand out from their surroundings (ground).



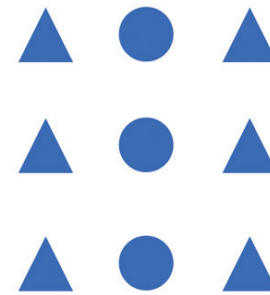
Time Savings Suggestion, © 2003 Roger Sheperd.

Gestalt concepts, 243-4

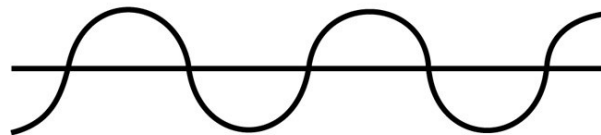
After distinguishing the figure from the ground, our perception needs to organize the figure into a meaningful form using grouping rules.



Proximity



Similarity



Continuity



Connectedness

Closure

Filling in gaps in order to perceive disconnected parts
as a whole object

Relative Height: 247

We perceive objects that are higher in our field of vision to be farther away than those that are lower.

Perception & Human Factors, 261

Human Factor Psychologists design machines that assist our natural perceptions.

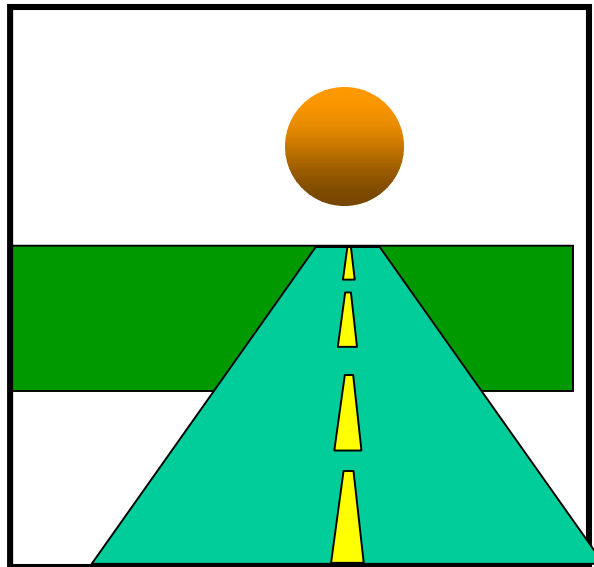
Natural mapping and Human Factors, 261

Human factors psychologists use natural mapping to redesign instruments on audio visual technology, automobiles and kitchen appliances

The goals to make the products more user friendly

Motion Perception, 249

Motion Perception: Objects traveling towards us grow in size and those moving away shrink in size. The same is true when the observer moves to or from an object.



Chapter 6 Essay

- *You have been asked to paint a picture that includes buildings, fields, a river, and a mountain.*
- Describe how you would use at least five (5) monocular cues to give your painting a sense of depth. *(Several sentences for each; 2 points for each for a total of ten) Extra credit for more...*
- Hint: see 246-248 in Chapter 6: *interposition, relative size, relative clarity, texture gradient, relative height, relative motion, linear perspective, light and shadow, are your choices...*