

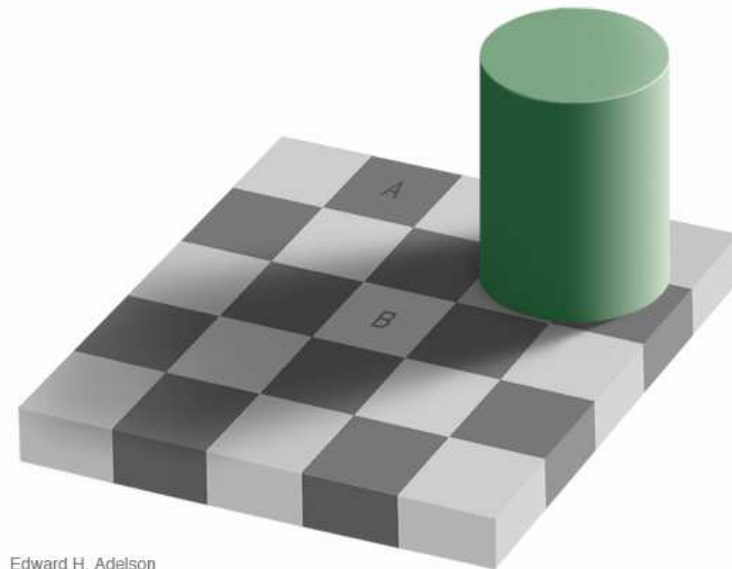
Psych 333

Sensation and Perception

Winter, 2008

Instructor: Geoffrey Boynton

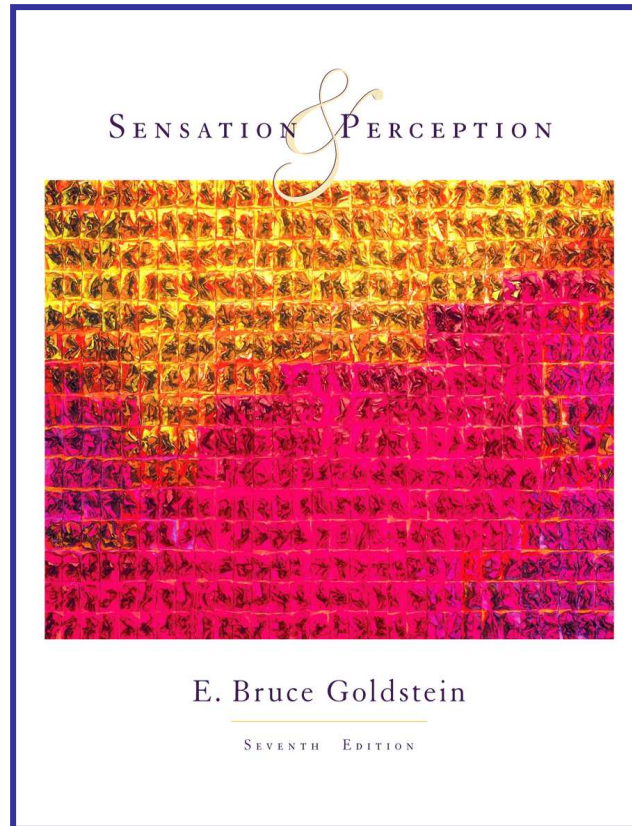
TA: Alec Scharff



Edward H. Adelson

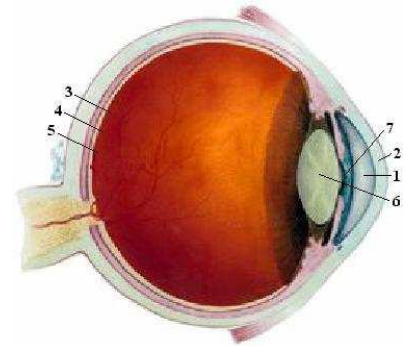
Course Website: <http://courses.washington.edu/psy333>

Textbook: Sensation and Perception, 7th edition by Bruce Goldstein



Why the name 'Sensation and Perception'?

- **Sensation** is the process of transforming physical stimuli to electrical (neuronal) signals
- **Perception** is the process of interpreting these signals for conscious awareness or for action.



Why Study Perception?

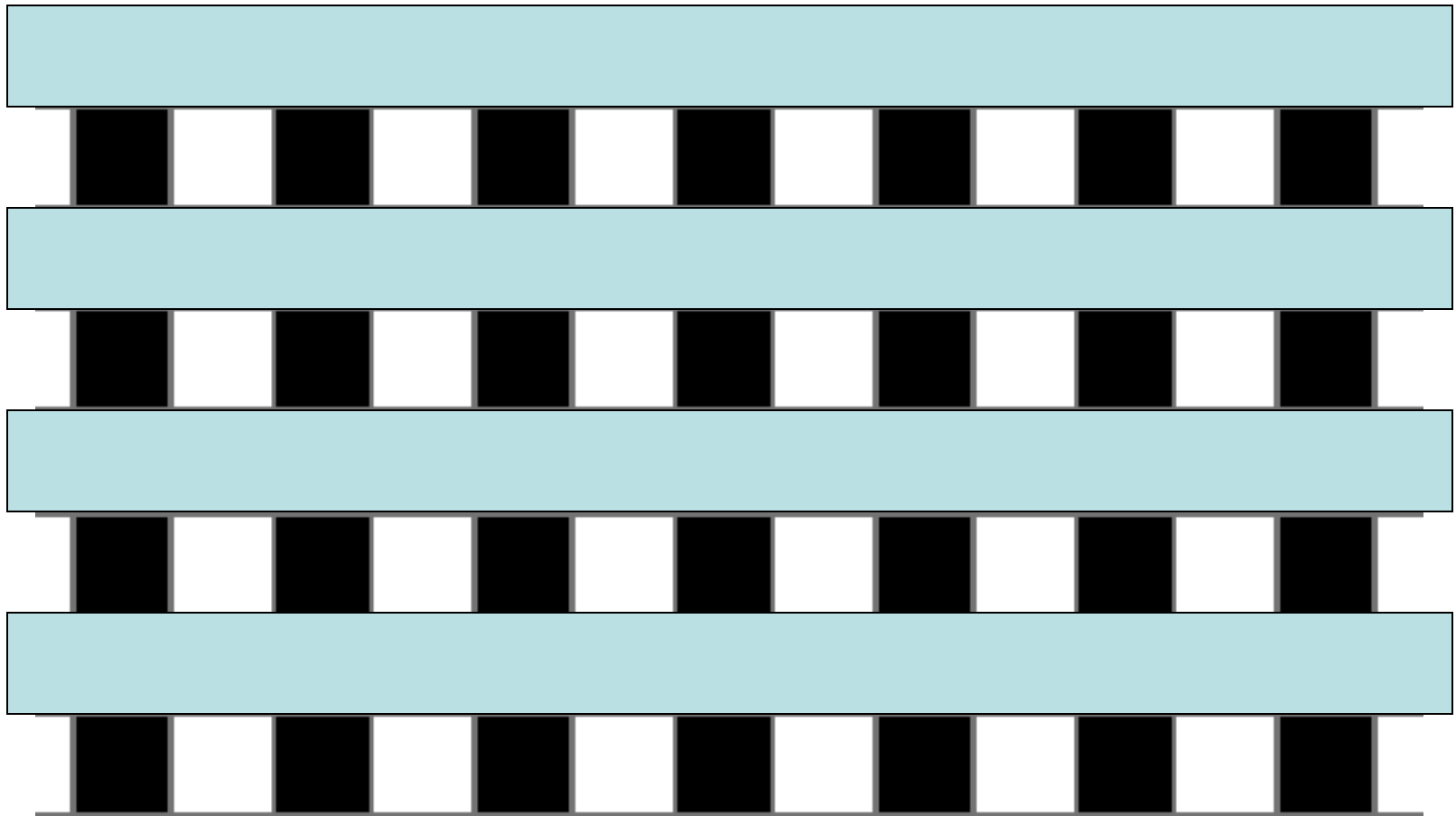
- **Understanding how you perceive the world**
- **Future careers**
 - Graduate school work in perception
 - Learning how to measure human behavior
- **Medical applications**
 - Devices to assist people with vision and hearing losses

And to look at cool illusions!

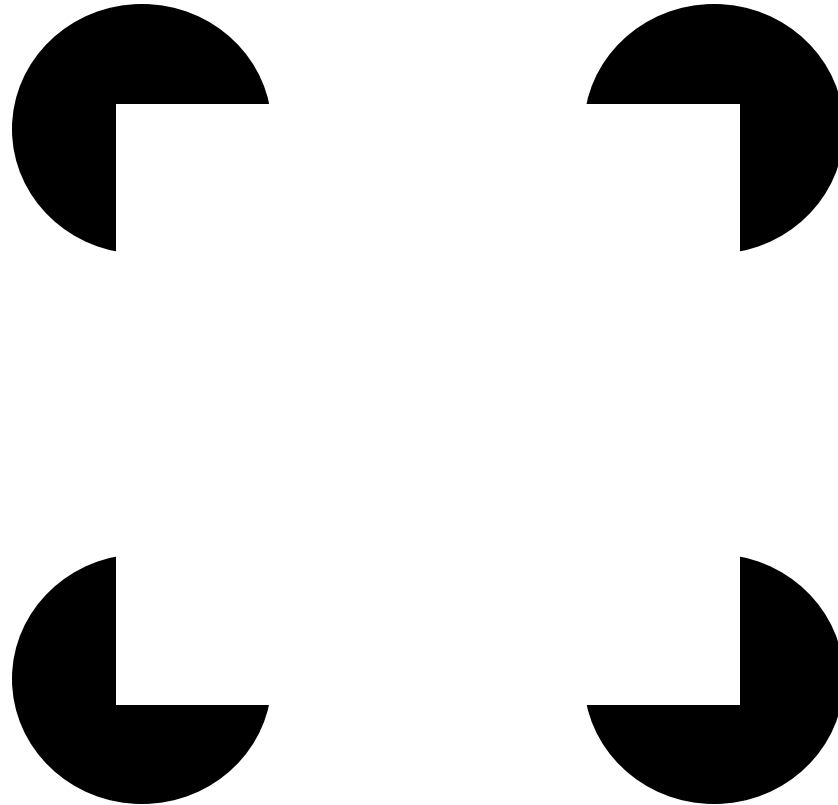




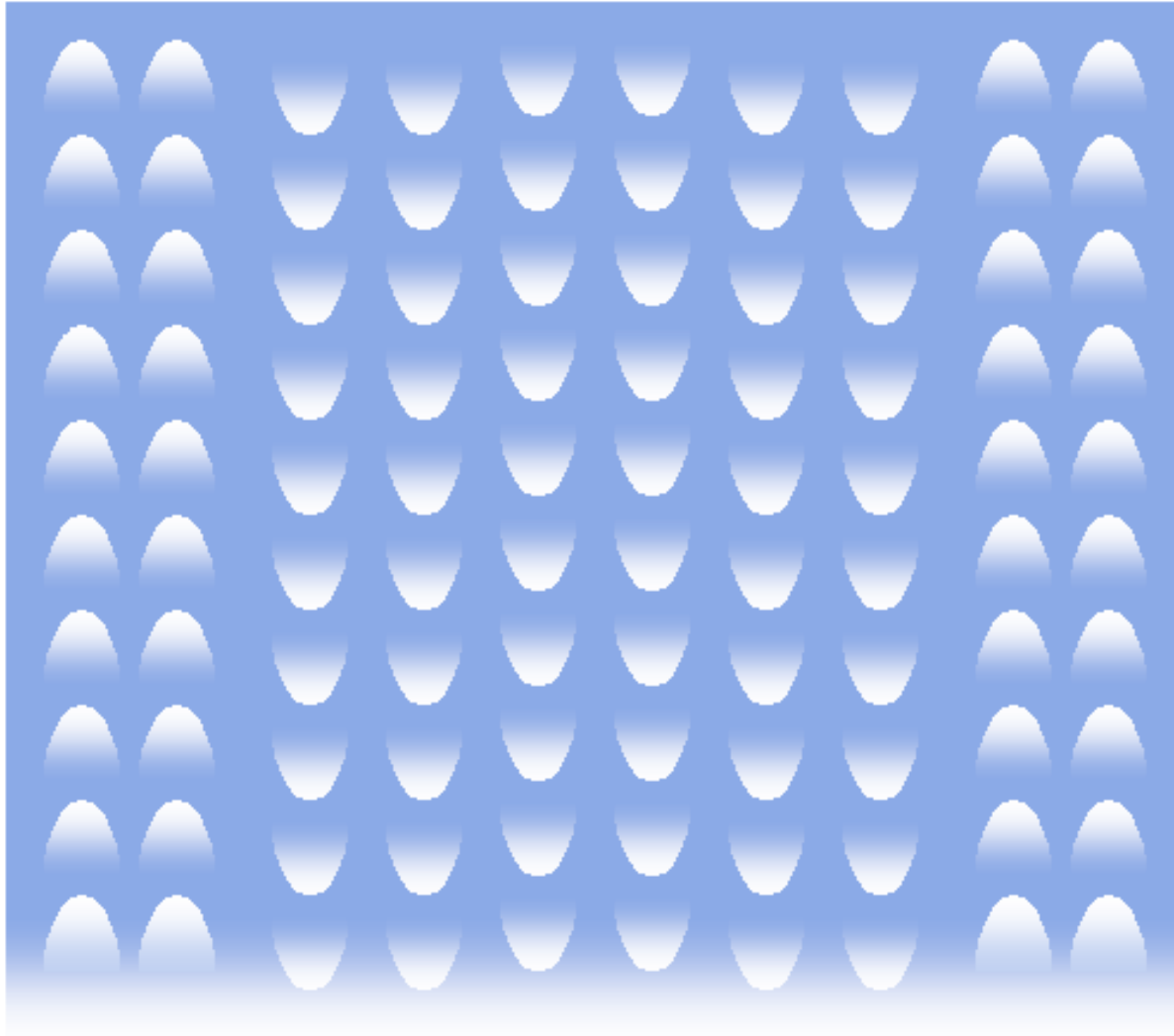
Café wall illusion



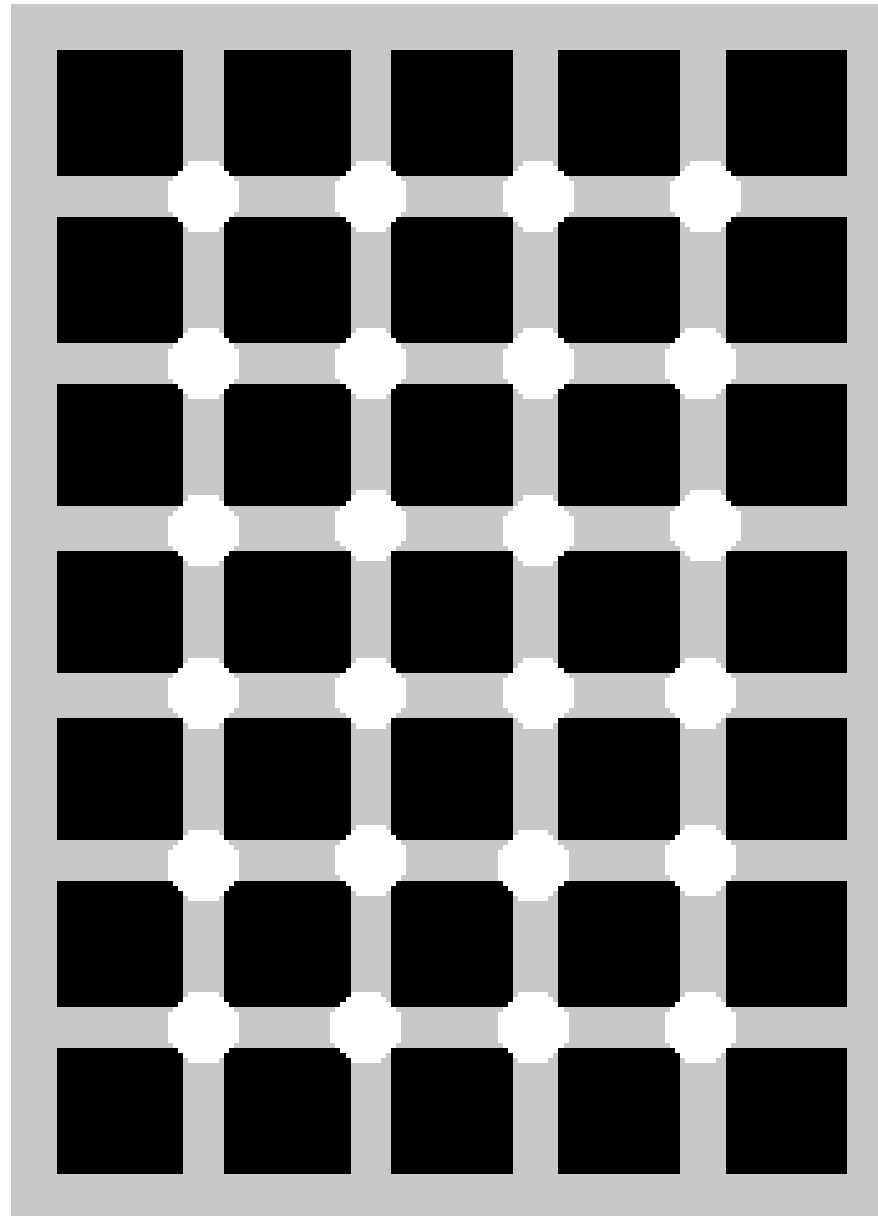
Illusory contours



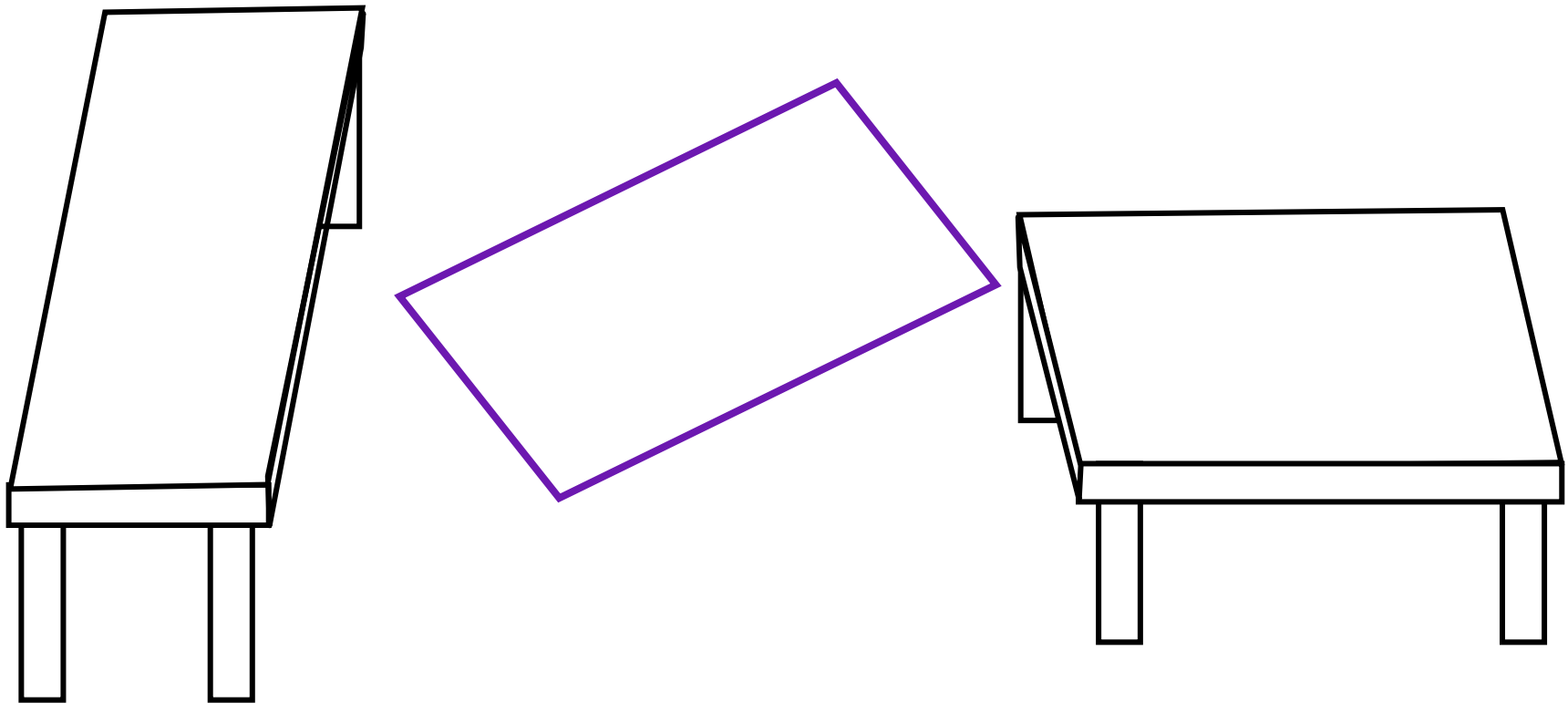
Illusory Motion



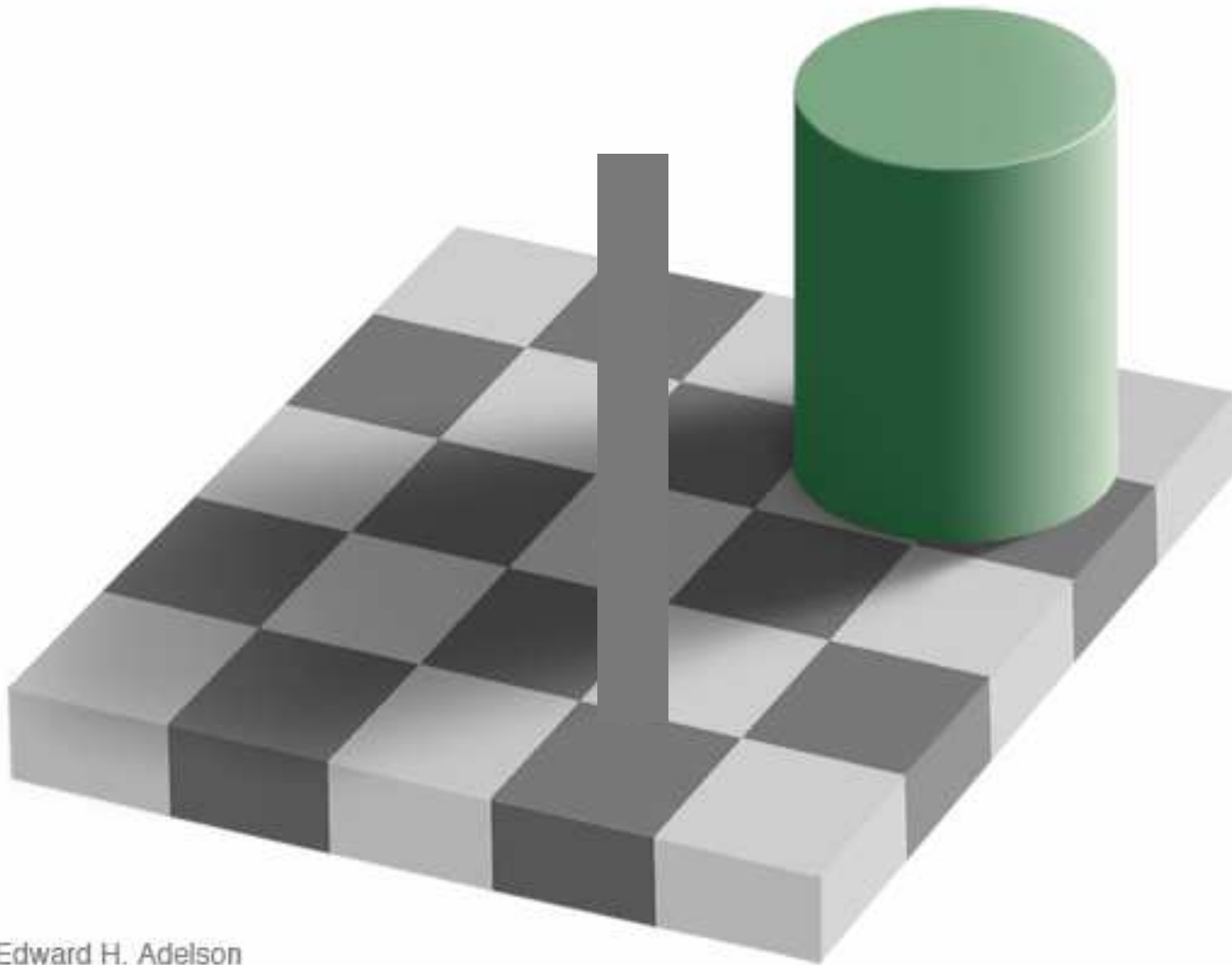
Hermann grid illusion



Roger Shepard's "tables illusion"



Adelson's lightness illusion



Edward H. Adelson

The senses

See, hear, smell, touch, taste

See, hear, smell, touch, taste

Why so much *vision*?

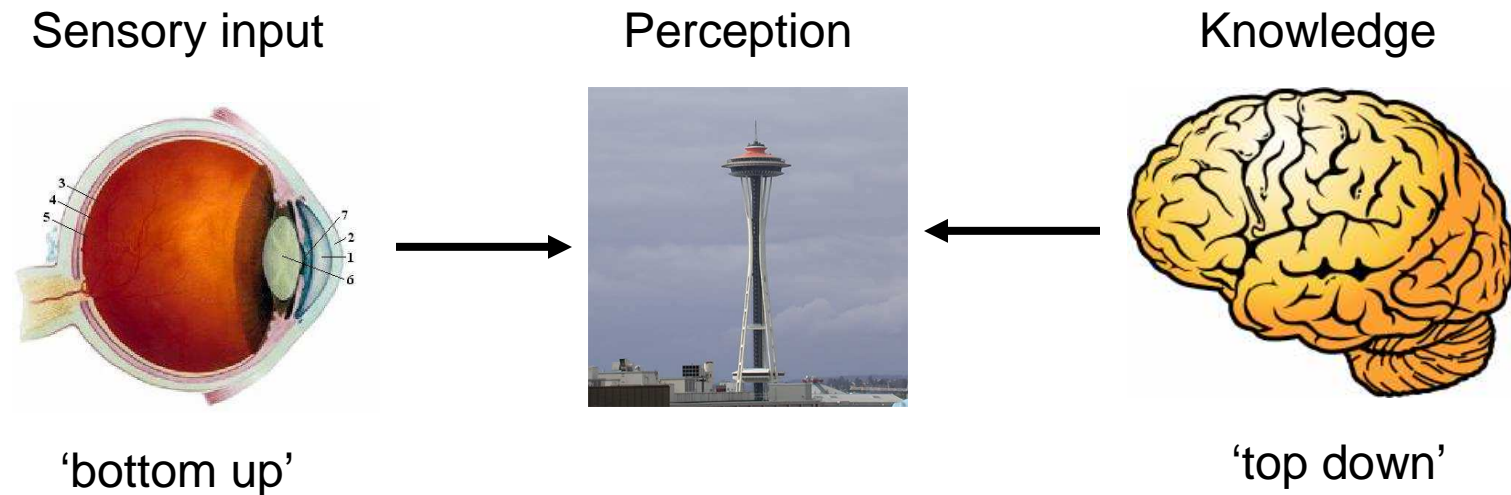
- 1) We're visual animals
- 2) Vision occupies about 1/3 of the brain
- 3) We know most about the visual system
- 4) I study the visual system.

Two kinds of things that you'll learn in this class:

- 1) Facts about perception
- 2) Facts about how scientists learned these facts about perception

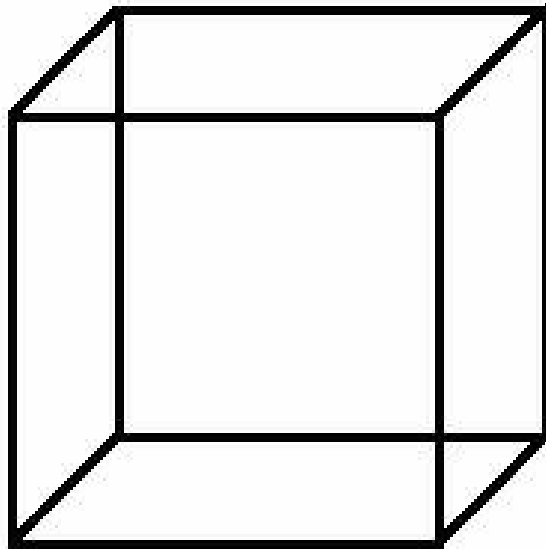
Major theme: *'Perception is an Inference'*

In other words, your brain is doing it's best to figure out what's out there given the limited input.



Major theme: *'Perception is an Inference'*

Perception is rarely ambiguous: the brain jumps to conclusions.



Bistable image: the 'Necker cube'

Major theme: *'Perception is an Inference'*

Perception is rarely ambiguous: the brain jumps to conclusions.



Old Lady



Young/Old Lady



Young Lady

Bistable image: old/young woman