

# READING ASSIGNMENTS for Visual Perception (PSY 500)

Spring 2011

Items are listed in the *approximate* order of lecture topics; the order is not precise, since the readings and lectures emphasize different topics and have a different organization. You may jump around if you find it helpful.

CWE = main text [Coren, Ward & Enns, Sensation and Perception, 6th edition (2004)]

SUPPL = supplementary readings (as identified below)

## Section 1 (Vision) ---

### Syllabus

CWE **Preface & Chapter 1** (Introduction)

SUPPL Rainwater, C. S., Perlman, R. (illustrator), & Zim, H. S. (project editor). (1971). **Light and Color**. New York: Golden Press. Pp. 29, 32-51, 53, 56-60, 64-67, 70-71.

CWE **Chapter 3** (The visual system), pp. 43-63.

SUPPL Kolb, H. (2003). How the retina works. *American Scientist*, 91, 28-35

CWE **Chapter 4** (Brightness and ....), pp. 80-92.

SUPPL Dawkins, R. (1996). The forty-fold path to enlightenment. Ch. 5 in **Climbing Mount Improbable**. New York: W. W. Norton. Pp. 138-197.

CWE **Chapter 11** (Time), pp. 330-355.

SUPPL Goldstein, E. B. (2002). **Sensation and Perception**, 6th ed. Pacific Grove, CA: Wadsworth. (Ch. 16, Clinical aspects of vision and hearing, pp. 545-564; stop after vision.)

SUPPL Catania, A. C. (2007). Strange visions: Haloes, dust storms, and blood on the walls. *Skeptical Inquirer*, 31, 47-50.

SUPPL Francis, E. L., Bai-Chuan, J., Owens, D. A., & Tyrrell, R. A. (2003). Accommodation and vergence require effort-to-see. *Optometry and Vision Science*, 80, 467-473.

SUPPL Arumi, P., Chauhan, K., & Charman, W. N. (1997). Accommodation and acuity under night-driving illumination levels. *Ophthalmic and Physiological Optics*, 17, 291-299.

### OPTIONAL READINGS:

- Riggs, L. A. (1964). Light as a stimulus for vision. Ch. 1 in C. H. Graham (Ed.), **Vision and Visual Perception**, pp. 1-38. New York, NY: John Wiley & Sons. [Serves more as a useful reference.]
- Owens, D. A. (1984). The resting state of the eyes. *American Scientist*, 72, 378-387.
- Henderson, J. M., & Hollingworth, A. (1999). The role of fixation position in detecting scene changes across saccades. *Psychological Science*, 10, 438-443.

----- Exam #1 -----

## Section 2 (Vision) ---

CWE **Chapter 3** (The visual system), pp. 63-79.

CWE **Chapter 13** (Attention)

CWE **Chapter 14** (Consciousness)

SUPPL. Sacks, O. (2010). Sight reading. Ch. 1 in **The Mind's Eye**. New York: Alfred A. Knopf. Pp. 3-31.

SUPPL Biederman, I., & Vessel, E. A. (2006). Perceptual pleasure and the brain. *American Scientist*, 94, 249-255.

SUPPL. Tsao, D. Y., Freiwald, W. A., Tootell, R. B. H., & Livingstone, M. S. (2006). Cortical region consisting entirely of face-selective cells. *Science*, 311, 670-674.

CWE **Chapter 2** (Measuring perception)

### Handouts on Psychophysics (2)

SUPPL Kruskal, J. B., & Wish, M. (1978). **Multidimensional Scaling**. Beverly Hills, CA: Sage Publications. (First part of Ch. 1, Basic concepts of multidimensional scaling, pp. 7-15.)

CWE **Chapter 4** (.....and color), pp. 93-115.)

CWE **Chapter 10** (Perceptual constancies), pp. 307-312 (on lightness/color constancy).

SUPPL Levine, M. W. (2000). **Fundamentals of Sensation and Perception**, 3rd ed. New York: Oxford University Press. (Brief selections from Ch. 14, Color vision, pp. 305-310 & 317-319.)

SUPPL Hansen, T., Olkkonen, M., Walter, S., & Gegenfurtner, K. R. (2006). Memory modulates color appearance. *Nature Neuroscience*.

### Handout on Color Blindness

SUPPL Birch, J. (1993). **Diagnosis of Defective Colour Vision**. New York: Oxford. (Ch. 10, Filter aids for colour deficient people, pp. 168-173; and Ch. 11, The occupational consequences of defective colour vision, pp. 174-184.)

**OPTIONAL READINGS:**

- Livingstone, M., & Hubel, D. (1988). Segregation of form, color, movement, and depth: Anatomy, physiology, and perception. *Science*, 240, 740-749.

----- **Exam #2** -----

**Section 3** (Visual Perception)

- SUPPL Wagner, M., & Owens, D. A. (1992). Introduction: Modern psychology and early functionalism. In D. A. Owens & M. Wagner (Eds.), **Progress in Modern Psychology. The Legacy of American Functionalism**. Westport, CT: Praeger. (Read pp. 3-14.)
- CWE Chapter 8** (Patterns and Edges)
- CWE Chapter 9** (Space)
- CWE Chapter 10** (Object and Scene Perception; pp. 307-312 already read)
- SUPPL New, J., Cosmides, L., & Tooby, J. (2007). Category-specific attention for animals reflects ancestral priorities, not expertise. *Proceedings of the National Academy of Sciences USA*. October 16; 104(42): 16598–16603. Published online 2007 October 1. doi: 10.1073/pnas.0703913104. Retrieved January 21, 2009, from <http://www.pubmedcentral.nih.gov/>
- SUPPL Stevens, S. S. (1974). S.S. Stevens. In G. Lindzey (Ed.), **A History of Psychology in Autobiography, v. 6**. Englewood Cliffs, NJ: Prentice-Hall. pp. 393-420.
- SUPPL Pratkanis, A. R. (1992). The cargo-cult science of subliminal persuasion. *Skeptical Inquirer*, 16 (No. 3, Spring), 260-272.
- SUPPL Blake, R. (1998). What can be "perceived" in the absence of visual awareness? *Current Directions in Psychological Science*, 6, 157-162.
- SUPPL Martinez-Conde, S., & Macknik, S. L. (2008). Magic and the brain: How magicians "trick" the mind. *Scientific American*, 299 (No. 6, Dec.), 72-79.
- SUPPL Levine, M. W. (2000). **Fundamentals of Sensation and Perception**, 3rd ed. NY: Oxford Univ. Press. (Ch. 9, Spatial frequency representation, pp. 155-183.)
- SUPPL Leibowitz, H. W., Owens, D. A., & Tyrrell, R. A. (1998). The assured clear distance ahead rule: Implications for nighttime traffic safety and the law. *Accident Analysis and Prevention*, 30, 93-99.
- SUPPL Bruce, V., Green, P. R., & Georgeson, M. A. (1996). **Visual Perception: Physiology, Psychology and Ecology**, 3rd ed. East Sussex, GB: Psychology Press. (Ch. 11, Introduction to the ecological approach to visual perception, pp. 255-266.)
- SUPPL Franz, V. H., Gegenfurtner, K. R., Bülhoff, H. H., & Fahle, M. (2000). Grasping visual illusions: No evidence for a dissociation between perception and action. *Psychological Science*, 11, 20-25.
- SUPPL Gogel, W. C., & Mertz, David L. (1989). The contribution of heuristic processes to the moon illusion. In M. Hershenson (Ed.), **The Moon Illusion** Hillsdale, NJ: Erlbaum. Pp. 235-258.
- SUPPL Foley, J., Loomis, J., & Mershon, D. (2006). Walter Gogel: In memoriam.
- CWE Chapter 12** (Motion)
- SUPPL Young, K. R., Mershon, D. H., & Hicks, L. J. (2002). The Far-Anchor Effect: Errors in the perception of motion and implications for aviation safety. *Human Factors*, 44, 133-143
- CWE Chapter 15** (Development) – not responsible for details of non-visual systems
- CWE Chapter 16** (Learning and Experience) – not responsible for details of non-visual systems

**OPTIONAL READINGS:**

- Lemley, B. (2000). Isn't she lovely?. *Discover*, 21, (No. 2, February), 42-49.
- Olshausen, B. A., & Field, D. J. (2000). Vision and the coding of natural images. *American Scientist*, 88, 238-245.
- Gogel, W. C. (1990). A theory of phenomenal geometry and its applications. *Perception & Psychophysics*, 48, 105-123. Recommended only for advanced students.
- Norman, J. (2001). Ecological psychology and the two visual systems: Not to worry! *Ecological Psychology*, 13, 135-145.

----- **Final Exam** -----