9.01 Study Questions

Session 4 lecture Questions

1. Diagram the flow of information in a simple model of behavior control based on reflexes.
2. Applying this model to "segmental reflexes", indicate the correspondence of the elements of your model to axonal pathways and connections. [We will return to this later in the class: see class outline, Motor Control 1.]
3. Insert, in a diagram similar to that in question 1, a simple model of hunger as a gating mechanism. Describe one response in a human baby that is probably under such control.
4. What is a suprasegmental reflex arc (or "higher" reflex arc)?

Session 4 Reading Questions

Rosenzweig chapter 2

Study Guide, page 31-33, "Important Terminology". Try to learn these terms and do the matching exercise (answers on p. 36).

Study Questions from Gazzaniga ch 3

1. What is HRP? How is axonal transport used with HRP in neuroanatomical studies? Contrast the use of HRP and the Golgi staining method.

2. What is a cell's receptive field? What are topographic maps?

3. Discuss the advantages and limitations of electrical stimulation and single cell recording.

4. What is a major disadvantage of using brain lesions for analyzing brain structures underlying behavior? What is the appeal of neurochemical lesions?

5. Contrast the key principles underlying CT, MEG, PET and fMRI.

6. What is single and double dissociation?

7. What is the key issue in the group-versus-case study debate?

8. How does computer modeling bring insights to cognitive science? What are the disadvantages of computer modeling?