Course Description. Cognitive scientists share a commitment to developing theories of human cognition which can integrate findings from diverse fields (psychology, philosophy, linguistics, computer science, neuroscience). Interdisciplinary research methodology, including connectionist modeling, will be reviewed and applied to questions on human decision making, consciousness, creativity, development, social behavior and psychopathology.

Prerequisites. Any one of the following courses: Cognitive Psychology (PS 336), Physiological Psychology (PS 231) Neuropsychology (PS 338), Minds and Machines (PH 265), Mind, Brain and Self (PH 266), Philosophy of Cognitive Science (PH 468), Artificial Intelligence. Prerequisites waived for graduate students. All students should have an understanding of basic statistical concepts (e.g., background in statistics to the level of MA 116 or PS 211). Auditors and visitors welcome.

Course Requirements. Four requirements:

• Paper, 8-12 pages, topic of your choice.
• Class participation. Draw on the reading and your own experience to contribute to discussion.
• Students will choose one of the following:
  Postings to course discussion board, Fall02 PS 525 courseinfo.bu.edu, Fall 02. Choose 4 topics, spread through out the class, and prepare a commentary on the topic. Format of the commentary is open (e.g., summarize and critique an article on the topic; offer an alternative point of view; help class members understand a technically difficult aspect of the article). Your commentary should be interesting and helpful to others in the class.

or

Course participants will assist in leading class discussion on one class meeting of their choosing.

• Read and respond to others’ discussion board postings

Readings

There are no books for this course. Most articles for weekly reading are available from www.sciencedirect.com. BU subscribes to this site. To download or print them you must access this website from your BU account.

Weekly Topics and Reading

See “Assignments” on course website for an overview of articles, discussion questions and themes for the week

Sep 6  Class introduction (Wed Sept 4, First class day)


**Sep 16 Decision Making and the Brain: Are We Rationale?**


**Sep 23 Stereotypes, Social Categorizations, Perceiving and categorizing and Ethnicity**

*Papers on Implicit Attitudes*

Test your own implicit stereotypes at either of these websites (both describe Implicit attitude research):

- http://www.tolerance.org/hidden_bias/tutorials/06.html
- http://buster.cs.yale.edu/implicit/index.html


*Papers on perceiving/categorizing visual features indicating race*


For additional papers on the literature of cross-race face recognition, look at the list maintained Eyewitness Identification Research Laboratory At the University of Texas at El Paso, http://eyewitness.utep.edu/crossrace.html.

I will show in class on Monday Sep 23 a short video on “change blindness.” Before seeing the video you may want to experience the phenomenon for yourself by visiting the website http://coglab.wjh.harvard.edu/~netexp/. The phenomenon of change blindness is relevant both to social categorization and next week’s topic of visual awareness.

**Sep 30: Change Blindness; Conscious Awareness**


Dehaene, S., Naccache, L. (2001). Towards a cognitive neuroscience of consciousness: Basic evidence


Oct 7: Sleep and Dreaming


Oct 14: Tues is Mon sched. Primate Intelligence, Animal Cognition


Oct 21: Music Cognition


Oct 28: Evolutionary Psychiatry


*Supplementary articles (Background reading)*


**Nov 4 Conceptual Representations; Children’s Conceptual Development**


Additional articles to be determined (with assistance from our Human Development classmates).

**Nov 11 Language**


**Nov 25 (Monday only)**


**Dec 2 Connectionism, Modularity, Dynamical Systems**


Randall D. Beer. Dynamical approaches to cognitive science, *Trends in Cognitive Sciences*, Volume 4,


Zenon W. Pylyshyn. Why the mind is (still) not a network, *Trends in Cognitive Sciences, Volume* 5, 1 November 2001, Page 499


**Dec 9 Computational Models of Clinical Disorders**

Connectionist Models of Cognitive, Affective, Brain, and Behavioral Disorders. Browse this website, maintained at Carnegie-Mellon, for background, discussion, and listings of papers. http://www.cnbc.cmu.edu/disordermodels


You may also want to browse the website, Connectionist Models of Anxiety Spectrum Disorders. http://www.cnbc.cmu.edu/disordermodels/anxiety.html. This contains a bibliography, but, not all papers are available on-line.