Syllabus for U668 Seminar Fall 2008.doc

Class meets: Friday 11:45 - 3:15 p.m. (sequence Ub)

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Textbook: there is no required textbook. You will find your textbook for the Sensation & Perception course is useful for background material. Sensation & Perception (by Goldstein), Perception (by Sekuler and Blake), as is texts on Perception by J. Wolfe and others, can all be substituted. There are copies in the Library, in case you did not keep your old class copy.

Prerequisites: you must have had the lecture course, Sensation/Perception; you need not have had a Lab course.
Statistics is highly recommended, but not mandatory.

Purpose of the Course: to meet, discuss, and report on seminal papers in Sensation and Perception. You will be reading these papers critically, and reporting on them. The aim is to prepare you for reading research papers in virtually any area of experimental Psychology. You will spend time each week reading just two papers intensively, so this is not like a lecture class.

Papers: We allocate papers at the start of the semester and pick weeks to present them, so you will know what papers to read and who will present them.

Week ....Date .... Topic .... Presenter
1 ....Sept 12.... Introduction .... Reeves
2 ....Sept 19 .... Paper 1 .... Reeves
3 ....Sept 26 .... Papers 2,3
4 ....Oct 3 ..... Papers 4,5
5 ....Oct 10 .... Papers 6,7
6 ....Oct 17 .... Papers 8,9
7 ....Oct 24 .... Midterm exam on papers 1-9
8 ....Oct 31 .... Papers 10,11
9 ....Nov 7 ..... Papers 12,13
10 ....Nov 14 .... Papers 14,15
11 ....Nov 21 .... Paper 16,17
12 ....Nov 28 .... Paper 18,19
13 ....Dec 5 ..... Revision for final
14 ....Dec ? ..... final exam on papers 9-19

Dec 19 th; all reports must be completed by now.
Dec 22 nd; grades due.
Proposed Papers (may be altered depending on student interest).

A brilliant study in which Triesman shows that what you can attend to without effort defines what are the 'features' (elementary visual shapes) which the visual brain uses to decode reality.

2. "Focused auditory attention and frequency selectivity" by B. Scharf and others. Perception & Psychophysics, vol 42, 215-223. Adults hear an expected sound better than an unexpected one (no surprise here), and -- here is the novelty -- this effect of attention is produced in the ear itself, not just in the brain. See if you agree that the authors really proved this.

Infant vision


4. The perception of biological motion in human infants. Fox R. & McDaniel C. (1982) Science, 218, 486-487. Infants not only perceive motion, but can tell if the moving pattern makes sense as a living organism. Does this really prove innate knowledge?


6. Infants' perception of depth from cast shadows. Yonas, A. & Granrud, C. Perception & Psychophysics 2006, 154-160. An important moment in infant's development; when can they tell cast shadows from attached shadows?

Infant hearing


8. "Speech Perception in Infants" by P. Eimas. Science, vol. 171, 303-306. The classic demonstration that 4 month old infants hear and process speech. If you haven't run into this before, imagine how you could prove it - the infants cannot talk, yet!

Infant taste/smell


Inter-sensory

11. 'Thirst modulates a perception' by M. Changizi and W. Hall. Perception (2001), 1489-1497. The authors report that being thirsty makes you more likely to see a surface as transparent (like water) rather than opaque. This is a complicated paper - read it carefully.

12. "Learning and intermodal transfer of information in newborns" by K. Kaye and TGR Bower. Psychological Science vol 5, 286-288. It seems that 1-day old infants can relate shapes the see to shapes they feel. How on earth could the authors could prove such a thing?

13. "Visual capture of touch: out of the body experiences with rubber gloves" by F. Pavani, C. Spence, and J Driver. Psychological Science (2000), vol 1, 353-359. A fascinating paper in which the authors try to show that when touch and vision conflict, vision wins by 'capturing' touch in a manner which is 'cognitively impenetrable ' - i.e., even knowing your are being deceived doesn't help you resolve the illusion.

Neural development


Applied

15. Why walkers slip: Shine is not a reliable cue for slippery ground. John, A., Adoph, K., Campbell, M., & Eppler, M. Perception & Psychophysics 68, 339-352. We normally react automatically and accurately to what we see, which is why we can walk fearlessly and effortlessly over rough ground. But not always....

Animal perception

Different colors have different brightness, so even if a cat saw the world in black and white, it could still tell the difference between green (a bright color) and red (a dim one). So how can you prove that the cat really does have color vision, using nothing but behavioral methods? This break-through study answers this important question and also illustrates how to apply an important 'nuisance-variable' methodology.


18. The infrared "vision" of snakes. Newman E.R. & Hartline P.H. (1982, March). Scientific American, 247, 116-127. This paper asks whether we humans are confused about the definition of 'vision' as optical by our reliance on our eyeballs. A must read - it will shake you up.

Pain
V.S. Ramachandran and H. Williams. Brain, Vol 121(9), Sep 1998. pp. 1603-1630. This is a long review paper, unlike the others, but it is very interesting. We will discuss part of it in class, depending on the interests of the student who presents it. Download from http://brain.oupjournals.org/cgi/reprint/121/9/1603.pdf