PSYC 415
Human Neuropsychology
Introduction
Once again...

ww2.coastal.edu/kingw
Neuroscience

one of the most rapidly advancing areas of science (30-40 major journals, compared to 4 or 5 in astronomy)

Society for Neuroscience (www.sfn.org)

primary professional society

currently over 36,000 members

psychologists have been the largest contingent
The SFN annual meetings attract 10s of thousands of attendees.
Biopsychology

- focus on behavior
- physiological psychology
- psychopharmacology
- psychophysiology
- comparative psychology
- cognitive neuroscience
- neuropsychology
Research in Neuroscience

much of what we know about the brain was learned from animal experiments

- function of neurons - squid
- function of the hypothalamus - rats
- function of the frontal lobes - monkeys
Research in Neuroscience

- but some things have to be studied in humans
- language
- the advantages of using human subjects
  - less likely to bite you or pee on you!
  - they can tell you what they are thinking
- disadvantages - ethical limitations (we often have to wait for “natural experiments”)
How Science Works
(the short version)

there are no absolute truths

“Scientific truths are held only until further notice.” --Herbert Feigl

1902 – 1988
How Science Works (the short version)

- theories stand or fall by the grace of data
- “One Hundred Against Einstein”
- Einstein’s reply – “One would be enough!”
- Why did astronomers recently check to make sure the expansion of the universe is slowing? (It’s not, by the way.)
How Science Works
(the short version)

- the case of the action potential

- Hodgkin and Huxley (1930’s - 1950’s)

- but does it apply to vertebrates? (yes)
The Moral of the Story

- When we say, “This is how the brain works,” this is understood to mean, “This is currently our best understanding of how the brain works.”

- We could be wrong, and sometimes are.

- Some of what I’m going to tell you this semester about the brain is going to be wrong.

- It’s up to you to keep your knowledge current.
Quiz Zero is due on Monday. This material will be covered. The hard stuff starts Monday!