

PSYC 415  
Human Neuropsychology

Introduction



Once again...  
[ww2.coastal.edu/kingw](http://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](http://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





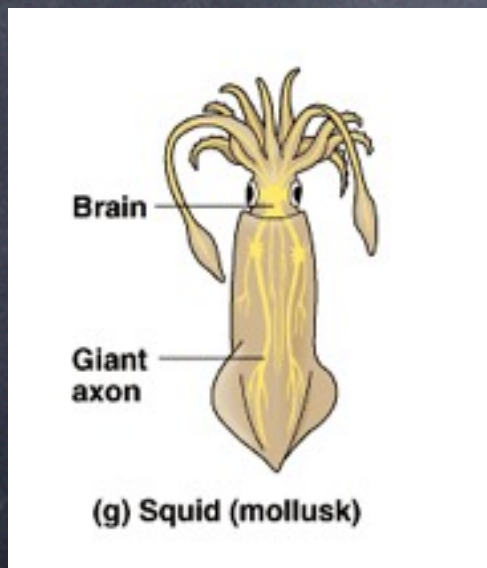
# How Science Works (the short version)

- 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.



**Friday.**

Quiz Zero is due on ~~Monday.~~

This material will be covered.

The hard stuff starts Monday!