Evolutionary theory

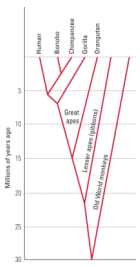
- Charles Darwin and Alfred Russel Wallace
- Genetic mutation and variation within species
- Some physical and behavioral characteristics better help individual survive to reproduce
  - fit to environment (*adaptations*)
  - more offspring (themselves more likely to reproduce)
- *Natural selection:* inherited, adaptive characteristics more likely to be passed to future generations
  - creation of new species defined by unique physical/behavioral characteristics

Evolutionary theory and psychology

- Implication of *naturalism*
  - brain is biological structure, and so influenced by biological processes
- Focus on *function*
  - explain what a behavior accomplishes for the individual (what its function is)
  - applied not only to behavior, but also to psychological processes (e.g. memory)

Species-typical behaviors

- Characteristic way of behaving
  - evolution *prepares* biological organism for behavior
  - learning sometimes plays crucial role
- Comparisons across species
  - homology: common ancestor (e.g. among primates)
  - analogy: common function



Species-typical mating patterns

- Analogous mating patterns
  - polygyny: one male - several females (gorillas)
  - polyandry: one female - several males
  - monogamy: one male - one female
  - polygynandry: several males - several females
- Driven by *parental investment* in offspring
  - sex with higher investment: more competed for and more selective (fewer partners)
  - competition sometimes leads to larger body size among competing sex

Human mating patterns

- Compare to chimpanzees and bonobos
  - both polygynandrous species
    - bonobos: helps to reduce group conflict
    - chimps: polygyny + paternity confusion
- Humans?
  - many cultures polygynous, but practically monogamous (*love*)
  - sex differences in body size and violent behavior (*sexual jealousy*), similar to chimps
  - high investment in offspring (extended childhood)
  - some infidelity (*lust*)