

## Chapter 6: Antecedents of Functionalism

### Introduction

- About the Functionalist protest
- Precursors of the Functionalist school: Evolution, Individual Differences, and Animal  $\psi$ .

### Evolution and Charles Darwin (1809-1882)

- *On the Origin of Species by Means of Natural Selection* (1859).
  - Influence of evolutionary theory on modern  $\psi$
  - Jean-Baptiste Lamarck
  - People were eager to trade their faith
- I. Darwin's Life
    - A. As a boy
    - B. As a man
      1. At Cambridge University
      2. His naturalistic voyage (*HMS Beagle*)
      3. Character changes during the trip
      4. Darwin and the Church
      5. Alfred Russell Wallace
  - II. On the Origin of Species.
    - A. Terms (More than a brief review needed)
      1. *Variability*
      2. *Natural Selection*
      3. *Behavioral Selection*
    - B. Thomas Henry Huxley
      1. "Good & kind agent for the propagation of the gospel [of evolution]."
      2. A new path to salvation.
    - C. *The Descent of Man*
  - III. The Finches' Beak: Unacceptable Evidence
    - A. The Grant's, finches beaks (Galapagos Islands)
    - B. Effects of alternating draught & heavy rain
      1. In times of draught
      2. In times of flood
    - C. The Logical Fallacy
      1. Micro-evolution vs. macro-evolution
      2. Unsuitable jump in logic
      3. Observational data? Causal Conclusions
  - IV. Darwin's Influence on Psychology

### Individual Differences: Sir Francis Galton (1822-1911)

- I. Galton's Life
  - A. Education
  - B. Darwin was Galton's cousin
- II. Galton's Areas of Interest.
  - A. Mental Inheritance
    1. Book, *Heritable Genius*
    2. Science of Eugenics
  - B. Statistical Methods
    1. Among the first scientists to use probability theory & statistics.
    2. Galton and the *normal curve*.
    3. All human characteristics could be described using 2 numbers
    4. His work set the stage for development of Correlational analysis.
  - C. Mental Tests
    1. Galton originated the concept of "mental test."
    2. Quantification of a person's intelligence
    3. Galton's testing procedure
    4. His data were re-analyzed 100 years
  - D. Summary

### Animal Psychology and the Development of Functionalism

- I. Darwin's Influence on Animal Psychology
  - A. Cartesian distinction b/t animals and humans
  - B. Darwin's book, *Descent of Man*, changed people's perception of animals
  - C. Darwin wrote another book concerning the continuity of emotional expression across species.
    1. Remnant emotional displays
    2. EX: sneering
      - a. Post Hoc
      - b. How we feel when we sneer is different from anger.

- II. George John Romanes (1848-1894)
  - A. About Romanes
  - B. His Writings and Methods
    - 1. *Animal Intelligence*, 1<sup>st</sup> comparative  $\psi$  book
    - 2. Tried to study "mental processes" in lots of animals
    - 3. **Anecdotal Method**
    - 4. **Introspection by analogy** (*the problem of other minds*).
    - 5. Observational stage in comparative science
  
- III. C. Lloyd Morgan (1852-1936)
  - A. Romanes' successor
  - B. "Law of Parsimony" and minimizing "anthropomorphism"
  - C. **Associations** of sensory experience vs. reasoning & ideation
  - D. First person to use experimentation (of sorts) to study animal behavior

### Summary