Historical Roots of Psychology

Rene Descartes

What is Psychology?

- “Psychology is the science of human and animal behavior, and the mental processes that influence overt behavior.” (Gerow and Bordens, 2002)
- But Psychology has not always been defined this way.
- Why the change? To find out, we must go back in history . . .

Historical Roots of Scientific Psychology

- Psychology’s two roots:
  - Philosophy
    - “Mother” of all sciences
    - Psychology as the study of the mind
  - Physiology
    - Study of physical processes that sustain life
    - Psychology: brain and behavior
Rene Descartes

- 17th Century French Philosopher
- Transitional figure between Middle Ages and modern science
- Contributions to psychology:
  - Mechanism, not magic – the reflex arc
  - Interactive dualism
  - Rationalism

The Reflex Arc

- Mechanical chain of cause and effect:
  - Stimulus
  - CNS
  - Response
- Animal behavior as stimulus-response chains
- Human involuntary behavior due to reflex mechanism

Interactive Dualism

- Human being as part physical mechanism, part nonphysical soul
- Two-way communication between body and soul (via the ‘conarium’ or pineal gland)
- Soul: Ability to reason
- Brain: Perception, memory, emotion
Rationalism

- Method for finding truth using reasoning alone:
  - Find self-evident truths
  - Use as assumptions for deduction
  - Apply deduction to arrive at true conclusions
- Other methods for finding truth:
  - Method of Authority
  - Empirical Method

Method of Authority

- To find truth, consult a trusted authority
- Used by Scholastics in Descartes' day

Empirical Method

- Carefully observe
- Use inference to generalize from specific observations to universal laws
- Empirical question: Can be answered via the evidence of the senses