

## FOUNDATIONS/HISTORY – CH 1

### What is Psychology?

- The science of behavior and the mind
  - behavior - observable actions of a person or animal
  - mind - thoughts, feelings, sensations, perceptions, memories, dreams, motives and other subjective experiences
    - hypothetical constructs – unobservable explanatory variable
  - science
    - an objective way to answer questions
    - based on observable facts / data and well described methods
- A set of questions about mental functioning
  - trace back to philosophy
  - Aristotle asked about memory, personality, emotions, etc.
- A set of theories and procedures for asking and answering questions
  - the scientific method
  - evolved over centuries, first in physics
- A product of history
  - philosophy asked many of the basic questions
  - physiology used similar methods

### Three Foundational Ideas of Psychology

1. The idea that there is a physical causation of behavior
2. The idea that the mind and behavior are shaped by experience
3. The idea that the machinery of behavior and mind evolved through natural selection

### Philosophical Developments

- Is there a separation between mind and body?
- How would such an assumption change the way you think about behavior?
- Are behaviors inborn or learned?
- How would you test such a thing?
- Question 1: How are mind and body related?
  - Dualism - body and soul are separate but interrelated
    - origins in medieval religion
    - soul is seat of intellectual function and will
    - mind is product of the soul
      - mind not subject to scientific inquiry
  - René Descartes (1596-1650) - modified dualism
    - since animals have no soul, much behavior does not require soul
    - the body can therefore control much behavior
    - led him to study reflexes
    - the soul's main function is thought, a uniquely human attribute
  - Materialism: Thomas Hobbes (1588-1679)
    - mind is a product of the brain
    - soul is not involved in human behavior
  - Empiricism:
    - knowledge and intellect are acquired
    - sensory experiences produce elementary ideas
    - elementary ideas become associated into complex thought and ideas
- Question 2: Empiricism vs. Nativism
  - Nativism is the view that elementary ideas are innate
  - If knowledge is innate
    - What is the purpose of education?
    - Can intellect be changed by experience?
  - Are abilities determined by our genes or our experiences?
  - This is known as Nature vs. Nurture
    - appears throughout modern psychology

### Foundations of Modern Psychology

- Charles Darwin (1809-1882)
- Theory of natural selection (1859)
  - physical characteristics evolve through natural selection
  - behavioral patterns also influence selection
  - inborn knowledge and behavioral tendencies with survival value are passed on
- Human beings are part of nature and can be understood through the methods of science
- Darwin's theory encouraged scientific inquiry
- 19th century developments in physiology demonstrated the approach to use
  - based on scientific methods, controlled laboratory experiments
  - influential beliefs from early physiology
    - reflexology - all human behaviors occur through reflexes (i.e. the reflex chain)
    - localization of function - specific structures of the brain serve specific functions in the control of mental experiences and behavior
- Separated from philosophy in 19th century
  - influences from physiology remain
- Wilhelm Wundt (1832-1920)
  - Leipzig, Germany
  - wrote the first psychology textbook
  - applied laboratory techniques to study of the mind
  - structuralism - identify 'atoms' of the mind
    - focused on basic sensory and perceptual processes
    - measured reaction times

### Other Pioneers

- Edward Titchener (1867-1927)
  - Wundt's student, professor at Cornell University
- William James (1842-1910)
  - started psychology at Harvard in 1870s
  - opposed Wundt and Titchener's approach
  - functionalism - influenced by Darwin to focus on how behaviors help us adapt to the environment
- Sigmund Freud (1856-1939)
  - Austrian physician that focused on illness
  - psychoanalytic theory of mental disorders
- Alfred Binet (1857-1911)
  - French intelligence researcher
  - developed first intelligence test
- Ivan Pavlov (1849-1936)
  - Russian physiologist
  - discovered conditioned reflexes
- B.F. Skinner (1904-1990)
  - American psychologist at Harvard
  - studied learning and effect of reinforcement
  - behaviorism