

***Chapter Two:  
Philosophical Influences on Psychology***

**PSY 495**

**Dr. Rick Grieve**

**Western Kentucky University**

***Philosophy from the  
Greeks to Descartes***

- **Plato and Aristotle**
  - 400 BC to 300 BC
    - Hellenistic Period
      - ◻ Not much after this until 1200-1300 AD
- **Before Plato**
  - 6<sup>th</sup> century BC
    - Critiques of systems of thoughts
    - Beginning of modern Western thought

***Philosophy from the  
Greeks to Descartes***

- **The question of Being vs. Becoming**
  - **Being**
    - ◻ Beyond the changing world there are external truths
    - ◻ Ideas have an existence apart from any person
    - ◻ Foundation of Idealism
    - ◻ Some argued that ideas were innate
      - Nativists
  - **Becoming**
    - ◻ The only constant in the world is change
    - ◻ Constantly changing and becoming something else
    - ◻ Ideas are simply mental constructs

***Philosophy from the  
Greeks to Descartes***

- **Rationalism vs. Empiricism**
  - **Rationalism**
    - ◻ Exercise of reason is the only means by which valid knowledge is created
    - ◻ Perform logical deductions from intuitively valid premises
  - **Empiricism**
    - ◻ Know reality through experience
    - ◻ Valid knowledge results from experience/observation

## *Philosophy from the Greeks to Descartes*

- **Plato**
  - Idealist and Rationalist
  - Dualist in regards to mind-body problem
  - Objects continually change so we cannot really know them
  - Perception is faulty
    - Can't use it to determine reality
  - Ideal form for every object

## *Philosophy from the Greeks to Descartes*

- This form exists in a cave somewhere in the earth
- We have knowledge of the forms, but only when we are dead
- 2 ways to get the knowledge w/o dying
  - Contact with real objects jars our memories
  - Rational process
    - Socratic Method

## *Philosophy from the Greeks to Descartes*

## *Philosophy from the Greeks to Descartes*

- **Aristotle**
  - On the fence about Being/Becoming and Empiricist
  - Some say he was the first scientist
  - Mind-body problem
    - Noted dual aspect of mind/body
    - Stated there was one material reality with two aspects—the physical and the mental

## *Philosophy from the Greeks to Descartes*

- 4 types of causes
  - Material causation
  - Formal/essence causation
  - Efficient causation
  - Final cause

- Soul = formal, efficient, and final cause
- Body = material cause
- Located cognition and motivation in mind rather than the body

## *Philosophy from the Greeks to Descartes*

- His idea of empiricism was not complete
  - Did not offer complete confirmation by sensory data
- Universals
  - Appear to be like prototypes
  - “essences”
- Focused on purpose of behavior
  - Touch of Functionalism
  - Touch of Behaviorism

## *Philosophy from the Greeks to Descartes*

- Three laws of association
  - Similarity
  - Contiguity
  - Contrast
- Need for repetition in learning
- Aristotle died in 323 BC
- Final comments on Plato/Aristotle
  - Modern-sounding ideas
  - Some were off the mark, but give them credit for trying

## *Philosophy from the Greeks to Descartes*

- Others in the Hellenistic Period
  - Atomists ruled
    - Emphasize becoming and empiricism
      - With a strong emphasis on materialism, determinism, and reductionism
  - Very scientific age
  - Ptolemy & Galen
    - Anatomical, botanical, and astronomical work
  - Hellenistic Stoicism
    - Materialism and monism
    - Wanted to reduce human psychology to physical matters

## *Philosophy from the Greeks to Descartes*

- As Rome deteriorated, people's lives got worse
  - Turned to religion to help
  - Christianity comes out on top of the heap and the Age of Faith begins
- **Age of Faith**
  - **Big Question:**
    - How to reconcile Christianity with philosophy
  - **St. Augustine (345-420)**
    - One of first to try to do this

## *Philosophy from the Greeks to Descartes*

- **Combined Christianity with Platonic ideals**
  - Put Plato's forms in God's mind
  - Very much a mystic
  - Stated that heaven, God, souls, and angels could only be known through introspection
    - No science is possible in this context
  - He believed that science should not be concerned with things you can see
    - No emphasis on the self
    - Felt science should emphasize the supernatural
  - Each physical object represents something supernatural
    - Therefore, is an imperfect form

## *Philosophy from the Greeks to Descartes*

- God is the ultimate truth
  - Mind is concerned with things that are not discernable through observation
  - We can only know truth through rationalism
  - However, faith can elevate the comprehension of the ultimate truth
- **Augustinian thinking dominated for the next few centuries**
  - However, by then people were so unknowledgeable that they had machines that they did not know how to use

## *Philosophy from the Greeks to Descartes*

- **Charlamange (760-800)**
  - Attempted to restore knowledge
- **Fall of Constantinople**
  - Knowledge reintroduced to Europe
  - When Plato, Aristotle and the boys are reintroduced they are so far advanced that they were taken as authoritative
- **Concept of individual was reintroduced into philosophy**

- But not really studied (cf., Augustine)

## *Philosophy from the Greeks to Descartes*

- St. Thomas Aquinas (1225-1274)
  - Synthesized Aristotle and Christianity
    - Eventually his ideas overtook those of Augustine
  - Emphasized naturalism and empiricism
    - God is indirectly known through his works in the world
      - Thus, philosophy and religion could be separate yet compatible
  - Led to the destruction of theological metaphysics
    - Ideas in the mind of God

## *Philosophy from the Greeks to Descartes*

### • Transition from the Age of Faith to the Renaissance

- Ockham (1290-1345)
  - Revised empiricism
    - Knowledge comes from experiencing and knowing objects in the real world
    - No universals
      - Only exist in the mind
  - Ockham's Razor
    - Felt that adding religion to philosophy only adds extra baggage

## *Philosophy from the Greeks to Descartes*

- All things being equal, the simplest (most parsimonious) explanation is the best
- Roger Bacon (1214-1272)
  - Ideas should be based on experience, not authority
  - Tried to account for all aspects of experience
    - Physiological, mental, etc.
    - Did not isolate crucial aspects of reality
- Copernicus (1473-1543)
  - Besides placing sun at the center of the universe, he philosophically agreed with Aquinas

## *Philosophy from the Greeks to Descartes*

- Other important scientists involved in the transition
  - Brahe (1546-1601)
  - Johannes Koeppler (1571-1630)
  - Galileo (1564-1642)

## *The Renaissance: Working in the Spirit of Mechanism*

- **Mechanism**
  - Mechanical items were becoming commonplace in the 17<sup>th</sup> century
    - Clocks were the impetus
  - Doctrine that natural processes are mechanically determined and capable of explanation by the laws of physics and chemistry

## *The Renaissance: Working in the Spirit of Mechanism*

- Originated in physics
  - Work of Galileo and Isaac Newton
- Everything in the universe was composed of particles of matter in motion
  - Therefore, every physical event follows from a direct cause
  - These effects are subject to the laws of measurement and should be predictable
  - Operation of the physical universe is orderly, like a clock

## *The Renaissance: Working in the Spirit of Mechanism*

- Once the laws that governed the universe are understood, can make predictions about what will happen in the future
- Observation and experimentation became the distinguishing features of science
  - Followed closely by measurement
  - Attempted to define every phenomenon by assigning it a numerical value

## *The Renaissance: Working in the Spirit of Mechanism*

- **The clockwork universe**
  - Clock was the metaphor for 17<sup>th</sup> century spirit of mechanism
  - Began to consider clocks as models for the universe
  - Harmony and order in the universe were related to clocks' regularity

## *The Renaissance: Working in the Spirit of Mechanism*

- **Determinism and Reductionism**
  - **Determinism**
    - Acts are determined by past events
  - **Reductionism**
    - Explains phenomena on one level in terms of phenomena on another level
      - Clock analogy again
- **Automata**
  - Toy of the 17<sup>th</sup> century
  - Used as an analogy for human behaviors

## *The Renaissance: Working in the Spirit of Mechanism*

- **The calculating engine**
  - Charles Babbage
  - Rudimentary computer from the 1820's-1830's
  - Analytical Engine
    - Tabulate values of math functions
    - Play chess and checkers
    - Memory capacity that held intermediate results until they were needed to complete a calculation
      - Used punch cards as the memory source

## *The Renaissance: Working in the Spirit of Mechanism*

- Working on a Difference Engine but ran out of funding
  - Subtract, multiply and divide
- British government finished the engine in 1991
  - It worked flawlessly
- Again, this was used as an example of mechanism

## *The Beginnings of Modern Science*

- **Empiricism and Descartes**
  - **Empiricism**
    - Pursuit of knowledge through the observation of nature and the attribution of all knowledge to experience
      - Focused on experimentation
    - Strong proponent was Rene Descartes
      - Symbolized the transition to the modern era of science

- Ushered in era of modern psychology
  - If he didn't create it, he sure set the stage for it to occur

## *The Beginnings of Modern Science*

- **Rene Descartes**

- Interested in applying scientific knowledge to practical concerns
- Mathematical principles can be applied to all of the sciences
  - Wrote extensively on mathematics and philosophy

## *The Beginnings of Modern Science*

- **Mind-Body Problem**

- The question of the distinction between mental and physical qualities and how the two types of qualities interact
- Before Descartes, the accepted theory was that the mind exerted enormous influence on the body, but not vice versa

## *The Beginnings of Modern Science*

- **Descartes' position**

- Mind and body are distinct but each influence the other
  - Body exerts a much greater effect than previously thought
  - Body takes on greater importance
    - Functions such as reproduction, perception and movement were attributed to the body rather than the mind
  - Mind has single function:
    - thought

## *The Beginnings of Modern Science*

- Diverted attention from abstract theological discussion of the soul to the scientific study of the mind and mental processes
  - Methodology changed
- Body has extension—takes up space
- Mind is unextended and lacking in physical substance

- **The Nature of the body**

- Because the body is composed of physical matter, it must possess the characteristics of matter



## *The Beginnings of Modern Science*

- **Extension in space and capacity of movement**
  - Laws of physics and mechanism must apply to the body
- **Body is like a machine**
  - Explained physiological functioning in terms of physics
    - Compared to automata
  - undulatio reflexa
    - Movement not supervised or determined by a conscious will to move
  - Theory of reflex action
    - An external object can bring about an involuntary response

## *The Beginnings of Modern Science*

### • **The Mind-Body Interaction**

- Mind is nonmaterial
- Capable of thought and consciousness
- Provides us with information about our external world
- Most important quality is its ability to think
- Mind can be influenced by the body

## *The Beginnings of Modern Science*

- Point of interaction between mind and body
  - Mind is unitary; therefore it must interact with only one part of the body
  - Must be in the brain
  - Only one brain structure that is unitary
    - Pineal body

### • **Doctrine of Ideas**

- Mind produces two kinds of ideas:
  - **Derived ideas**
    - Ideas produced by the direct application of an external stimulus

## *The Beginnings of Modern Science*

- **Innate ideas**
  - Ideas that arise from the mind or consciousness, independent from sensory experiences or external stimuli
- Led to the idea that perception is innate rather than learned

***Empiricism and Associationism:  
Acquiring Knowledge Through Experience***

- **Advancing in Psychological Study**

- **Positivism**

- **The doctrine that recognizes only natural phenomena or facts that are objectively observable**
  - Everything that was speculative, inferential or metaphysical was not science
  - August Comte (1798-1857)
    - Limited work to those facts which were determined solely through the methods of science

***Empiricism and Associationism:  
Acquiring Knowledge Through Experience***

- **2 kinds of propositions**

- Sense
- Nonsense

- **Materialism**

- **Doctrine that considers the facts of the universe to be sufficiently explained by the existence and nature of matter**
  - Even human consciousness

- **Empiricism**

- **Pursuit of knowledge through the observation of nature and the attribution of knowledge to human experience**

***Empiricism and Associationism:  
Acquiring Knowledge Through Experience***

- **All knowledge comes through the senses**
- **Operational definition**
  - Centers on the notion that the concept being referred to must be, in principle, observable

- **Positivism, materialism, and empiricism became the philosophical foundations of the new science of psychology**

***Empiricism and Associationism:  
Acquiring Knowledge Through Experience***

- **John Locke (1632-1704)**

- **Philosopher**

- **Champion of liberalism in government**

- ***An Essay on Human Understanding* (1690)**

- **Beginning of British empiricism**

- **Concerned with how the mind acquires knowledge**

- **Rejected the existence of innate ideas**

- **At birth, humans have no knowledge whatsoever**
  - Aristotle—*tabula rasa*

***Empiricism and Associationism:  
Acquiring Knowledge Through Experience***

- Sensation and perception
  - There are two kinds of experience—one from sensation and one from perception
  - Ideas derived from sensations
    - Come from direct sensory input
    - Simple sense impressions
    - These impressions operate on the mind, but the mind also operates on them and forms ideas
    - Reflection is dependant upon sensation

***Empiricism and Associationism:  
Acquiring Knowledge Through Experience***

- Simple and complex ideas
  - Simple idea
    - Elemental ideas that arise from sensation and reflection
  - Complex ideas
    - Derived ideas that are compounded simple ideas
- Theory of Association
  - Knowledge results from the linking or associating of simple ideas into complex ideas
  - Reduction of mental events into simple ideas or elements formed the core of the new psychology

***Empiricism and Associationism:  
Acquiring Knowledge Through Experience***

- Primary and secondary qualities
  - Primary qualities
    - Characteristics such as shape and size that exist in an object whether or not we perceive them
  - Secondary qualities
    - Characteristics such as color and odor that exist in our perceptions of an object
  - Taken from Galileo
  - Agrees with mechanistic position
  - Locke recognized the subjectivity of much of human perception

***Empiricism and Associationism:  
Acquiring Knowledge Through Experience***

- George Berkeley (1685-1753)
  - Philosopher
  - *An Essay Towards a New Theory of Vision* (1709)
  - *A Treatise Concerning the Principles of Human Knowledge* (1710)
  - Argued that perception is the only reality

- No such thing as primary qualities; only secondary qualities

***Empiricism and Associationism:  
Acquiring Knowledge Through Experience***

- **Mentalism**
  - Notion that all knowledge is a function of mental phenomena
- **Perception is the only reality of which we can be sure**
  - Cannot know with certainty the nature of physical objects in the experiential world
  - Object is the accumulation of sensations experienced concurrently so they become associated in our mind by habit
- **No mental quality of which we can be sure**
  - Take away the perception, the quality disappears

***Empiricism and Associationism:  
Acquiring Knowledge Through Experience***

- Because all experience is within ourselves, we can never know precisely the physical nature of objects
- God is the only being with perfect perception
- Association of sensations
  - Knowledge is a construction of simple ideas or mental elements that are bound together by the mortar of association

***Empiricism and Associationism:  
Acquiring Knowledge Through Experience***

- **David Hume (1711-1776)**
  - *A Treatise on Human Nature* (1739)
  - Supporter of Locke's notion of compounding simple ideas into complex ideas
  - Agreed with Berkeley that the material world did not exist until it was perceived
  - Went a step further:
    - Argued that there is no way of knowing whether or not there was anything outside of our own minds

***Empiricism and Associationism:  
Acquiring Knowledge Through Experience***

- Impressions and ideas
  - Impressions
    - Basic elements of mental life
  - Ideas
    - Mental experiences we have in the absence of any stimulating object
  - Impressions are strong and vivid while ideas are weak copies of impressions
  - Both may be simple or complex
    - Simple idea will resemble simple impression
    - Complex idea may not resemble any complex, or even simple impression

*Empiricism and Associationism:  
Acquiring Knowledge Through Experience*

- Two laws of association
  - Law of Resemblance
    - The more similar two ideas are, the more readily they will be associated
  - Law of Contiguity
    - The more closely linked two ideas are in time or place, the more likely they will be associated

*Empiricism and Associationism:  
Acquiring Knowledge Through Experience*

- **David Hartley (1705-1757)**
  - *Observations on Man, His Frame, His Duty, and His Expectations* (1749)
  - Association is made by contiguity and repetition
    - Ideas or sensations that occur together, either simultaneously or successively, become associated such that the occurrence of one leads to the occurrence of the other
    - Used to explain everything from memory to action

*Empiricism and Associationism:  
Acquiring Knowledge Through Experience*

- Influence of mechanism
  - Attempted to explain physiological processes in mechanistic terms
- **James Mill (1773-1836)**
  - *Analysis of the Phenomena of the Human Mind* (1829)
  - The mind as machine
    - Applied concept of mechanism to the mind
    - Goal was to destroy the idea of subjective or psychic activities

*Empiricism and Associationism:  
Acquiring Knowledge Through Experience*

- Mind is a passive entity that is acted on by external stimuli
- Mind should be studied by the method of analysis
- Sensations and ideas are the only mental components that exist
- Mind has no creative function
  - Association is an automatic, passive process
    - Sensations that occur together will be reproduced as ideas
    - Ideas are merely the accumulation of individual mental elements

*Empiricism and Associationism:  
Acquiring Knowledge Through Experience*

- **John Stuart Mill (1806-1873)**
  - Mental chemistry

- **Argued against the mechanistic position**
- **Argued that the mind plays an active role in the association of ideas**
- **Complex ideas are not simply the summation of simple ideas through the process of association**
  - **Complex ideas take on new qualities not found in simple elements**

### ***Empiricism and Associationism:***

### ***Acquiring Knowledge Through Experience***

- **Creative synthesis**
  - **Notion that complex ideas formed from simple ideas take on new qualities; the combination of mental elements creates something greater than the sum of the original elements**

## ***References***

- "Analytical Engine" (2000). *Microsoft® Encarta® Online Encyclopedia 2000*. Retrieved January 22, 2001, from the World Wide Web: <http://encarta.msn.com>
- Schultz, D. P., & Schultz, S. E. (1996). *A history of modern psychology* (6<sup>th</sup> edition). Ft. Worth, TX: Harcourt Brace Publishers.
- Schultz, D. P., & Schultz, S. E. (2004). *A history of modern psychology* (8<sup>th</sup> edition). Ft. Worth, TX: Harcourt Brace Publishers.