

Chapter Two: Philosophical Influences on Psychology

PSY 495

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Philosophy from the Greeks to Descartes

- **Plato and Aristotle**

- o 400 BC to 300 BC

- Hellenistic Period

- Not much after this until 1200-1300 AD

- **Before Plato**

- o 6th century BC

- Critiques of systems of thoughts

- Beginning of modern Western thought

Philosophy from the Greeks to Descartes

- o **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

o 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

- o Idealist and Rationalist
- o Objects continually change so we cannot really know them
- o Perception is faulty
 - Can't use it to determine reality
- o 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

o Dualist in regards to mind-body problem

Philosophy from the Greeks to Descartes

Plato's views on the soul:

Level	Name	Located	Who
1	Appetites	Stomach	Men, women, slaves, animals
2	Passion	Chest	Men, women, slaves, animals
3	immortal	head	men

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

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

Philosophy from the Greeks to Descartes

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

Philosophy from the Greeks to Descartes

- Others in the Hellenistic Period
 - o Atomists ruled
 - Emphasize becoming and empiricism
 - With a strong emphasis on materialism, determinism, and reductionism
 - o Very scientific age
 - o Ptolemy & Galen
 - Anatomical, botanical, and astronomical work
 - o 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 of Hippo (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



- o **Charlamange (760-800)**
 - Attempted to restore knowledge
- o **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
- o **Concept of individual was reintroduced into philosophy**
 - But not really studied (cf., Augustine)

Philosophy from the Greeks to Descartes



- o **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**
 - o **William of 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

o 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

o Nicolaus Copernicus (1473-1543)

- Besides placing sun at the center of the universe, he philosophically agreed with Aquinas



Philosophy from the Greeks to Descartes

o Other important scientists involved in the transition

- Tycho Brahe (1546-1601)
- Johannes Kepler (1571-1630)
- Galileo Galilei (1564-1642)



The Renaissance: Working in the Spirit of Mechanism

• Mechanism

- o Mechanical items were becoming commonplace in the 17th century



- Clocks were the impetus



- o 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

- o Originated in physics
 - Work of Galileo and Isaac Newton
- o 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
- o 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
 - o Clock was the metaphor for 17th century spirit of mechanism
 - o Began to consider clocks as models for the universe
 - o 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 17th 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

o 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**
 - o 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*

o 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)

- o Philosopher
- o *An Essay Towards a New Theory of Vision* (1709)
- o *A Treatise Concerning the Principles of Human Knowledge* (1710)
- o 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

o **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)**

- o *A Treatise on Human Nature* (1739)
- o Supporter of Locke's notion of compounding simple ideas into complex ideas
- o Agreed with Berkeley that the material world did not exist until it was perceived
- o 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*

o **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*

o **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)**

- o *Observations on Man, His Frame, His Duty, and His Expectations* (1749)
- o 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*

o **Influence of mechanism**

- Attempted to explain physiological processes in mechanistic terms

• **James Mill (1773-1836)**

- o *Analysis of the Phenomena of the Human Mind* (1829)
- o 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

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