

Lecture 17: Empiricism, Sensationalism, and Positivism

I. INTRODUCTION

A. Introduction

- Descartes had a profound effect on European philosophy.
 - Descartes' claim of innate ideas was very controversial.
- One reaction was the formation of *Empiricism*
 - Philosophy which asserts that knowledge arises from experience.
 - Empiricism emphasizes the role of experience and evidence, especially sensory perception, in the formation of ideas, while discounting the notion of innate ideas

I. INTRODUCTION

A. Introduction

- Rejecting innate ideas meant that the mind is empty at birth.
 - The notion of *tabula rasa* ("clean slate" or "blank tablet") dates back to Aristotle.
 - Was developed into an elaborate theory by Avicenna and demonstrated as a thought experiment by Ibn Tufail (a Persian Philosopher)
- John Locke in the 17th C. argued that the mind is a *tabula rasa*, denying anything is knowable without reference to experience.

I. INTRODUCTION

A. Introduction

- Positivists argued that authentic knowledge can only be based on actual sense experience.
 - Such knowledge can come only from affirmations of theories through strict scientific method.
 - Metaphysical speculation is avoided.
 - Concept was first coined by Auguste Comte in the middle of the 19th century.
 - Comte widely considered the first modern sociologist
 - In the early 20th century, the Positivist movement was picked up by Ernst Mach
 - Science can only study observables!

I. INTRODUCTION

A. Introduction

- Three movements
 - British Empiricists:** They challenged Descartes' doctrine of innate ideas.
 - Thomas Hobbs, John Locke, George Berkeley, David Hume, David Hartley, James Mill, J.S. Mill, Alex. Bain
 - French Sensationalists:** They were materialists who denied Descartes' dualism.
 - Pierre Gassendi ; Julien do La Mettrie; Etienne Bonnot de Condillac; Claude Helvetius
 - Positivists:** Denies innate ideas and believed that science can only study that which can be observed.
 - Auguste Comte, Ernst Mach

II. BRITISH EMPIRICISTS

A. Thomas Hobbes

- Thomas Hobbes (1588 –1679)
 - English philosopher, known for his work on political philosophy.
 - Founder of British empiricism
 - Man is a machine functioning within a larger machine
 - Matter and motion is Galileo's explanation of the universe.
 - Used the deductive method of Galileo and Descartes
 - Attempted to apply the ideas of Galileo to studying humans



II. BRITISH EMPIRICISTS

A. Thomas Hobbes

- Hobbes' Political philosophy
 - Government necessary to control innate tendencies of selfishness, aggressiveness, and greediness.
 - Democracy was dangerous because it gives too much freedom to these tendencies.
 - Was a materialist.
 - Mind was a series of motions within the person (physical monist)
 - Attention
 - Sense organs retain the motion caused by certain external objects
 - Imagination
 - Sense impressions decay over time.



II. BRITISH EMPIRICISTS

A. Thomas Hobbes

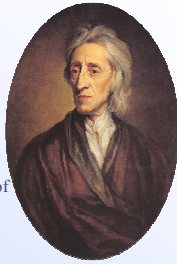
- Hobbes' Political philosophy
 - Proposed a hedonistic theory of motivation
 - Appetite, seeking or maintaining pleasure; aversion, avoidance or termination of pain drove human behavior
 - There is no free will
 - A strict deterministic view of behavior.
 - Complex thought processes resulted from law of contiguity (originating with Aristotle).



II. BRITISH EMPIRICISTS

B. John Locke

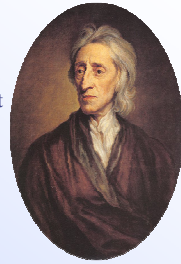
- John Locke (1632 –1704)
 - Regarded as the Enlightenment's most influential thinker.
 - All ideas come from sensory experience -- no innate ideas
 - An idea is a mental image employed while thinking and comes from either sensation (direct sensory stimulation) or reflection (reflection on remnants of prior sensory stimulation).
 - Sensation is the source of ideas.
 - These ideas can be acted upon by operations of the mind giving rise to new ideas.



II. BRITISH EMPIRICISTS

B. John Locke

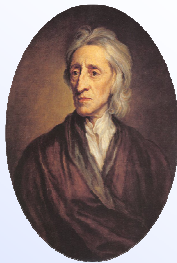
- Operations of the mind
 - Include perception, thinking, doubting, believing, reasoning, knowing, and willing
 - These operations are innate - a part of human nature.
 - Simple ideas cannot be divided further while complex ideas are composites of simple ideas and can be analyzed into parts
 - Complex ideas formed through reflective operations on simple ideas.



II. BRITISH EMPIRICISTS

B. John Locke

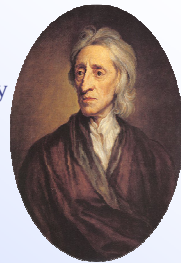
- Feelings
 - Pleasure and pain accompany simple and complex ideas.
 - Other emotions are derived from these two basic feelings.
 - Primary qualities: Ideas related to physical attributes of objects
 - Solidarity, extension, shape, motion, and quantity
 - Secondary qualities: unrelated to the objects in the real world
 - Color, sound, temperature, and taste



II. BRITISH EMPIRICISTS

B. John Locke

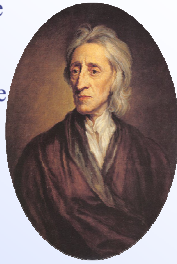
- Association
 - Used to explain faulty beliefs (*a degree of madness*) which are learned by chance, custom, or mistake; associated by contiguity
 - Many ideas are clustered in the mind because of some logical connection among them and some are naturally associated.
 - These are safe types of associations because they are naturally related and represent true knowledge.



II. BRITISH EMPIRICISTS

B. John Locke

- Education of children
 - Parents should increase tolerance in their children and provide necessities for good health
 - Teachers should always make the learning experience pleasant and recognize and praise student accomplishments.
 - Locke challenged the divine rights of kings and proposed a government by and for the people.



II. BRITISH EMPIRICISTS

C. George Berkeley

- George Berkeley (1685 –1753).
 - Irish philosopher who held that individuals can only directly know sensations and ideas of objects not abstractions.
 - He opposed materialism because it left no room for God.
 - Esse is percipi “to be is to be perceived,” which basically states that we exist only in being perceived by another.
 - Therefore, only secondary qualities exist because they are perceived.



II. BRITISH EMPIRICISTS

C. George Berkeley

- George Berkeley
- All sensations that are consistently together (contiguity) become associated.
 - Berkeley’s theory of distance perception suggests that for distance to be judged, several sensations from different modalities must be associated
 - For example, viewing an object and the tactile sensation of walking toward it.



II. BRITISH EMPIRICISTS

D. David Hume

- David Hume (1711 – 1776)
 - Scottish philosopher and a key figure in the history of Western philosophy and the Scottish Enlightenment.
 - Philosophical goal was to combine the empirical philosophy of his predecessors with principles of Newtonian science to create a science of human nature.
 - Focused on Bacon’s inductive method of making careful observations and then generalize



II. BRITISH EMPIRICISTS

D. David Hume

- Philosophy
 - Contents of the mind come from experience
 - Can be stimulated by either external or internal events.
 - Distinguished between impressions and ideas
 - Impressions
 - Strong, vivid perceptions
 - Ideas
 - Weak perceptions
 - Faint images in thinking & reasoning



II. BRITISH EMPIRICISTS

D. David Hume

- Philosophy
 - Simple ideas cannot be broken down further (like Locke)
 - Complex ideas made up of other ideas
 - Once in the mind, ideas can be rearranged in an infinite number of ways because of the imagination.
 - Three laws of association
 - Laws of resemblance, contiguity, and cause and effect
 - Causation is not in reality, not a logical necessity; it's a psychological experience.



II. BRITISH EMPIRICISTS

D. David Hume

- The mind
 - Its no more than perceptions we are having at any given moment.
 - Passions determine behavior
 - All humans possess the same passion (emotions). But all humans differ in degree of specific emotions
 - Therefore, we respond differently to situations.
 - Animals and humans learn to act in ways through experience with reward and punishment.



II. BRITISH EMPIRICISTS

E. David Hartley

- David Hartley (1705 -1757)
 - He was an English philosopher and Associationist school founder
 - Philosophical goal was to synthesize Newton's conception of nerve transmission (vibrations in nerves) with versions of empiricism.
 - Ideas are diminutive vibrations (vibratiuncles) and are weaker copies of sensations.
 - These may become associated through contiguity, either successively or simultaneously.



II. BRITISH EMPIRICISTS

E. David Hartley

- Simple and Complex Ideas
 - Simple ideas become associated by contiguity to form complex ideas
 - Complex ideas can become associated with other complex ideas to form “decomplex” ideas.
- Laws of association
 - They can be applied to behavior to describe how voluntary behavior can develop from involuntary behavior.



II. BRITISH EMPIRICISTS

E. David Hartley

- Philosophical Ideas
 - Proposed that excessive nerve vibration produced pain and mild to moderate vibration produced pleasure.
 - Objects, events, and people become associated with pain or pleasure through experience, and we learn to behave differentially to these stimuli.



II. BRITISH EMPIRICISTS

F. James Mills

- James Mills (1773 – 1836)
 - He was a Scottish historian, economist, political theorist, and philosopher.
- A follower of utilitarianism
 - Concept of hedonism, which was the cornerstone of Jeremy Bentham’s political and moral philosophy
- The mind was sensations and ideas held together by contiguity
 - Complex ideas were made of simple ideas.



II. BRITISH EMPIRICISTS

F. James Mill

- James Mill
 - When ideas are continuously experienced together, the association may become so strong that they appear as one idea.
 - Strength of associations is determined by:
 - Vividness of the sensations or ideas
 - By the frequency of the associations



II. BRITISH EMPIRICISTS

G. John Stewart Mill

- John Stewart Mill (1806 – 1873)
 - He was a British philosopher, political economist, civil servant and Member of Parliament.
 - Proposed a mental chemistry in which complex ideas are not made up of aggregates of simple ideas but that ideas can fuse to produce an idea that is completely different from the elements of which it is made.



II. BRITISH EMPIRICISTS

G. John Stewart Mill

- John Stewart Mill
 - Mill argued for a “science of the formation of character”, which he called ethology.
 - His ethology would explain how individual minds or characters form under specific circumstances.
 - Mill was a social reformer who took up the causes of freedom of speech, representative government, and the emancipation of women.



II. BRITISH EMPIRICISTS

H. Alexander Bain

- Alexander Bain (1818 – 1903)
 - He was a Scottish philosopher and educational theorist.
 - Often referred to as the first full-fledged psychologist.
 - Goal was to describe the physiological correlates of mental and behavioral phenomena.
 - The mind assumed to have three components:
 - Feelings, Volition, Intellect



II. BRITISH EMPIRICISTS

H. Alexander Bain

- Alexander Bain
 - Intellect is explained by the laws of association.
 - Primarily the law of contiguity which applies to sensations, ideas, actions, and feelings.
 - Contiguity supplemented by the law of frequency.
 - The laws had their effect in neuronal changes in the nervous system.



II. BRITISH EMPIRICISTS

H. Alexander Bain

- Two other laws of association
 - Law of compound association
 - Single ideas are not associated, rather an idea is usually associated with several other ideas through contiguity or similarity.
 - Law of constructive association
 - Mind can rearrange memories of experiences into an almost infinite number of combinations, accounts for creativity.



II. BRITISH EMPIRICISTS

H. Alexander Bain

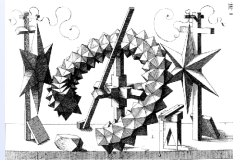
- Explanation of voluntary behavior
 - When a need arises, spontaneous or random activity is produced.
 - Some of those movements will produce approximate conditions necessary to satisfy the need but other movements will not.
 - Activities which produce need satisfaction are remembered.
 - When in similar situation again, the activities which previously produced need satisfaction will be performed.
 - This is essentially Skinner's selection of behavior by consequences.



III. French Sensationalists

A. Introduction

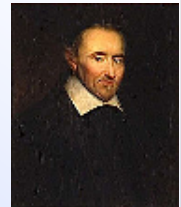
- Sensationalists
 - Descartes' dualism ran into the Renaissance view of a mechanical universe
 - Universe as clockworks: Conception of the universe along mechanical lines.
 - The sensationalists were materialistically oriented
 - Their goal was to explain the mind as Newton had described the physical world.



III. French Sensationalists

B. Pierre Gassendi

- Pierre Gassendi (1592 – 1655)
 - He was a French philosopher, scientist, astronomer.
 - He was one of the first to formulate the modern "scientific outlook", of scepticism and empiricism.
 - Clashed with Descartes on the possibility of certain knowledge.
 - Goal was to replace Descartes' deductive and dualistic philosophy with an observational inductive science based on physical monism



III. French Sensationalists C. Julien de La Mettrie

- Julien de La Mettrie (1709 - 1751)
- Early French materialists
 - He rejected the Cartesian dualism of mind and body, and claimed that human beings were machines.
- He claimed:
 - The universe is made of matter and motion
 - Sensation and thoughts are movements of particles in the brain
 - Man is a machine.



III. French Sensationalists C. Julien de La Mettrie

- Julien de La Mettrie
- Humans and animals differ only in degree (of intelligence)
 - Intelligence influenced by 3 factors
 - Brain size, brain complexity, and education
 - By education, La Mettrie meant we have more complex everyday interactions with other people
 - Humans
 - Humans are typically superior in intelligence to animals because we have bigger, more complex brains and because we are better educated.



III. French Sensationalists D. Etienne Bonnot de Condillac

- Etienne Bonnot de Condillac (1715 - 1780)
- Like Locke, claimed that sensation is the source of ideas
 - Mind's operations on sensations produce complex ideas and are associated with emotions.
- Powers which Locke attributed to the mind can be derived from the abilities to sense, to remember, and experience pleasure and pain.



III. French Sensationalists E. Claude Helvetius

- Claude Helvetius (1715 – 1771).
- He regarded the human mind as a blank slate.
 - Free not only from innate ideas but also from innate natural dispositions and propensities.
- Physiological constitution was at most a peripheral factor in men's characters or capabilities.
 - Apparent inequalities were due to unequal desire for instruction.



III. French Sensationalists

E. Claude Helvetius

- Claude Helvetius
 - Proposed that if you controlled the experience of a person, you also controlled the mind of that person
 - Thus social skills, moral behavior, and genius can be taught by controlling experience.
 - Empiricism became radical environmentalism.



IV. POSITIVISM

A. Introduction

- Science can only study what is observable
 - The key features of positivism:
 - A focus on science as a product, a linguistic or numerical set of statements.
 - A concern with demonstrating the logical structure and coherence of these statements.
 - An insistence on at least some of these statements being testable (verified, confirmed, or falsified) by the empirical observation of reality.
 - Excluded expressions of teleology;
 - The belief that science is markedly cumulative.
 - The belief that science is predominantly transcultural.

IV. POSITIVISM

A. Introduction

- Science can only study what is observable
 - The key features of positivism:
 - The belief that science rests on results that are dissociated from personality and social position of the investigator.
 - The belief that science contains theories or research traditions that are largely commensurable.
 - The belief that science sometimes incorporates new ideas that are discontinuous from old ones.
 - The belief that science involves the idea of the unity of science.
 - That there is, underlying the various scientific disciplines, basically one science about one real world.

IV. POSITIVISM

B. Auguste Comte

- Auguste Comte (1798 – 1857)
 - Proposed that the only thing we can be sure of is that which is publicly observable.
 - Sense experiences that can be perceived by others
 - Positivism equates knowledge with empirical observations
 - Proposed the law of three stages defined by the way natural events are explained.
 - Applied to members of disciplines or societies



IV. POSITIVISM

B. Auguste Comte

- The law of three stages
 - First stage
 - Theological, based on superstition and mysticism
 - Second stage
 - Metaphysical, based on unseen essences, principles, causes, and laws
 - Third stage
 - Scientific, description, prediction, and control of natural phenomena.
- Sociology described the study of how different societies compared in terms of the three stages of development.



IV. POSITIVISM

B. Auguste Comte

- Proposed a religion of humanity which was a utopian society based on scientific principles and beliefs.
- Humanity replaced God; scientists and philosophers would be the priests in this religion
- Also arranged sciences in a hierarchy from the first developed and most basic to the most recently developed and most comprehensive in this order:
 - Mathematics → astronomy → physics
→ chemistry → physiological biology
→ sociology



IV. POSITIVISM

C. Ernst Mach

- Ernst Mach (1838 – 1916)
 - He was an Austrian physicist and philosopher
 - Proposed a second brand of positivism: Logical Positivism
 - Differed from Comte's positivism primarily in what type of data science could be certain about.
 - Scientific laws are summaries of experimental events, having more to do with describing sensations than with reality as it exists beyond sensations.
- He thought that we can never experience the physical world directly.

