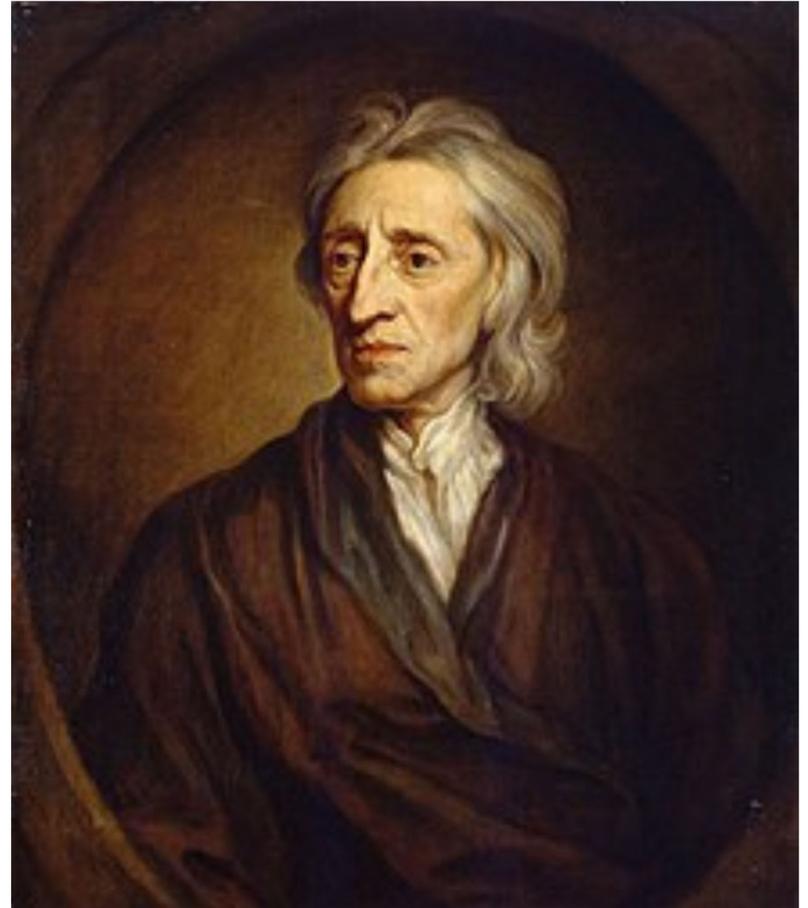


John Locke

29 August 1632 – 28 October 1704



Influence of History on Locke and His Work

- Last 60 years of 17th century
 - Locke (1632-1704)

- Political and Civil Unrest
 - Divine Right & Absolutist Actions of monarchs
 - Charles I (1625-1649)
 - Charles II (1660-1685)
 - James II (1685-1688)
 - State-Mandated Religion & Religious Tolerance
 - Anglicanism
 - Puritanism
 - Catholicism

Influence of History on Locke and His Work

- Locke's position
 - Opposed the divine right and absolutism of monarchs
 - Supported religious tolerance
- Exile in Dutch Republic (1683-1688)
- Completed three major works
 - *Two Treatises of Government* (1690)
 - *A Letter Concerning Toleration* (1690)
 - *An Essay Concerning Human Understanding* (1690)

An Essay Concerning Human Understanding

- ❖ Book I – Refutes the concept of Innateness advanced by Descartes and others
- ❖ Book II – Develops his theory of Ideas, Memory, and Human Understanding
- ❖ Book III – Words aid our memory and enable communication of ideas to others
- ❖ Book IV – Addresses Knowledge, Reason, and Judgement

An Essay Concerning Human Understanding *Introduction*

- Why study human understanding?
 - Understanding sets us above *the rest of sensible beings*
- Focus - Inquiry
 -*origin, certainty, and extent of human knowledge*
- Limited to human knowledge
 - Excludes physical consideration of the mind or body
- First Step
 -*survey of our own understandings, examine our own powers, and see to what things they were adapted.*

An Essay Concerning Human Understanding - Book I
Innateness – Universal-Assent Argument

- Universal-Assent Argument - If ideas/principles are innate, they must be known to be true universally
- Principles of the Mind:
 - Law of Identify (Whatever is, is) & Law of Non-Contradiction (A thing cannot be and not be)
 - Counter Argument: Small children do not understand these simple principles.
- Practical (Moral) Principles:
 - Counter Argument: many men are unaware of moral rules.
- Idea of God:
 - Counter Arguments: (1) Atheists; (2) Cultures with no notion of God

An Essay Concerning Human Understanding - Book II

Ideas

Chapter I - *Of Ideas in general, and their Origin*
Chapter II - *Of Simple Ideas*
Chapter III - *Of Ideas of one Sense*
Chapter IV - *Of Solidity*
Chapter V - *Of Simple Ideas of divers Senses*
Chapter VI - *Of Simple Ideas of Reflection*
Chapter VII - *Of Simple Ideas of both Sensation and Reflection*
Chapter VIII - *Some farther Considerations concerning our
Simple Ideas*
Chapter IX - *Of Perception*
Chapter X - *Of Retention*
Chapter XI - *Of Discerning, and other Operations of the Mind*
Chapter XII - *Of Complex Ideas*
Chapter XIII - *Of Simple Modes, and first of the Simple Modes
of Space*
Chapter XIV - *Of Duration, and its simple Modes*
Chapter XV - *Of Duration and Expansion, considered together*
Chapter XVI - *Of Number*
Chapter XVII - *Of Infinity*

Chapter XVIII - *Of other Simple Modes*
Chapter XIX - *Of the Modes of Thinking*
Chapter XX - *Of Modes of Pleasure and Pain*
Chapter XXI - *Of Power*
Chapter XXII - *Of mixed Modes*
Chapter XXIII - *Of our complex Ideas of Substances*
Chapter XXIV - *Of collective Ideas of Substances*
Chapter XXV - *Of Relation*
Chapter XXVI - *Of Cause and Effect, and other
Relations*
Chapter XXVII - *Of Identity and Diversity*
Chapter XXVIII - *Of other Relations*
Chapter XXIX - *Of Clear and Obscure, Distinct and
Confused Ideas*
Chapter XXX - *Of Real and Fantastical Ideas*
Chapter XXXI - *Of Adequate and Inadequate Ideas*
Chapter XXXII - *Of true and false Ideas*
Chapter XXXIII - *Of the Association of Ideas.*

An Essay Concerning Human Understanding - Book II

- We all have ideas - How do we acquire them
- Mind as a tabula rasa (blank page) when were born
- Locke's thesis:
 - *all our ideas take their beginnings from those two sources—external material things as objects of sensation, and the operations of our own minds as objects of reflection.*
 - Ideas of Sensation*the great source of most of the ideas we have*
 - Ideas of Reflection*the notice that the mind takes of what it is doing*

An Essay Concerning Human Understanding - Book II

- New-born children acquire ideas gradually over time
 - Awareness of the operation of the mind comes later - if at all
- Mind fitted to receive ideas of sensation and of reflection – First step toward discovery – *basis on which to build all the notions he [a man] will ever have in this world*
- Mind is mostly passive in receiving simple ideas

An Essay Concerning Human Understanding - Book II

- Idea:
 - Whatever the mind perceives
 - Immediate object of perception, thought, or understanding
 - Most basic unit of human thought

- Simple Ideas: Ideas that the mind receives passively, only by sensation and reflection
 - Sensation - sight, sounds, touch, tastes and smells
 - Different senses - more than one sense, e.g., space, extension, shape, rest, and motion
 - Reflection
 - Power of thinking (understanding)
 - Power of volition (will)
 - Both sensation and reflection – e.g., pleasure; delight; pain; uneasiness; power; existence; unity

An Essay Concerning Human Understanding - Book II

- Perception: *the Mind is mostly passive*
 - *Mind's first way of engaging with ideas*
 - *First and simplest idea we have from reflection.*

- Thinking: *stands only for operations on ideas in which the mind is active, coming to bear on something with some degree of voluntary attention.*

- Retention:
 - *Mind's ability to keep simple ideas*

- Operations of the mind:
 - *Distinguishing one idea from another*
 - *Comparing ideas, etc.*

An Essay Concerning Human Understanding – Book II

Complex Ideas

- Ideas combined to form a compound idea
 - 1) Combine simple ideas – collections, e.g., dozen; score; beauty; theft; human; army
 - 2) Combine complex ideas – relationships, e.g., cause & effect
 - 3) Abstraction – idea of common feature independent of its origins
 - Idea of the color white independent of Chalk, Snow or Milk
- Ability to conceive of ideas that vastly exceed what sensation and reflection are capable of providing
- Three types of Complex Ideas:
 - 1) Modes
 - 2) Substances
 - 3) Relations

An Essay Concerning Human Understanding - Book II

Substance

- Substance: *an uncertain supposition of we know not what.....the substratum, or support, of those ideas we know*
- Particular Substance: A consistent collection of particular simple ideas, plus a substratum
 - Examples: Iron – Gold - Horse - Man
- Quality: **Power** to produce an idea in our mind
 - Primary: size, shape, number, position, and motion (Independent of observer; not subjective)
 - Secondary: color, taste, sound, hot, cold, hardness, etc. (What we “sense”)
 - Tertiary: power of a lodestone to attract iron (One object “affects” another)
- Collective Idea: Many particular substances unified and considered as a single entity
 - Army
 - Constellation
 - Taxonomic Rank – Domain, Kingdom, Phylum, Class, Order, Family, Genus, Species

An Essay Concerning Human Understanding - Book II

- Substances are **corporeal**, i.e., **real**
 - Its qualities are supported by a **material** substratum or substance, though we know not what it is

- ❖ Nominal Essence: Observable through the Senses
 - ❖ Collection of particular, primary, secondary and tertiary qualities one observes together in a substance

- ❖ Real Essence: The internal constitution of a body
 - ❖ the real but usually unknown inner nature on which its perceptible qualities depend

An Essay Concerning Human Understanding - Book II *Body – Spirit - God*

○ **Body**

- An extended solid substance, capable of communicating motion by impulse

○ **Soul**

- An immaterial spirit, a substance that thinks and has a power of exciting motion in a body, by willing, or thought

○ **Ideas of Corporeal and Spiritual Substances**

- Don't know/understand the Real Essence of either
- Yet we accept the real existence of body – corporeal substance
- Can't assert nonexistence of spiritual substance

○ **God**

- The ideas of existence, knowledge, power, pleasure, etc., infinite and eternal

An Essay Concerning Human Understanding - Book III

Words

Chapter II	- <i>Of the Significance of Words</i>
Chapter III	- <i>Of general Terms</i>
Chapter IV	- <i>Of the Names of simple Ideas</i>
Chapter V	- <i>Of the Names of mixed Modes and Relations</i>
Chapter VI	- <i>Of the Names of Substances</i>
Chapter VII	- <i>Of Abstract and Concrete Terms</i>
Chapter VIII	- <i>Of Particles</i>
Chapter IX	- <i>Of the Imperfection of Words</i>
Chapter X	- <i>Of the Abuse of Words</i>
Chapter XI	- <i>Of the Remedies of the foregoing Imperfections and Abuses</i>

Locke credits God with making man **a sociable with creature and providing him with language** to accomplish this. However, **he credits nature with man's ability to articulate sounds, which we call 'words'**.

words must be linked to *internal conceptions, making them stand as marks of ideas, in our own minds*

An Essay Concerning Human Understanding - Book III

- Words have two uses:
 - ❖ *to record their own thoughts as an aid to their memory;*
 - ❖ *to bring their ideas out into the open (so to speak) where others could see them* [i.e., to communicate]
- General Terms or Names: most Words in all languages are general terms
 - ❖ Examples – man, woman, bird, island, sand, grass, etc.
- Names
 - ❖ Arbitrary - no natural relation to the thing or abstract idea they represent
 - ❖ Exist in the mind of the individual using them
 - ❖ If generally agreed upon, they become part of a language
- Imperfection of Words – complex concepts; different/multiple definitions
- Misuse of Words – using wrong word; using word without clear understanding of its meaning
- Remedies for Imperfections and Misuse – basically diligence in understanding meaning and using words.

An Essay Concerning Human Understanding - Book IV

Knowledge and Its Limitation

Chapter I	- <i>Of Knowledge in General</i>
Chapter II	- <i>Of the Degrees of our Knowledge</i>
Chapter III	- <i>Of the Extent of Human Knowledge</i>
Chapter IV	- <i>Of the Reality of Knowledge</i>
Chapter V	- <i>Of Truth in General</i>
Chapter VI	- <i>Of Universal Propositions, their Truth and Certainty</i>
Chapter VII	- <i>Of Maxims</i>
Chapter VIII	- <i>Of Trifling Propositions</i>
Chapter IX	- <i>Of our Knowledge of Existence</i>
Chapter X	- <i>Of our Knowledge of the Existence of a God</i>
Chapter XI	- <i>Of our Knowledge of the Existence of other Things</i>

Chapter XII	- <i>Of the Improvement of our Knowledge</i>
Chapter XIII	- <i>Some farther Considerations concerning our Knowledge</i>
Chapter XIV	- <i>Of Judgment</i>
Chapter XV	- <i>Of Probability</i>
Chapter XVI	- <i>Of the Degrees of Assent</i>
Chapter XVII	- <i>Of Reason</i>
Chapter XVIII	- <i>Of Faith and Reason, and their distinct Provinces</i>
Chapter XIX	- <i>Of Enthusiasm</i>
Chapter XX	- <i>Of wrong Assent, or Errour</i>
Chapter XXI	- <i>Of the Division of the Sciences</i>

Since the mind in all its thoughts and reasonings has no immediate object other than its own ideas, which are all it can contemplate, it is evident that our knowledge has to do only with them. Knowledge, then, seems to me to be nothing but the perception of the connection and agreement, or disagreement and incompatibility, of any of our ideas. That is all it is.

Definition of Knowledge

Oxford Dictionary

1. Facts, information, and skills acquired through experience or education; the theoretical or practical understanding of a subject

❖ Synonyms

- understanding, comprehension, grasp, grip, command, mastery, apprehension
- learning, erudition, education, scholarship, letters, schooling, science
- familiarity with, acquaintance with, conversance with, intimacy with information,
- facts, data, intelligence, news, reports

i. The sum of what is known

ii. Information held on a computer system.

iii. Philosophy - True, justified belief; certain understanding, as opposed to opinion

An Essay Concerning Human Understanding - Book IV

- Knowledge: *the perception of the connexion and agreement, or disagreement and repugnancy of any of our Ideas*
- Four types of agreement, disagreement, and incompatibility of Ideas
 1. Identity and Diversity: Same or Different
 2. Relationship: Not the same, but related
 3. Coexistence or Non-Coexistence: Two qualities may or may not exist together in same substance
 4. Real Existence; Something corresponding to an idea has real existence outside the mind

An Essay Concerning Human Understanding - Book IV

- Three Degrees of Knowledge: Based on how we come to knowledge
 1. Intuitive Knowledge: Memory of relationship between ideas; Directly and immediately recognized
 2. Demonstrative Knowledge: Reasoning
 3. Sensitive Knowledge: Perceptions of existence of something outside the mind; Conveyed through senses
- Demonstrative Knowledge - more certain
- Intuitive Knowledge - *more clearly and brightly evident*, though often less certain
- Sensitive Knowledge - less certain than either demonstrative or intuitive knowledge
- Faith & Opinion – are not Knowledge, however confidently one might accept them

An Essay Concerning Human Understanding - Book IV

○ Basic criteria to acquire Knowledge:

- ❖ Must possess the requisite ideas
- ❖ Must have a clear understanding of these ideas
- ❖ Must recognize the ways in which they are related to each other

○ Certainty in Knowledge:

- ❖ Material Things: Knowledge of material qualities & substances is **always limited in certainty**
- ❖ Non-Substantial Things: Mathematical and Moral knowledge is **perfect certainty**

○ Truth:

- ❖ Truth of Thought or Mental Truth: Comparing ideas in the mind to determine agreement or disagreement
- ❖ Truth of Words or Verbal Truth: Stating in words a Mental Truth
 - Falsehood – Statement contrary to Mental Truth

An Essay Concerning Human Understanding - Book IV

- Basic Theme of Locke's Epistemology:
 - Can't know everything
 - Respect the extent & limitations of human knowledge
 - Awareness - avoid haste, laziness, and despair in search for truth

- Perfect Knowledge and Certainty: Not required in everyday life
 - Starve if we waited for demonstrative certainty....but none of us forget to eat
 - In most cases, lack genuine knowledge
 - Judgement is often enough
 - Accept presumptive agreement between ideas without demanding certainty

An Essay Concerning Human Understanding – Book IV Probable Knowledge

- Degree of agreement with proposition - depends on strength of supporting evidence
- ❖ Basing judgement on memory of past experience – potentially dangerous practice
 - Memory can be faulty
 - Prior judgement could have been faulty
 - New information may be available, etc.
 - Practical Necessity – Can't develop beliefs every time a new situation arises
- ❖ Degrees of Probable Knowledge - decreasing order
 - General consent of all human beings happens to coincide with one's own invariable experience
 - The unanimous testimony of impartial witnesses
 - Opinion/words of some authority
 - Agreement with opinions one already holds

The difficulty of applying judgment successfully, Locke suggested, should encourage us to be patient & tolerant of those who disagree with us on matters about which neither side can claim anything more sure than probable opinion

An Essay Concerning Human Understanding *Reaction, Response, and Influence*

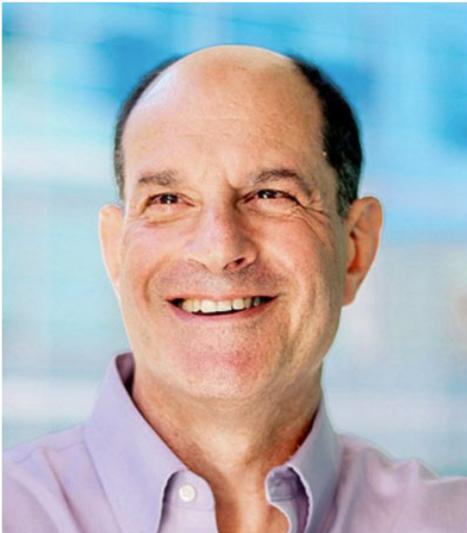
- Many of Locke's views were sharply criticized by rationalists and empiricists alike
 - ❖ Leibniz – 1704: A chapter-by-chapter rebuttal, entitled the *New Essays on Human Understanding*
 - ❖ Berkeley – 1710: *A Treatise Concerning the Principles of Human Knowledge*
- Locke's work provided crucial groundwork for future empiricists such as David Hume
- “Voltaire found the humane counterpart to Newton’s physics in the psychology of John Locke”
 - ❖ *Just as a skilled anatomist explains the workings of the human body, so does Locke's “Essay on the Human Understanding” give the natural history of consciousness. ... So many philosophers having written the romance of the soul, a sage has arrived who has modestly written its history.*
Voltaire (1694-1778)

Backup

An Essay Concerning Human Understanding - Book II Modes

- Simple Modes – Variations or Combinations of a single Simple Idea
 - Modes of Quantity - Ideas of dozen and score
 - Modes of Duration – Idea of time
 - Modes of Space – Ideas of position, length, distance, capacity, etc.
 - Modes of Pain & Pleasure – Ideas of good & evil, love & hate, joy & sorrow
- Mixed Modes – Combinations of several simple ideas
 - Beauty
 - Theft
 - Murder
 - Obligation
 - Drunkenness
 - A lie

Nobel Prize – Medicine & Physiology *Simple Ideas of Sensation*



Scientists who discovered how our bodies feel the warmth of the sun or the hug of a loved one have won the Nobel Prize.

Source: BBC News

David Julius and Ardem Patapoutian, from the US, share the 2021 prize in Medicine or Physiology for their work on sensing touch and temperature.

They unpicked how our bodies convert physical sensations into electrical messages in the nervous system. Their findings could lead to new ways of treating pain.

"Prof David Julius's breakthrough, at the University of California, San Francisco, came from investigating the burning pain we feel from eating a hot chilli pepper. He discovered the specific type of receptor (a part of our cells that detects the world around them) that responded to capsaicin.

Prof Julius and Prof Ardem Patapoutian found one [receptor] that could detect cold.

Meanwhile, Prof Patapoutian, working at the Scripps Research institute.....[conducted experiments led to the discovery of a different type of receptor that was activated in response to mechanical force or touch.

The first heat sensor (called TRPV1) is also involved in chronic pain and how our body regulates its core temperature.

The touch receptor (PIEZ02) has multiple roles, from urinating to blood pressure.

The Prize Committee said "This knowledge is being used to develop treatments for a wide range of disease conditions, including chronic pain."