Religion, Meet Science

(Chapter 3)

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In the Beginning
The United States

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  - Logic and reason helped ensure religious freedom
  - This is why religious mentality was not incorporated into the Declaration of Independence

In the Beginning
God's Natural Law is Reason

From approx. 700 C.E. to 900 C.E.

- Mu'tazilites mode of study
  - Discern God's will by studying nature
  - God speaks through nature

Figure: Mu'tazilite Science

In the Beginning
God's Natural Law is Reason

1517 C.E.

- Martin Luther nails his 95 theses to the door of a Catholic church to protest the Church's practices
  - Protestants argued that knowledge comes from observing God's Word, not the Pope's word

Figure: Martin Luther

In the Beginning
God's Natural Law is Reason

1518 C.E.

- Protestant polemicist St. Germain supports "do it yourself" Bible study
  - Protestants argued that knowledge comes from observing God's Word, not the Pope's word
  - Use one's own experience of the Bible to find truth
    This approach is in the same "anti-authoritarian" vein as the modern scientific approach (make observations, then come to conclusions)

Figure: Martin Luther

In the Beginning
God's Natural Law is Reason

Early 1600's

- Puritan sympathizer Edward Coke argues that scientific laws could be studied by everyone, and could not be overruled by the crown.

Figure: Edward Coke

In the Beginning
God's Natural Law is Reason

Late 1500's to mid 1600's

- Puritans supported a logical, antiauthoritarian approach to theology:
  - Making your own observations from the Bible and not relying on the Pope
  - Use observations to draw broader theological conclusions
  - Puritans study Mu'tazilite science books

Figure: Edward Coke

The Islamic Keepers of Science

Islam was the leader in scientific knowledge up through he 15th century. With the largest scientific university at the time, they were able to translate and communicate all aspects of math and science to all different languages and religions. However, when the Renaissance began, a religionist culture switch in Islam made God more popular than science and their scientific advances came to a halt while European scientists and philosophers took over.

The DNA of Western Thought

- Western Christianity is composed of two main groups:
  1. Roman Catholicism
     Believe in tradition and that the Pope is the only way to God
  2. Protestantism
     Believe that the Catholic Church is corrupt and that everyone can have an individual relationship with God
- Luther (Protestant) used the printing press to sell over 100,000 bibles in forty years so that people could read the Bible and come to their own conclusions
- This was the beginning of a split in Western thought between anti-authoritarian and authoritarian views in government, economics, and science

Descartes vs. Bacon
Descartes

Descartes focused on the "mind-body split"

- Said that conclusions are only valid if they follow logically from the premise
- "I think therefore I am" - *Renee Descartes*
- Wanted to embrace skepticism
- Said that senses are unreliable and a source of untruth and illusion
  Only reliable from a mind that was separate from the body

Descartes vs. Bacon

Bacon

Bacon focused on science and published a "New Instrument of Science"

- Inductive reasoning -
  From bottom up, observing with senses and then building logical steps to reach a general conclusion about reality
- His method is "Flawed" because conclusions are provisional and leave room to be disproved

Bacon's method is good for science because it

- contains a provisional "probably" statement
- shows how math and science have become important, quantifies whether a relative probability is T/F

Puritan Science
Francis Bacon

Francis Bacon's method of scientific thought states that Conclusions are made because they are supported by all the facts observed so far. This is very similar to the Puritan method of thinking regarding philosophy and religion.

Puritan Science
Puritan Frustrations

- Since Protestantism was a protest against Catholic authority, Puritans disliked Catholic indictments or Christian fundamentalism.
  - Indictment of Galileo
  - Disliked denial of opinions supported by observation of nature, therefore evidence of God's will, because it conflicted with scripture
- Believed the Church of England was too Catholic
  - Demanded a new translation of the Bible in 1604 (the "King James" version)
  - Believed having a monarch that was also the head of a church was incompatible and hypocritically self-serving
- King Charles I's reintroduction of Catholicism to England and similar absolutism behavior led to Puritan migration to America

Puritan Science

Puritan and Anti-Authoritarian Influence in America

- Edward Coke
  - While in Parliament he attempted to limit the king's powers, including writing the Petition of Right, which laid out these basic rights the US would later adopt:
    1. Taxes levied only by Parliament not by the king
    2. No martial law in peacetime
    3. Soldiers could not be forcibly housed by civilians
  - Influenced the English Civil Wars and led to the Restoration of the Church of England and tolerated Puritanism
    Due to Puritanism encouraging individual liberty, many great scientists were members
- Isaac Newton
  - Wrote *Mathematical Principles of Natural Philosophy*
  - Influenced Thomas Jefferson's writing in the Declaration of Independence

The Sciencist-Politician

Thomas Jefferson

- Appointed by the Continental Congress to draft the Declaration of Independence, Jefferson was heavily influenced by Isaac Newton and Edward Coke's writings to establish:
  - A limit on the power of a monarch by writing a document for the US that was based on knowledge and reason, not God
  - A country based on the rule of men, a democracy, which would be appealing to people of all religions and denominations as one would not have power over the others
- As president he commissioned the Lewis and Clark expedition. He received support for it from Congress by presenting it as an economic initiative, but in reality he ordered Lewis to undergo the journey as though it were a scientific expedition.

How Do We *Know* Things?
Locke

Locke was an English, Protestant philosopher who created the foundations for empiricism. He divided human thought into two categories:

1. Knowledge
2. Belief

This difference between what is known and what is believed was a great influence on Thomas Jefferson. In fact, Jefferson called Locke "[one] of the greatest men the world had ever produced"

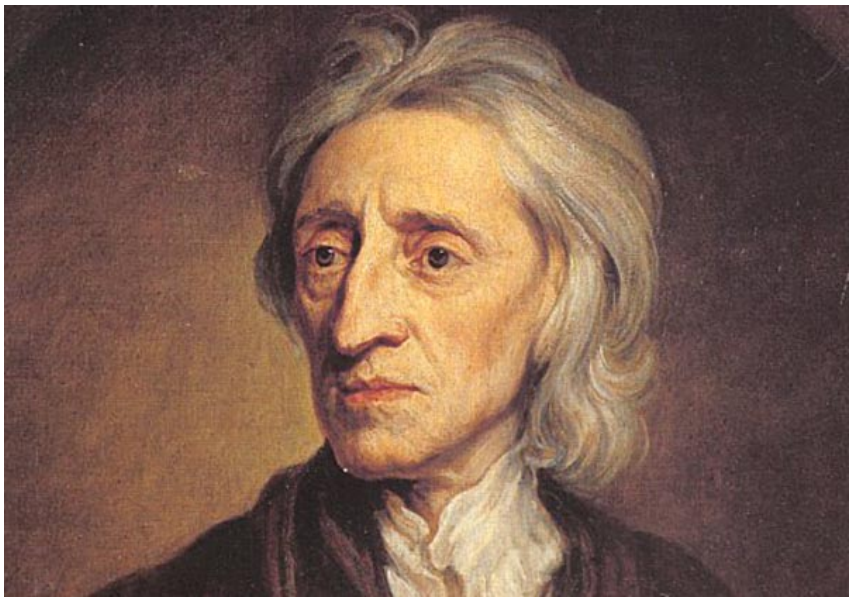

Figure: John Locke

How Do We *Know* Things?
Knowledge

Knowledge - which itself he divided into three distinct types

- Intuitive - Knowledge which is "self-evident"; "common sense"
- Demonstrative - Knowledge which can be shown to be true using a rigorous list of steps in reasoning (called "proofs")
- Sensitive - Knowledge which is gained from observing the world.

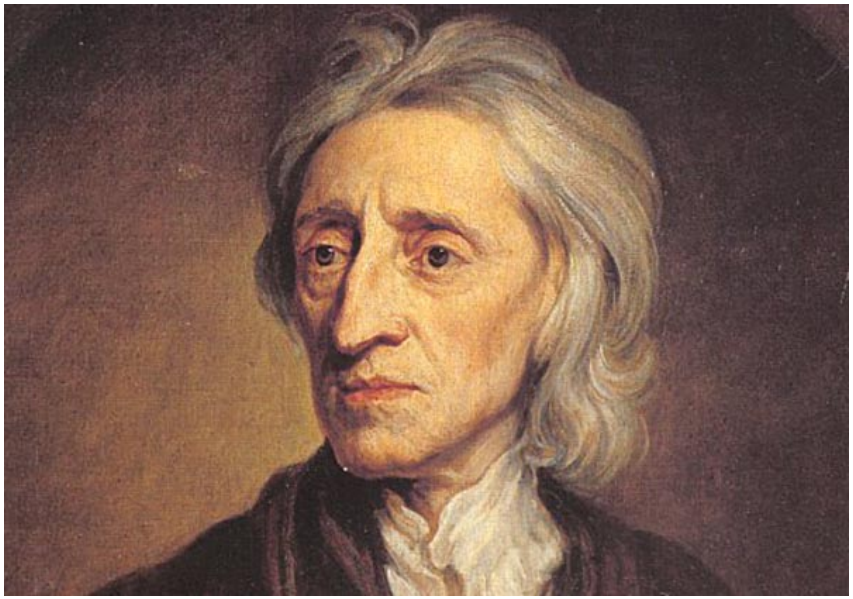

Figure: John Locke

Seventeen Days in June

- Jefferson strove to create a scientific foundation for democracy
  - By allowing all to discover truth through this scientific method, no one person "knows" the truth better than another, creating an equal field
  - If everyone can find this same democratic truth, no one has the right to impose their beliefs on another
- Worked for 17 days to attempt to create a logically infallible document by combining his ideals of science, knowledge, freedom and democracy
- Would give the people the right to reject authoritarian tyranny as illegitimate on the grounds of logic and the scientific method
- First draft of the document had trouble with including authoritarian religious assumptions