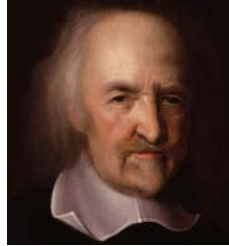


**PSY 3360 / CGS 3325  
Historical Perspectives  
on Psychology  
Minds and Machines since 1600**

**Dr. Peter Assmann  
Spring 2012**

**Thomas Hobbes (1588-1679)**



- All knowledge is derived from observation.

*“There is no conception in man's mind which hath not at first, totally or by parts, been begotten upon the organs of sense.”*

**Thomas Hobbes (1588-1679)**

- mechanistic principles govern the universe:  
**matter** and **motion**
- material monist
- determinist



**Thomas Hobbes (1588-1679)**



- **Materialism** – cognition and mental processes are based on the same laws that govern physical objects.
  - Perception
  - Memory
  - Attention

**Thomas Hobbes (1588-1679)**

- **principle of association:** continuity, cohesion, interconnectedness of ideas
- **Drives:** “appetites” and “aversions”

**Political and social writing**

- **Hedonism;** principle of self-interest
- **Free will** is an illusion created by inherent conflicts between appetites and aversions

## Political and social writing

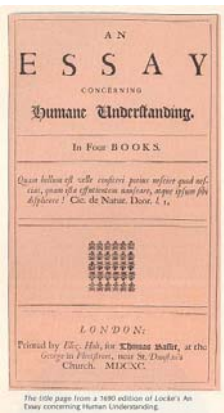
- *Leviathan* – “great beast”
  - view of mankind in the “natural state”
  - laws and rules are the product of fear of the consequences of everyone acting out of self-interest
  - laws and rules are conventions, not binding in any absolute sense
  - rational self-interest leads to support of a strong monarch



## John Locke (1632-1704)



- Empiricist view of the construction of human knowledge
- The mind at birth is a “tabula rasa” (blank slate)
- There are no innate ideas

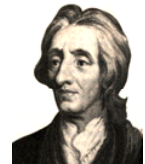


## Locke's *Essay*

- Where do ideas come from?
- Not innate, because even the most widely held beliefs are not shared by everyone.
- All knowledge comes from experience: **sensation** and **reflection**.

## John Locke (1632-1704)

- *Idea* – basic unit of perception and thought (mental image)
- *Operations of the mind* – mental abilities



## John Locke (1632-1704)

- *Simple ideas* and *complex ideas*
  - Simple ideas are the “building blocks” of thought; cannot be broken down or analyzed further



## John Locke (1632-1704)

- *Simple ideas* and *complex ideas*
  - Some simple ideas come from **sensation** (color, taste, smell)
  - Some come from **reflection** (memories, thoughts, intentions)



## John Locke (1632-1704)

- *Simple ideas and complex ideas*
  - Complex ideas are composites of simple ideas; the mind can form unlimited combinations of ideas



## John Locke (1632-1704)

- *Primary qualities* – perceived attributes resemble the physical objects that cause them
- *Secondary qualities* – perceived attributes do not correspond to any physical properties



## John Locke (1632-1704)

- Paradox of the basins
  - Does warmth reside in the water basin or in the mind?
  - Warmth is a secondary quality



## John Locke (1632-1704)

- Physical realism
  - physical objects stimulate the sense organs and cause the mind to form an accurate representation of external reality
- Copy theory of perception (Democritus, 460-370 BC)



## Molyneux's problem

*“Suppose a man born blind, and now adult, and taught by his touch to distinguish between a cube and a sphere of the same metal, and nighly of the same bigness, so as to tell, when he felt one and the other, which is the cube, which the sphere. Suppose then the cube and sphere placed on a table, and the blind man be made to see: quaere, whether by his sight, before he touched them, he could now distinguish and tell which is the globe, which the cube?”*

## Molyneux's problem

- Based on their philosophical positions, how would each of the following respond to the question?
  - Descartes
  - Leibniz
  - Locke



## Molyneux's problem



- English surgeon and anatomist William Cheselden (1688-1752) published an account of a congenitally blind boy's experiences after cataract removal.
- At first the boy found it difficult to distinguish shapes and recognize objects.
- Critics suggested that the boy did not have enough time to recover from the operation.



## Molyneux's problem



- Infant studies
- Visual deprivation experiments
- Experiments with sensory substitution systems show that participants need some time to learn to distinguish and identify objects

## John Locke (1632-1704)

- Blind people cannot comprehend color terms
- Private language of sensory experience
- Problem of other minds



## Locke's contributions

- Animals have memory, form simple ideas through sensation and perception; but do not form abstract concepts or thoughts
- Early development in children
  - learning and personality development in children determined entirely by their experiences

## Locke's contributions

- Problem of personal identity
  - “personal identity is the consciousness of being the same thinking being at different times and places.”

## Locke's political writings

- *Two Treatises on Government*
  - government as a social contract
  - all people are born equal
  - universal education as a right



John Locke, a painting by John Cowlishill (National Portrait Gallery, London)