

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

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Key terms

- **Dualism**
 - Interactionist (Descartes)
 - Psychophysical parallelism (Leibniz)
- **Monism**
 - Mental monism (Berkeley)
 - Physical monism (Hobbes, Gassendi)
 - Dual-aspect (neutral) monism (Spinoza)

Two Rationalist Alternatives:

Spinoza	Leibniz
Monist	Dualist

The Mind-Body Problem

- **Descartes – interactionist dualism**
- **Spinoza – neutral (double-aspect) monism**
- **Leibniz – psychophysical parallelism**

Spinoza (1632-1677)

- **Dual aspect (neutral) monism:** mind and body are two aspects of the same underlying reality



Spinoza’s rejection of dualism

- **Dual aspect (neutral) monism:** equivalence of mind and matter
- **Pantheism:** inseparability of nature and God
- **Deductive method:** start with a small number of principles or axioms regarded as “self-evident” and use them to arrive at other true statements
- Moral and ethical principles

Spinoza's moral / ethical philosophy

- **Determinism:** if humans are part of nature, and subject to its laws, then all aspects of human experience are determined.
- **Freedom:** consists in knowing that all events have causes, and living one's life in pursuit of the knowledge of the causes of things.
- **Hedonism:** "good" and "evil" are nothing more than the experiences of pleasure and pain.

Psychic determinism

- Spinoza's monist solution to the mind-body problem implies that mental experiences are subject to natural laws and can be studied in the same way as the physical world.
- Foreshadows the possibility of a scientific psychology.

Gottfried Wilhelm von Leibniz (1646-1716)



Psychophysical parallelism

- Dualist solution to the mind-body problem
- There is a close *correlation* between mental events and physical events
- But physical events do not interact with or influence mental events (or vice versa). They are fundamentally different.
- Metaphor of two clocks in perfect synchrony
- Pre-established harmony

Monadology

- **Anton van Leeuwenhoek** (1632-1723)
 - A lens grinder who developed the modern microscope and influenced Leibniz's theory of the cosmos.
- The universe is populated by living things
- **monads** - indivisible units that make up the universe.

Leibniz's Philosophy of Mind

The Monadology

- **Monads**—The ultimate, dynamic units of reality that Leibniz described as containing energies and forces that had the ability to perceive and register impressions of the rest of the world, arranged hierarchically in terms of their qualities and functions; capable only of minute perceptions.
- **Rational Monads**—Units first and closest to God in the hierarchy of finite monads, corresponding to the conscious souls or minds of human beings; capable of apperception.
- **Sentient Monads**—Units lying beneath the rational monads, comprising the souls of living but nonhuman organisms; capable of perception.
- **Simple Monads**—Units that make up the "bodies" of all matter, whether organic or inorganic.

Leibniz

- **Nativism:** the mind is like a block of veined marble

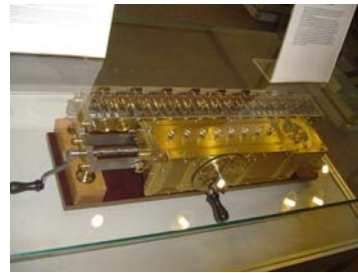
- **Apperception**—Process that occurs when ideas are “registered” in consciousness, accompanied by self-awareness, and also become subject to focused attention and rational analysis in terms of underlying principles and laws.
- **Psychophysical Parallelism**—Leibniz’s conception of the mind-body relationship that suggests that monads do not mutually *influence* one another but rather pursue independent but parallel and harmonious courses.

• *New Essays on Human Understanding*

- Leibniz’s posthumously published, point by point nativist/rationalist response to Locke’s *Essay Concerning Human Understanding*
- **Necessary Truths**—Leibniz’s term for the organizing principles that are innate in the human mind, including the axioms of mathematics and logic and the capacity for self-reflection and apperception.
- **Minute Perceptions**—The smallest unit in Leibniz’s continuum of consciousness, which ranged from the clear, distinct, and rational *apperceptions* through the more mechanical and indistinct *perceptions*, and terminating in what he called minute perceptions; provided theoretical basis for postulating unconscious psychological processes.

The Stepped Reckoner

Leibniz
1671



...it is beneath the dignity of excellent men to waste their time in calculation when any peasant could do the work just as accurately with the aid of a machine. Gottfried Leibniz¹⁴

The British Empiricists

- Francis Bacon (1561-1626)
- John Locke (1632-1704)
- Thomas Hobbes (1588-1679)
- George Berkeley (1685-1753)
- David Hume (1711-1776)

The British Empiricists

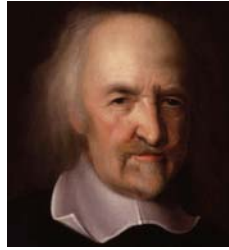
- **Characteristics of the empiricist approach:**
- respect for the facts; virtues of careful **observation**
- focus on **learning** rather than **innate** structure
- emphasis on the individual
- idea of human potential
- focus on practical aspects of the philosophy
- egalitarian

Francis Bacon (1561-1626)



- Promotion of science in Great Britain
- Inductive method
- Empirical generalization
- Avoid subjectivity in science by repeated, systematic observations

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

