

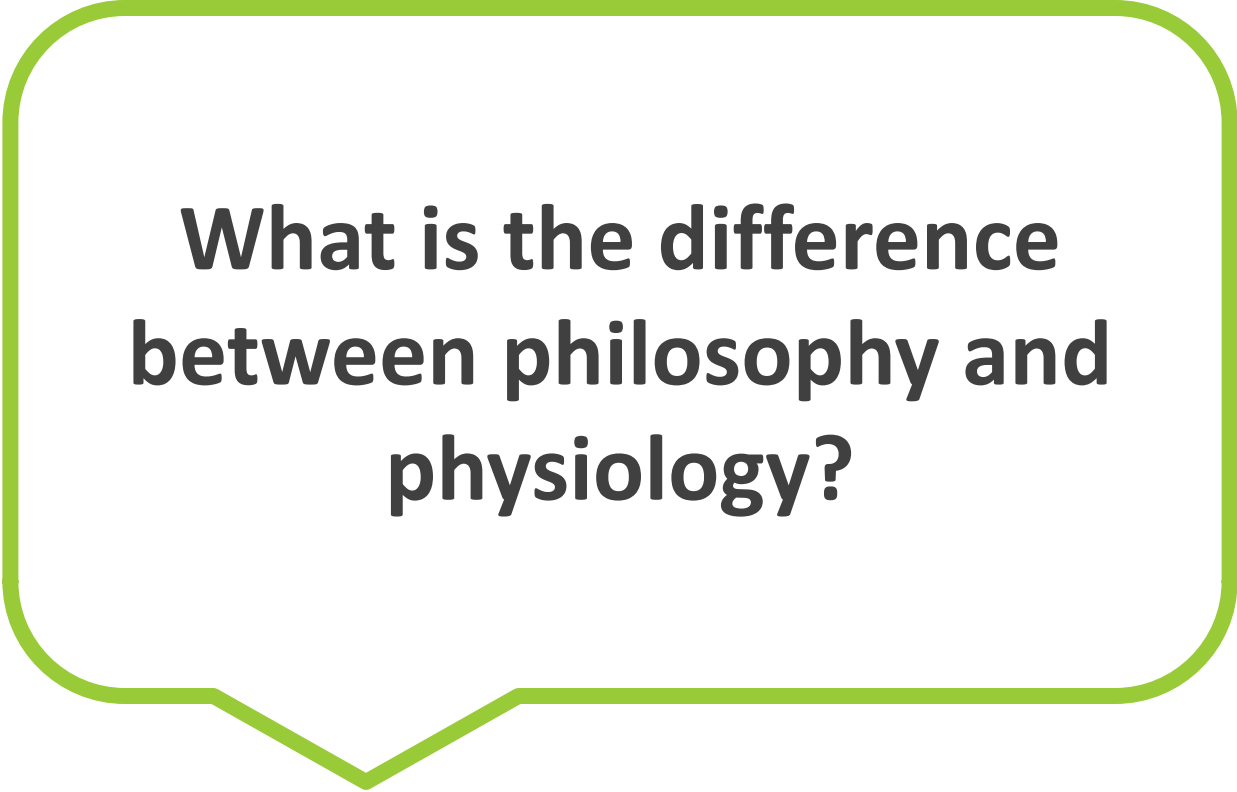
# The Influence of Philosophy

**PSYC 409 History and Systems of Psychology**

# Discussion Questions

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- What is the difference between philosophy and physiology?
- How did ancient Greek philosophers contribute to the development of psychology?
- How did Copernicus, Vesalius, and Bacon contribute in the 16th century?
- How did Descartes and Locke contribute in the 17th century?
- How did Berkeley and Hume contribute in the 18th century?
- How did Mill and Leibniz contribute in the 19th century?

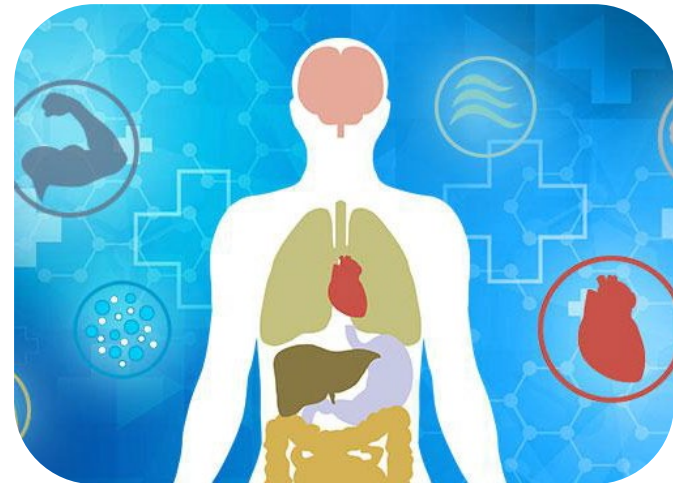


**What is the difference  
between philosophy and  
physiology?**

# What is the difference between philosophy and physiology?

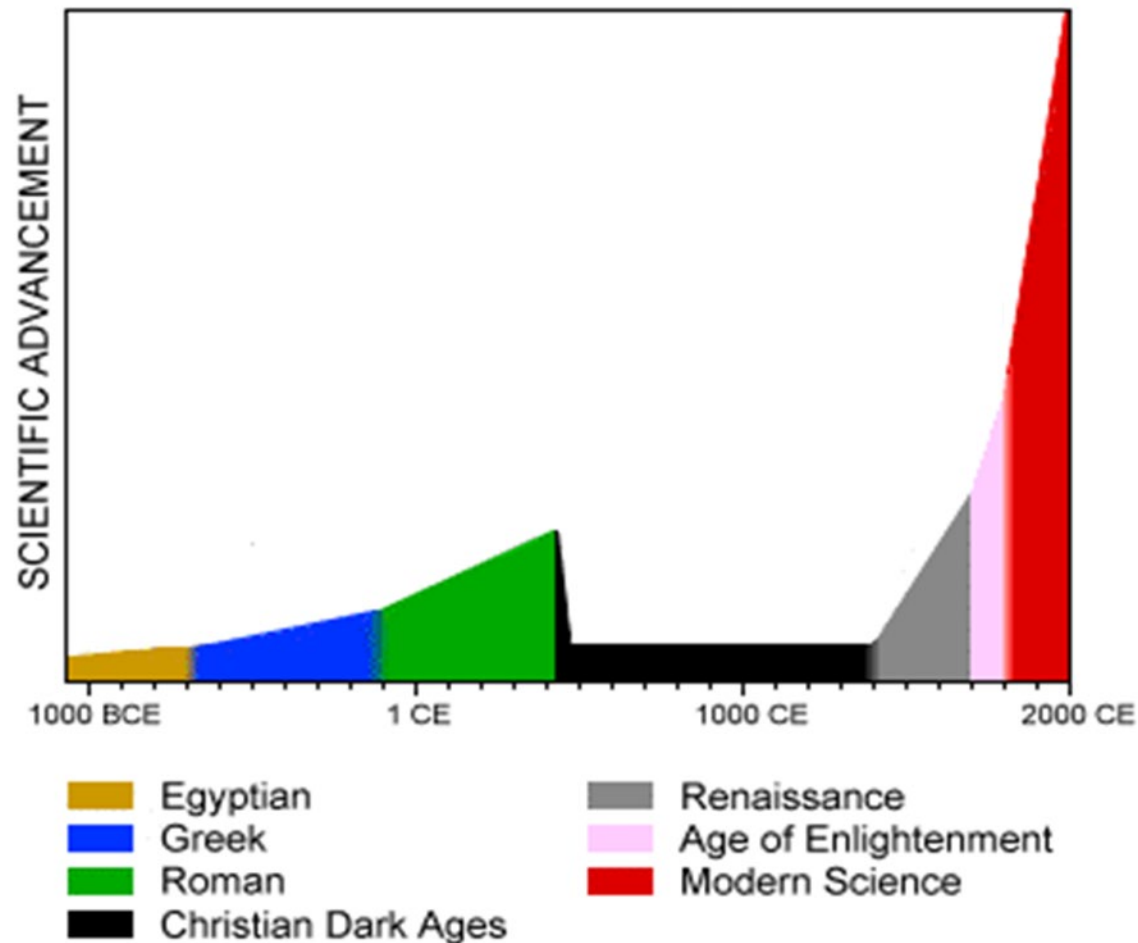
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- **Philosophy:** The study of fundamental questions about topics like knowledge, existence, and reality
- **Physiology:** The study of how living organisms operate and how their body parts function



# Review of World History

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**How did ancient Greek  
philosophers contribute to  
the development of  
psychology?**

# How did ancient Greek philosophers contribute?

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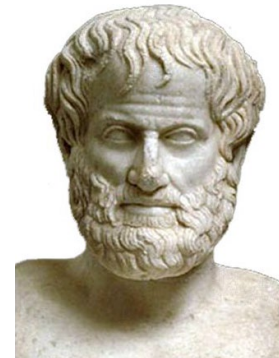
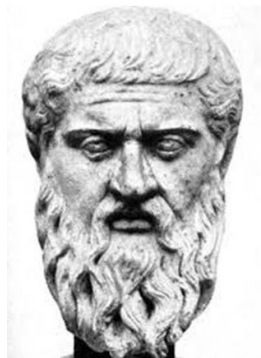
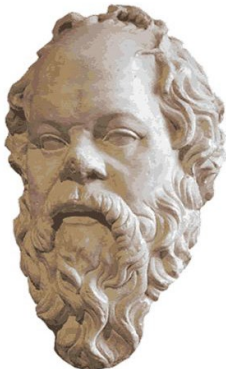
- Modern psychology emerged from philosophy (and physiology) approximately 200 years ago.
- However, its roots can be traced to ancient philosophers (and physicians).



# How did ancient Greek philosophers contribute?

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- **Socrates**, **Plato**, and **Aristotle** studied the human mind and their behaviors centuries before psychology was an established field.
  - They speculated about consciousness, cognition, learning, memory, and abnormal behavior.





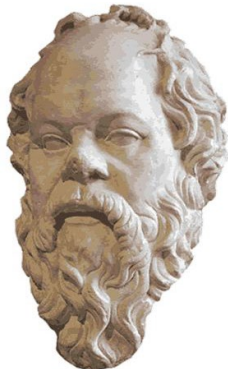
# How did ancient Greek philosophers contribute?

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## **Socrates**

**470-399 BCE**

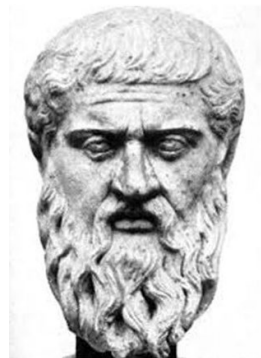
- Known only through Plato's writings
- Created the Socratic method



## **Plato**

**428-348 BCE**

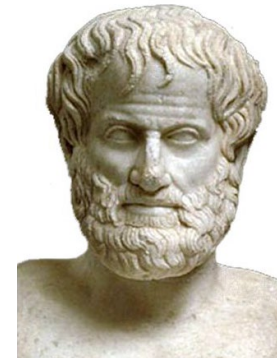
- Socrates' student
- Aristotle's teacher
- Wrote about the mind, body, and soul



## **Aristotle**

**384-322 BCE**

- Plato's student
- Wrote about logic and ethics



# How did ancient Greek philosophers contribute?

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- They contributed to **epistemology**, or the study of knowledge - its nature, origin, methods, and limits.
- Their contributions formed the foundation of modern philosophy and science (and psychology).

**What is knowledge?**

**What do people know?**

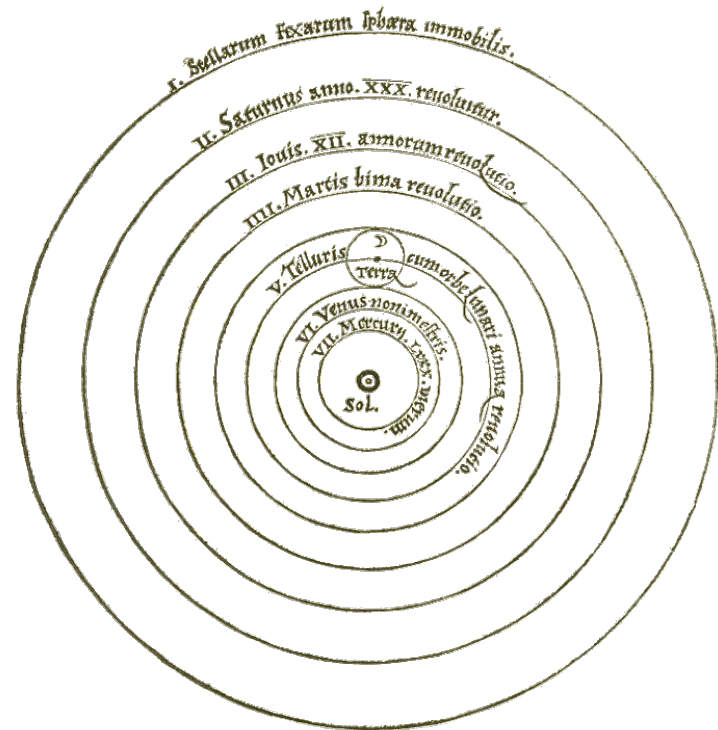
**How is knowledge acquired?**

**How did Copernicus,  
Vesalius, and Bacon  
contribute in the 16<sup>th</sup>  
century?**

# How did Copernicus and Vesalius contribute in the 16<sup>th</sup> century?

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- Some historians suggest modern science was born in 1543 when:
  - **Nicolas Copernicus** published his heliocentric view of the universe, and
  - **Andreas Vesalius** published his treatise on anatomy.



# How did Bacon contribute in the 16th century?

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- **Sir Francis Bacon** (1561-1626) was an English philosopher and statesman.



- He was influential during the transition from the Renaissance to the Age of Enlightenment.
- His work helped popularize the scientific method during this time.

# How did Bacon contribute in the 16th century?

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- He is also known as the father of **empiricism**.
  - Empiricists said knowledge develops from experience and reflection (and is uncertain).
    - E.g., Aristotle, Hobbes, Locke, Berkeley, Hume
- He advocated for an **inductive approach** to knowledge, in which general principles are derived from numerous observations.



**How did Descartes and  
Locke contribute in the 17<sup>th</sup>  
century?**

# How did Descartes contribute to psychology?

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- In the 1600s, the Church's authority began to erode, and the value of observational methods began to increase.
- There was also a spirit of mechanism.
  - Mechanists said humans operate like complex machines and can be explained in mechanical terms.
  - E.g., Hobbes, Harvey, Descartes, Newton





# How did Descartes contribute to psychology?

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- **René Descartes** (1596-1650) was a French philosopher and mathematician.
- He was raised in the church but left at age 18 to experience the world for himself.
- His fear of retribution from the church prevented him from publishing his work until after death.



# How did Descartes contribute to psychology?

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- In the 1620s, when Galileo Galilei and Sir Isaac Newton were perfecting their theories, Descartes used reason, math, and science to study and quantify the physics of the mind.
  - He promoted dualism, believing the mind and body interact.
  - He is known for modeling – using the unobservable (numbers) to represent the observable (behavior).

# How did the intellectual zeitgeist of the Renaissance contribute?

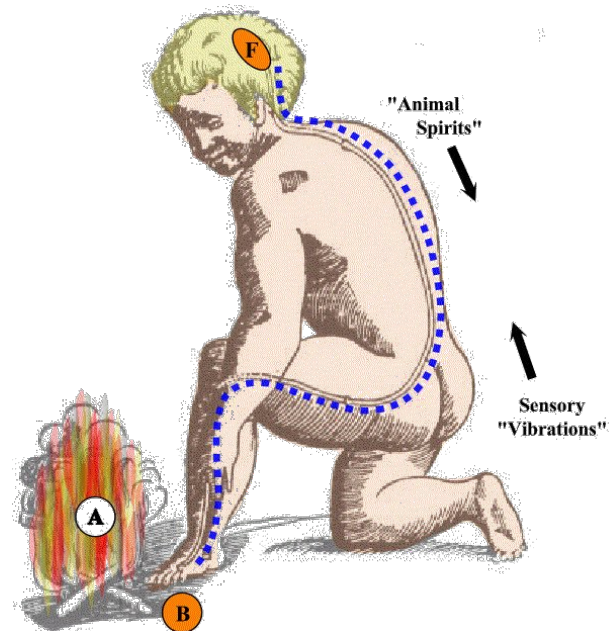
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- His work also popularized **rationalism** and **nativism**.
  - Rationalists said knowledge develops from reason and logic (and is certain).
    - E.g., Plato, Socrates
  - Nativists said some knowledge is genetically programmed to develop.
    - E.g., Plato

# How did Descartes contribute to psychology?

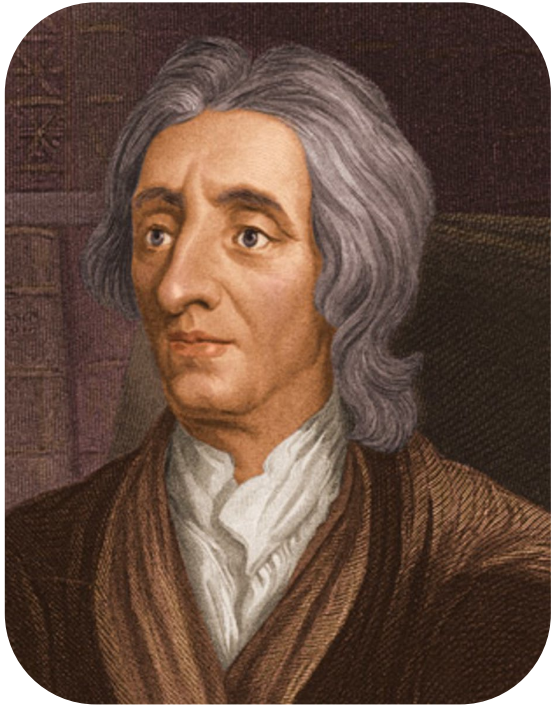
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- Descartes suggested:
  - Hollow tubes in the body carry tiny particles in the blood (animal spirits) to the senses for movement.
  - Humans have minds; animals do not.
  - Humans can control their reflexes; animals cannot.
- He was wrong about a few things, but his efforts paved the way for others.



# How did Locke contribute to psychology?

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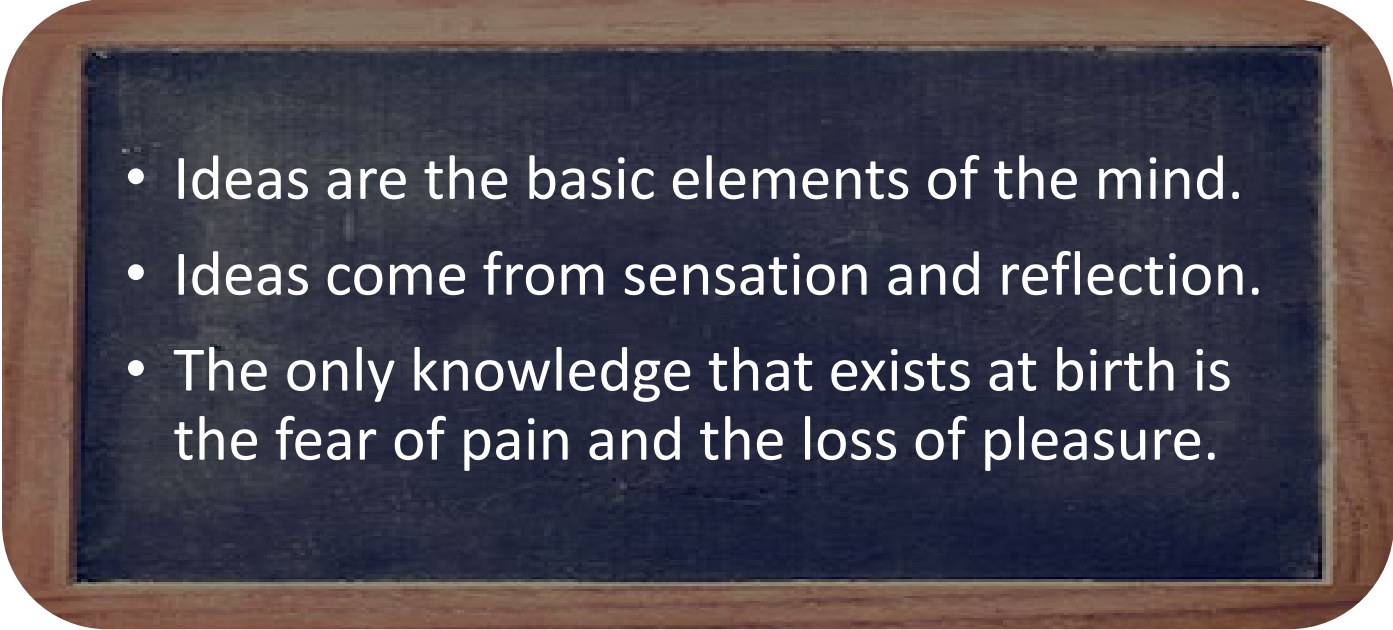


- **John Locke** (1632-1704) was an English philosopher and physician.
- In the **late 1600s**, he rejected Descartes' rationalism and promoted empiricism.
- He also emphasized the scientific method and experimentation.

# How did Locke contribute to psychology?

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- He believed humans are born with little knowledge like a “blank slate” (*tabula rasa*).

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- Ideas are the basic elements of the mind.
  - Ideas come from sensation and reflection.
  - The only knowledge that exists at birth is the fear of pain and the loss of pleasure.

# How did Locke contribute to psychology?

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- He popularized **associationism**.
  - Associationists believed the active mind operates by forming associations between mental states.
  - The only important principles of association are spatial and temporal contiguity.
  - E.g., Pavlov



# How did Locke contribute to psychology?

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- His educational philosophy highlighted the importance of children's physical health, the *avoidance* of punishment, and verbal praise.
  - He also urged that access to education should start early and be available to all children.
- He believed people have inalienable rights to personal liberty, equality before the law, religious equality – protected by checks and balances.



**How did Berkeley  
contribute in the 18<sup>th</sup>  
century?**

# How did Berkeley contribute to psychology?

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- **Bishop George Berkeley** (1685-1753) was an Irish philosopher and empiricist.
- He extended Locke's philosophy into a system called **subjective idealism** or **immaterialism**.



# How did Berkeley contribute to psychology?

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- He suggested our belief in the existence of the external world depends on our perception of it.
  - We can have faith in the reality of objects through our faith in God, the Permanent Perceiver.
  - We do not see objects directly; we make judgments based on visual information and experience.

# How did Hume contribute to psychology?

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- **David Hume** (1711-1776) was a Scottish philosopher, historian, and empiricist.



- He suggested no theory of reality is possible.
- He also said he mind does not create ideas but derives them from impressions or sensations.

# How did Hume contribute to psychology?

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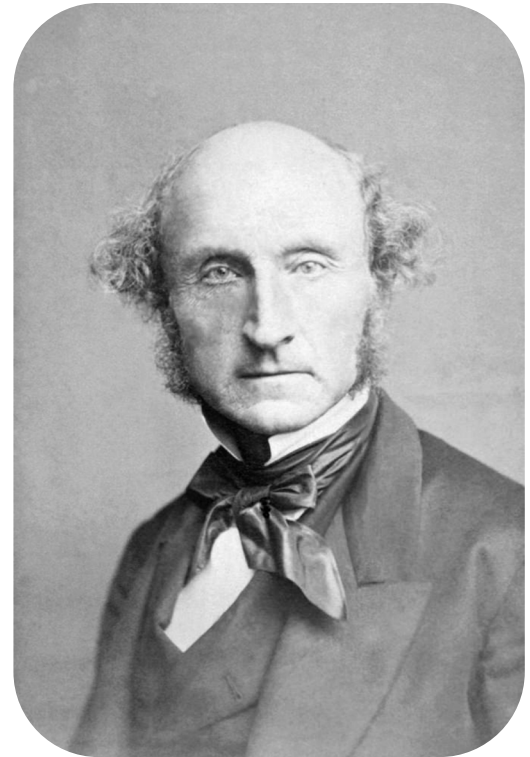
- He said ideas form according to three laws: resemblance, cause-and-effect relations, and temporal contiguity.
  - Resemblance – You see a picture of the Grand Canyon and immediately recall your visit there.
  - Temporal continuity – You flinch when you see lightning, anticipating the loud noise.

**How did Mill and Leibniz  
contribute in the 19<sup>th</sup>  
century?**

# How did Mill contribute to psychology?

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- **John Stuart Mill** (1806-1873) was a British philosopher and political economist.
- He rejected commonly accepted views about women.
  - He introduced a suffrage bill in Parliament in **1866**.
  - He supported the education of women in the mid-1800s.



# How did Mill contribute to psychology?

- In 1843, he called for a more scientific approach to the study of the mind in *A System of Logic*.
  - He believed the emerging field of psychology was still an inexact science.
  - He also described his five (5) methods of induction.





# How did Mill contribute to psychology?

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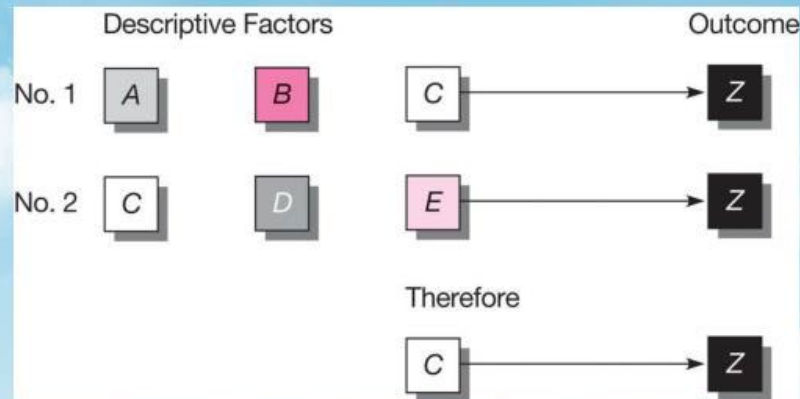
- The **method of agreement** looks for common elements in multiple cases of an event.
- The **method of difference** looks for an element that is present when an event occurs and absent when an event does not occur.
- His **method of concomitant variation** was an early version of the modern correlational method.

# How did Mill contribute to psychology?

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## Mills Method of Agreement

### ► Exhibit 6-4 Mills Method of Agreement



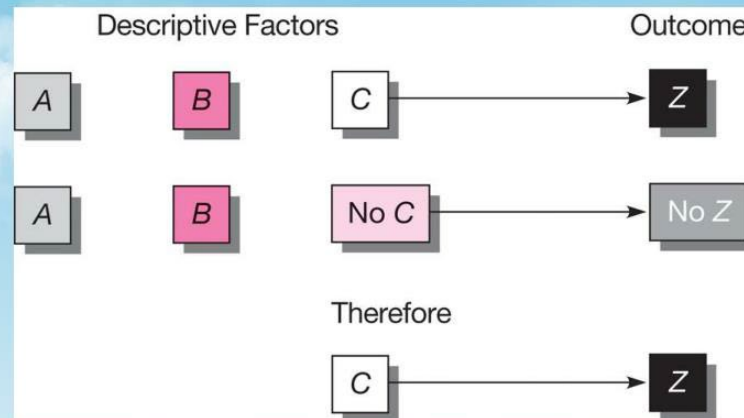
**The method of agreement helps rule out some variables as irrelevant.**

# How did Mill contribute to psychology?

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## Mills Method of Difference

### ► Exhibit 6-4 Mills Method of Difference



# How did Mill contribute to psychology?

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- Imagine we hypothesize that having a flower garden reduces stress.
  - Using the method of agreement, we would expect everyone with a garden to have low stress levels.
  - Using the method of difference, we would expect everyone without a garden to have high stress levels.



# How did Leibniz contribute to psychology?

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- **Gottfried Wilhelm Leibniz** (1646-1716) was a German philosopher and mathematician.



- He introduced the notion of different levels of awareness.
  - **Apperception**: The highest level of awareness
  - **Petite perception**: A perception below the level of awareness

# How did Leibniz contribute to psychology?

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- He argued that the human mind has innate properties that help shape our experience.
  - Only animals are true “empirics” (blank slates).
  - The human mind is more like veined marble, with the veins representing our innate predispositions.

