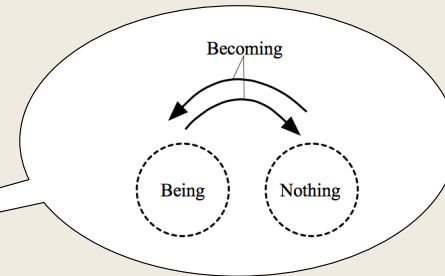


Knowers & Knowing

The Knowledge Framework: Scope; Perspectives; Methods & Tools
TOK L9



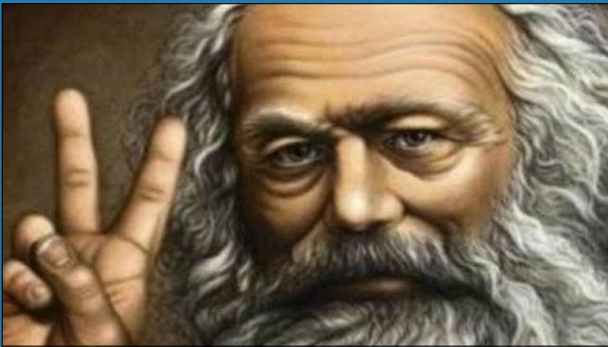
Key Terms

- **Scope:** The extent (depth) and limit (breadth) of the knower
- **Perspective:** The cultural, educational, historical (etc.) lens that is uniquely the individual knower's
- **Methods:** the systems, strategies, processes & procedures we use to acquire knowledge
- **Tools:** Devices (practical) used to complement or enhance knowledge; Mental approaches (cognitive) used for same

For discussion: *What is the difference between a theory, a law, and a paradigm? In what way can a paradigm help or hinder the progress of knowledge?*

Paradigm Shifts

are often triggered by individuals



Albert Einstein (1879-1955) in physics

Dimitri Mendeleev (1834-1907) in chemistry

Charles Darwin (1809-1882) in biology

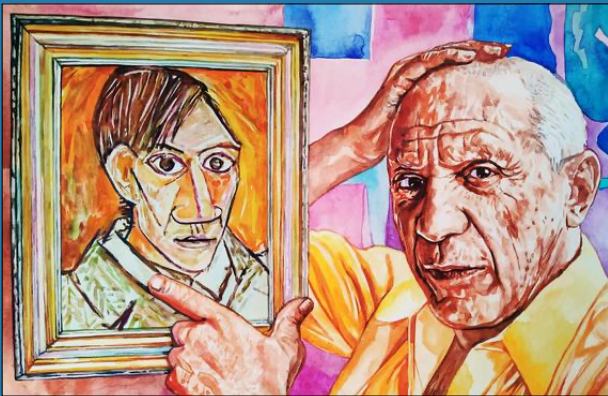
John Maynard Keynes (1883-1946) in economics

Karl Marx (1818-1883) in history

Sigmund Freud (1856-1939) in psychology

Noam Chomsky (1928–) in linguistics

Pablo Picasso (1881-1963) in art





METHODS & TOOLS

Georg Wilhelm Friedrich Hegel
1770-1831

The Hegelian Dialectic

Our understanding of reality begins with a proposition (**Thesis**) which contains within itself a contradictory aspect that requires a counter-argument (**Antithesis**), which needs a **Synthesis**—a new idea that resolves the conflict.

Can you see how Hegel influenced Marx? What other applications can you think of?



COGNITIVE TOOLS

How does the brain construct knowledge?

Empiricism claims that all knowledge must ultimately be based on sense perception; **Rationalism** relies on deduction to determine truth.

Imagination (empathy), and **Memory** (personal, factual, and practical) are other useful tools.

Notable Empiricists include David Hume, John Locke, and George Berkeley; Rationalists include Rene Descartes, Baruch Spinoza, and Gottfried Leibnitz.



METHODS & TOOLS

Rationality & Logic:
From *premise* to *conclusion*

Deductive, Inductive, or Abductive?

Deductive reasoning moves from the general to the particular; **Inductive** reasoning is the opposite. **Abductive** reasoning *infers* the best explanation based on the available evidence.

What applications can you find for these approaches to gaining knowledge? What might be the pitfalls of each?

“I think, therefore IB.”



HW: Do you side with the empiricists or with the rationalists when it comes to constructing knowledge? Do a little research on these two philosophies, and write a critique of each. In what ways might our senses mislead us? What fallacies might exist that undermine the use of logic to solve problems? Do you personally lean towards empiricism or rationalism as a knower, and what are the risks in doing so? One to two pages will suffice.
