

THE PURPOSE OF RESEARCH



Research
Core-Science
2021-2022
Dr. Wardisiani
Week 1

WHAT WILL YOU LEARN TO DO?

Describe

Describe scientific research and its purpose in furthering knowledge

Summarize

Summarize two theories of knowledge: falsifiability and the scientific revolution

**Compare
and Contrast**

Compare and Contrast Qualitative, Quantitative, and mixed methods

Explain

Explain the importance of ethics and objectivity research

SCIENTIFIC RESEARCH AND ITS PURPOSE



Traditional Knowledge is a form of knowledge that we inherit from the culture we grew up in



Authority is a form of knowledge that we believe to be true because its source is authoritative



Experimental Knowledge teaches us through pleasant or unpleasant experiences and continues throughout life



Scientific Knowledge is based on studies conducted by researchers

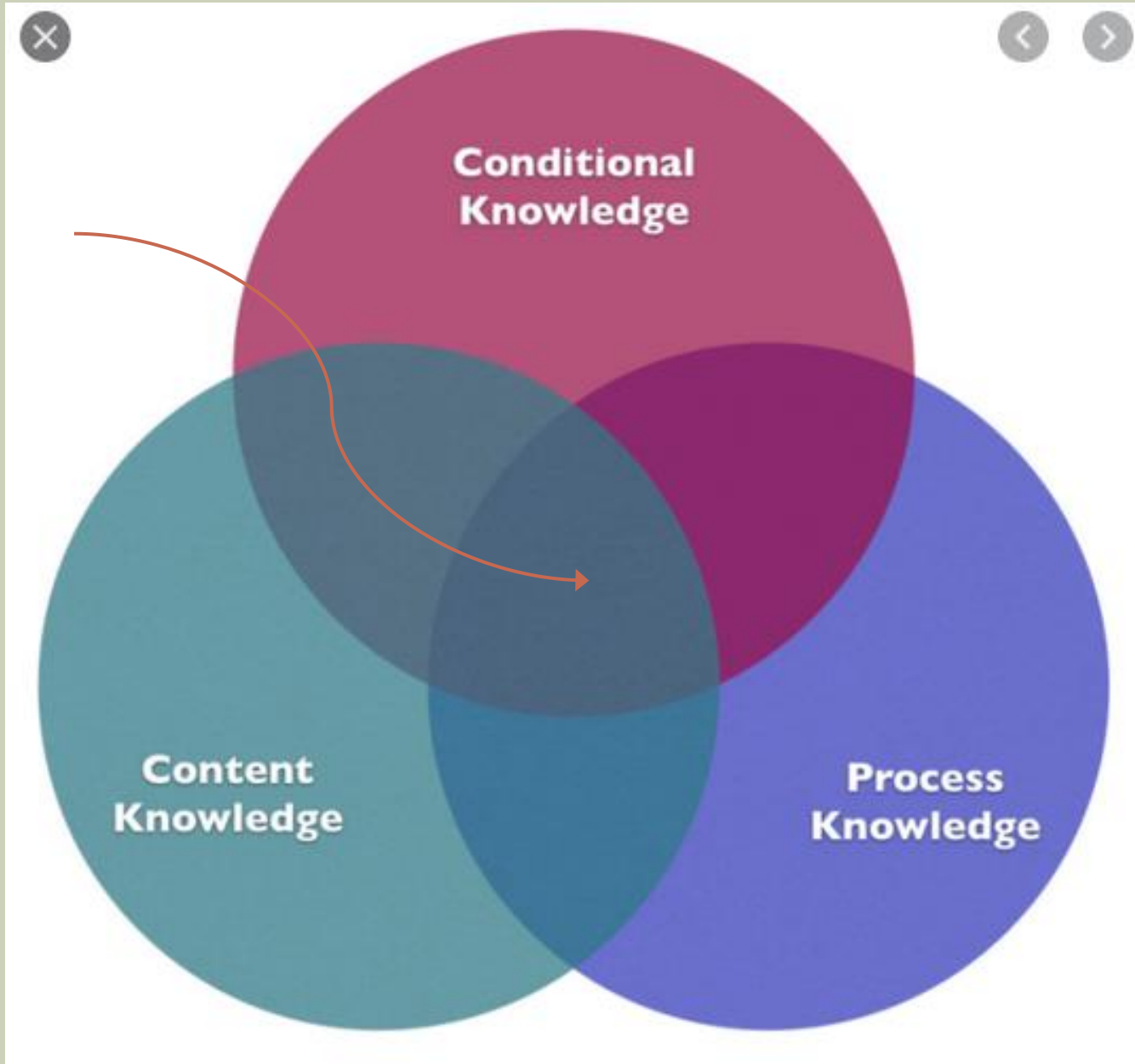
SO, DO WE ACTUALLY KNOW REALITY?



From the very start we must recognize that reality and knowledge are two different things.



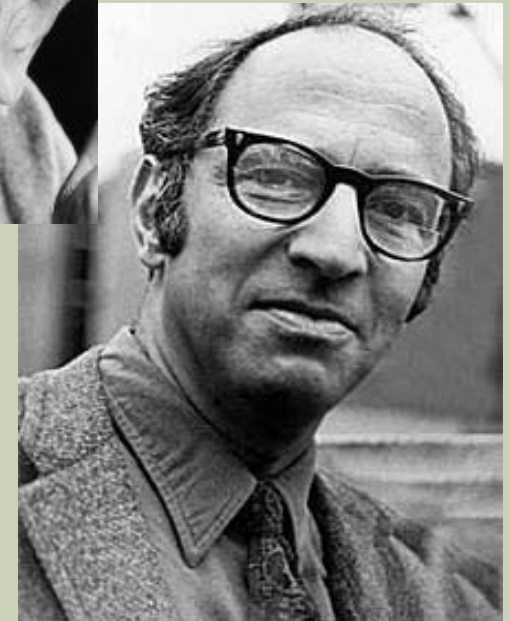
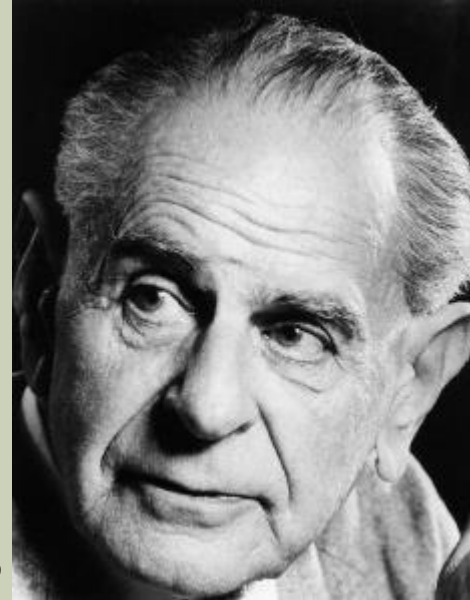
By conducting research.....we attempt to build knowledge about it.



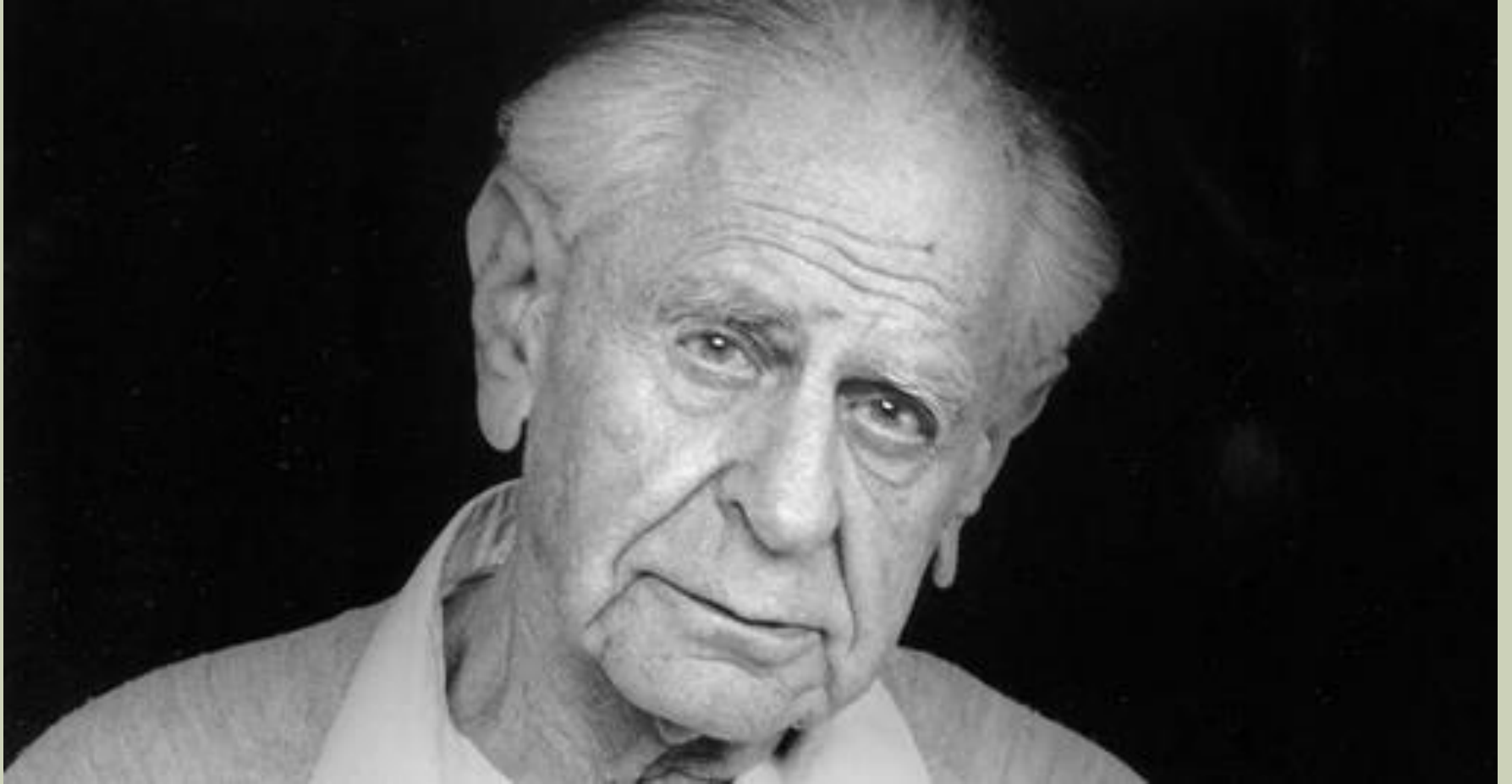
SCIENTIFIC RESEARCH METHODS

THEORIES OF KNOWLEDGE

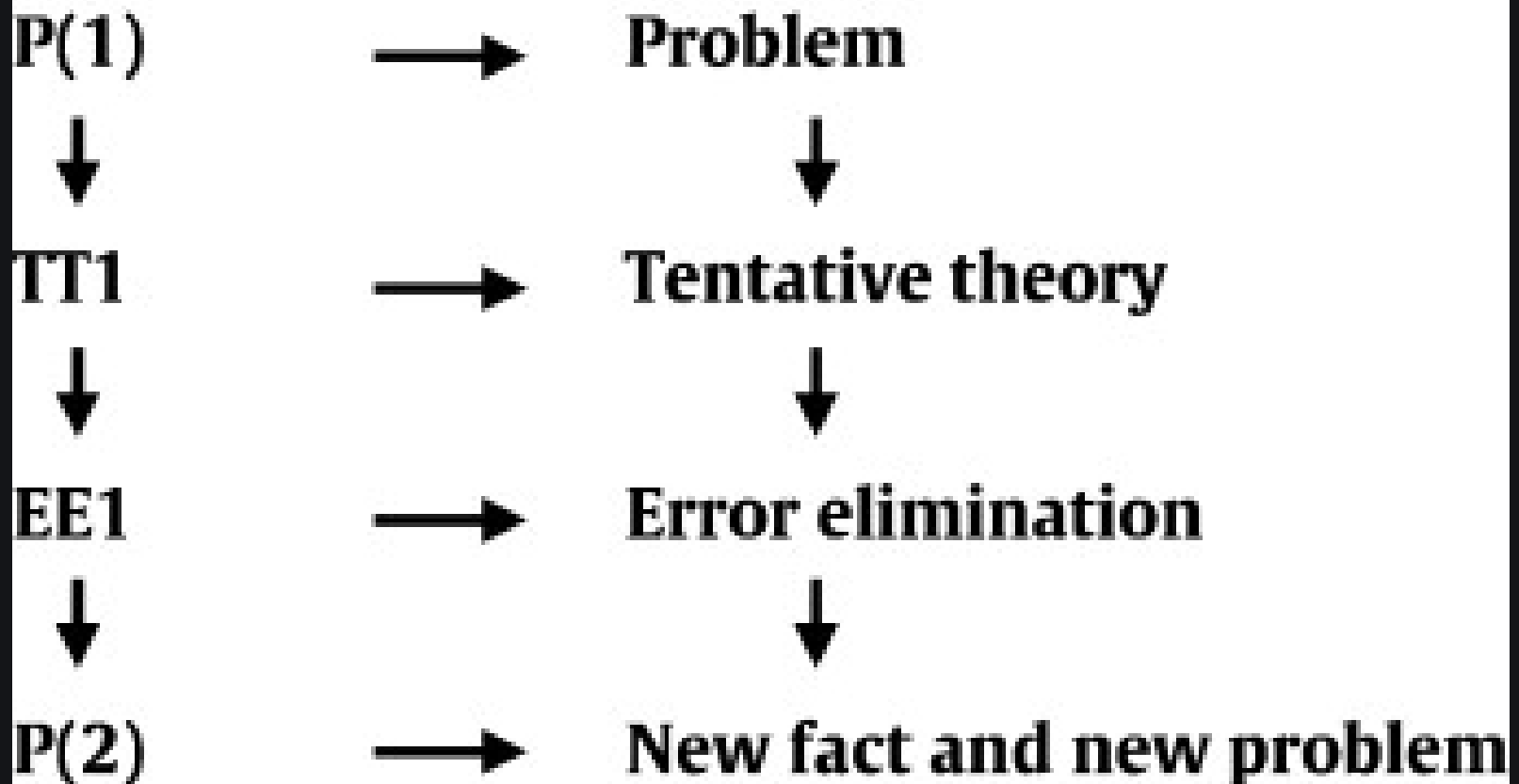
- Theories of knowledge, for example, attempt to explain how new knowledge is developed.
- Two of the most important and widely accepted of such theories are Karl Popper's falsifiability and Thomas Kuhn's structure of scientific revolution.



KARL POPPER



THEORY OF DEVELOPMENT



THOMAS KUHN'S STRUCTURE OF SCIENTIFIC REVOLUTION

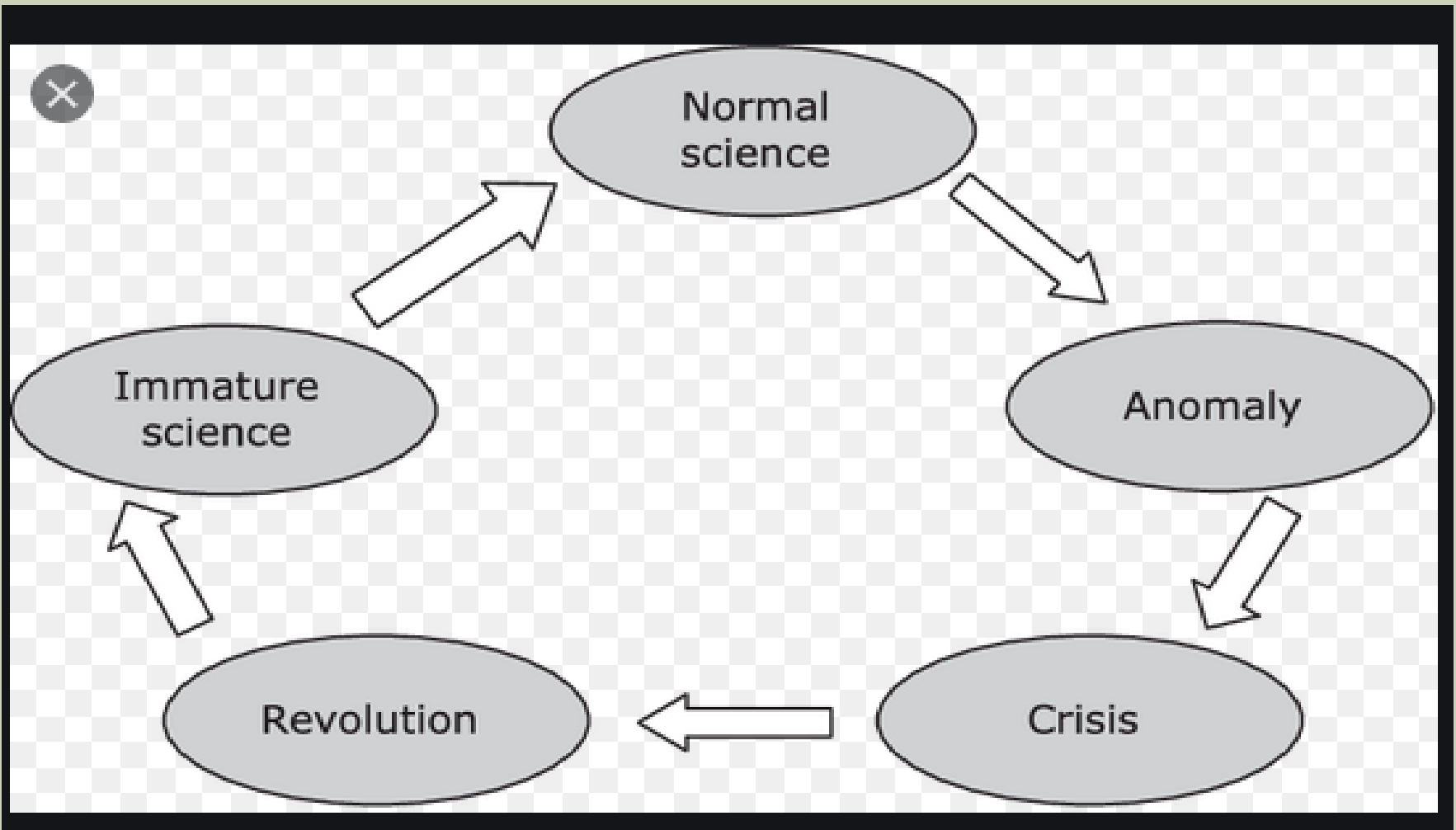


NORMAL SCIENCE



- Normal Science does not aim to explore new ideas, to build on scientific knowledge, to experiment, or to risk.
- Normal Science is made of accepted paradigms
- “Almost always the men who achieve these fundamental inventions of a new paradigm have been either very young or very new to the field whose paradigm they changed” (p. 90).

SCIENTIFIC REVOLUTION



RESEARCH METHODS



QUALITATIVE



QUANTITATIVE



**MIXED
METHODS**

A VIOLATION OF ETHICS

- The Tuskegee Syphilis Study

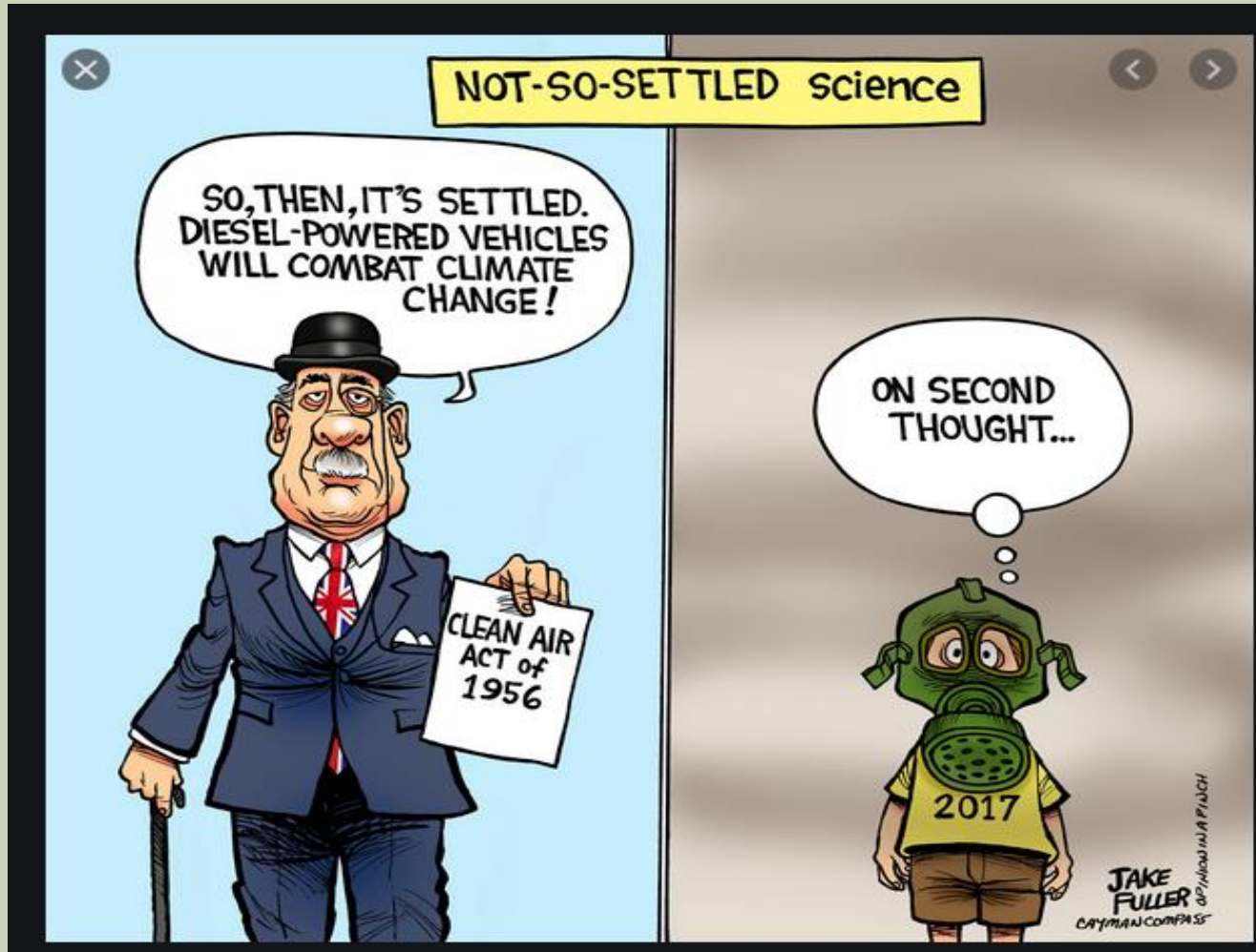
- [Video](#)



RESEARCHERS' BIASES

- **Objectivity** means perceiving something for different angles without personal preferences or judgments.
- **Subjective Thinking** is based on personal emotions, experiences, and prejudices.
- **Overgeneralization** happens when we use a small number of cases to draw conclusions about the entire population

RESEARCHER' BIASES



THANK YOU!

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