

# THE PURPOSE OF RESEARCH



Research  
Core-Science  
Fall 20-21SY  
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**

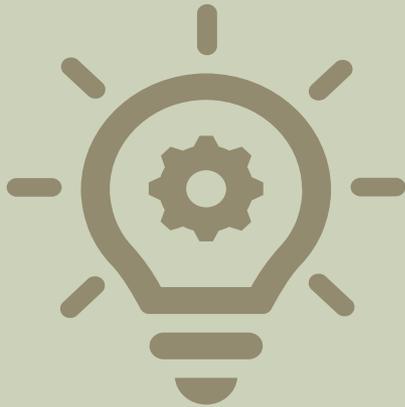


**Experimental Knowledge teaches us through pleasant or unpleasant experiences and continues throughout life**



**Scientific Knowledge is based on studies conducted by researchers**

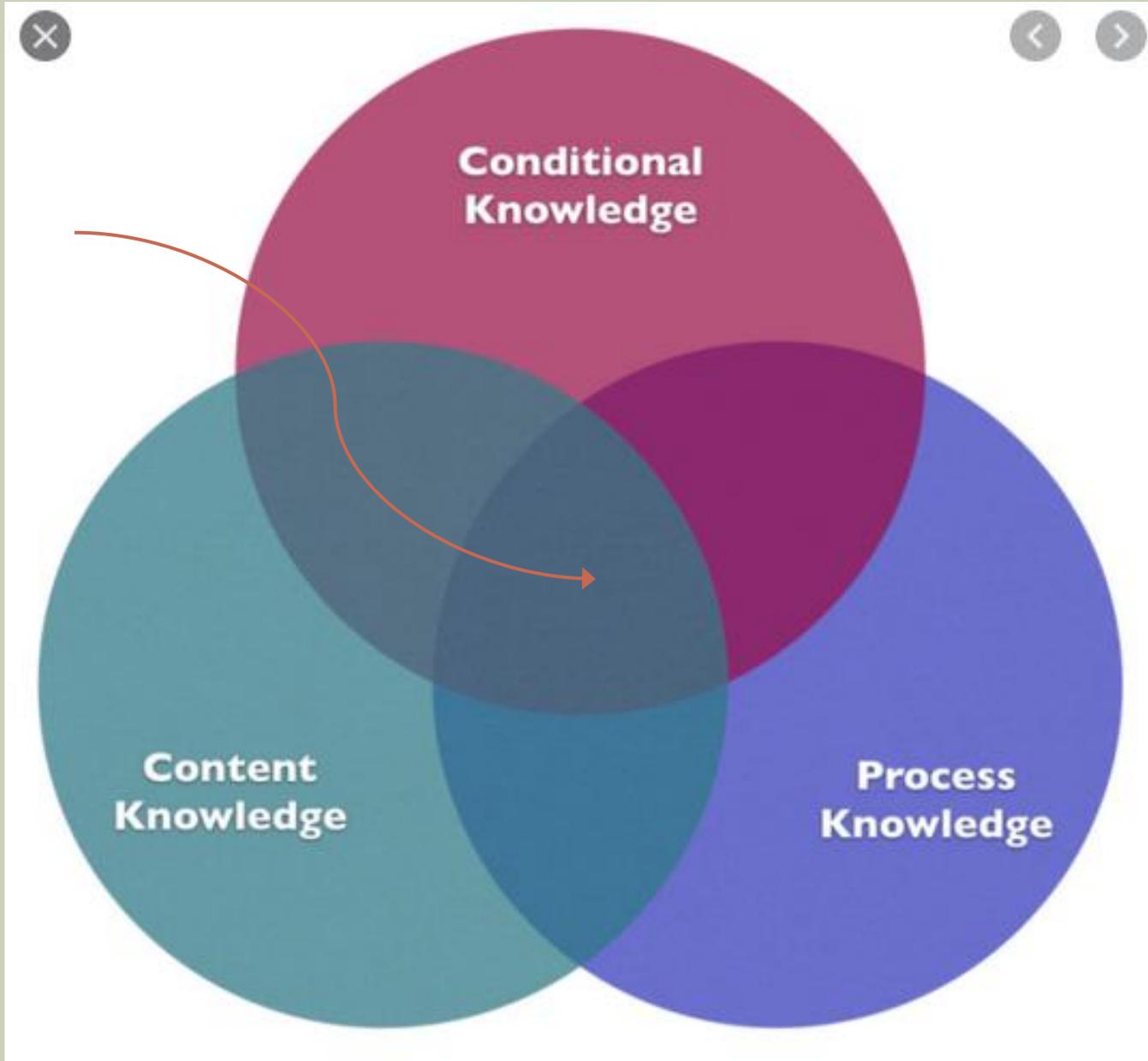
# SO, DO WE ACTUALLY KNOW REALITY?



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



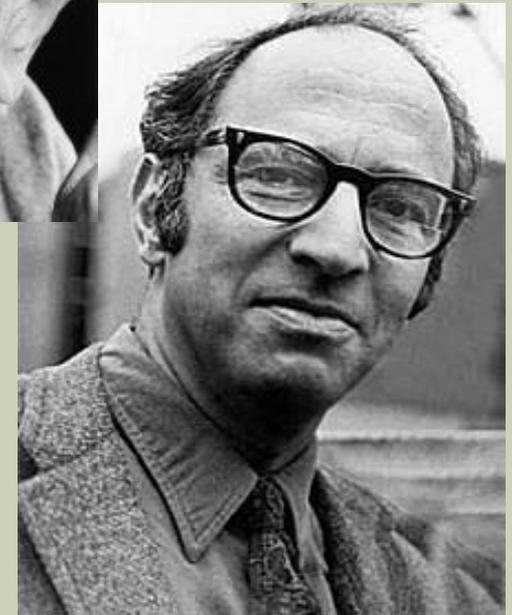
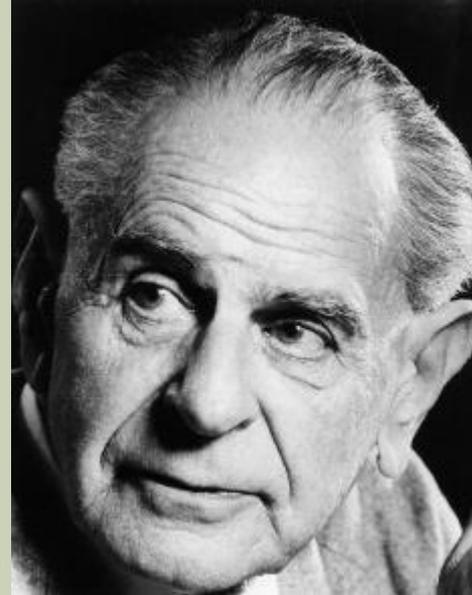
**By conducting research.....we attempt to build knowledge about it.**



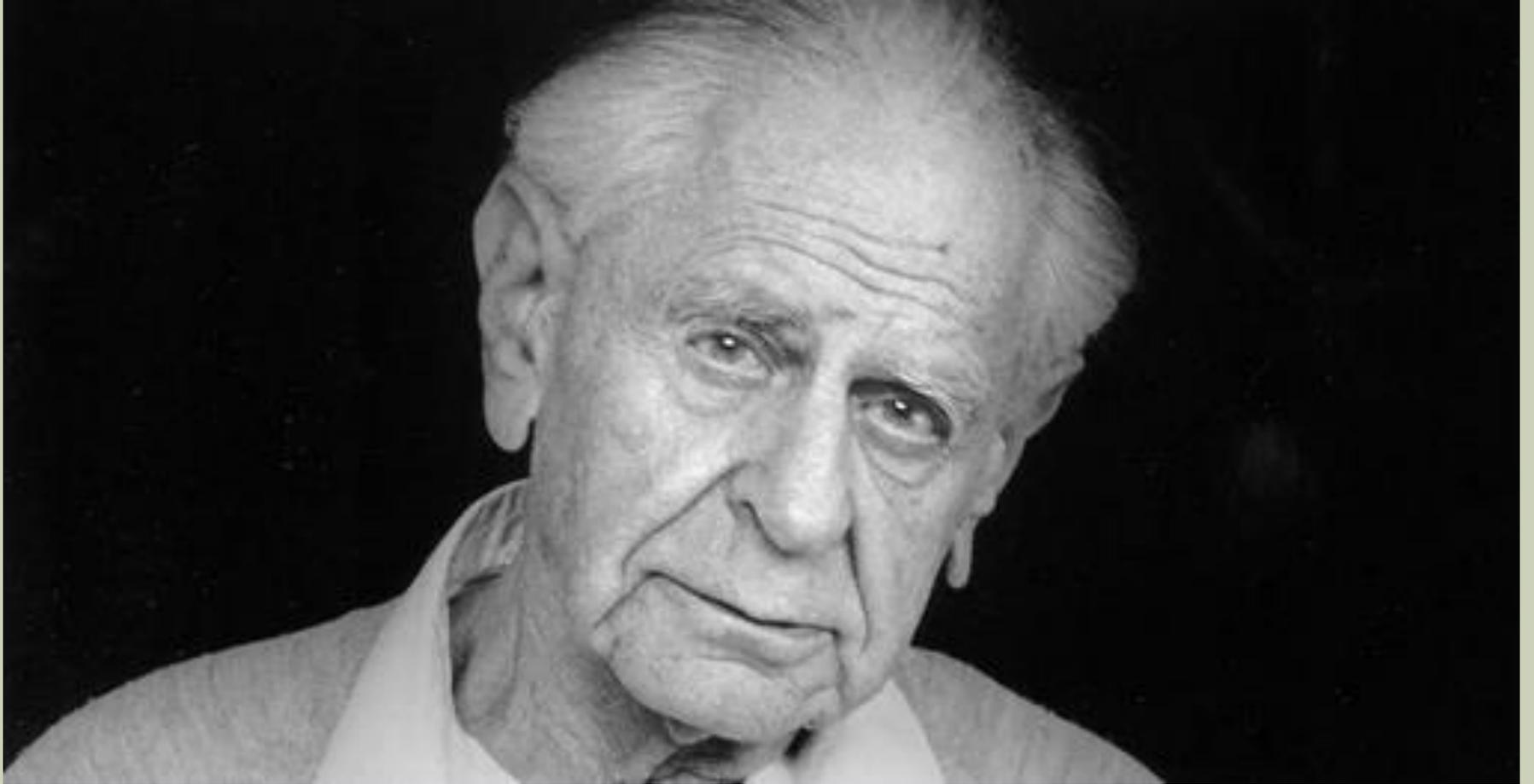
# SCIENTIFIC RESEARCH METHODS

# THEORIES OF KNOWLEDGE

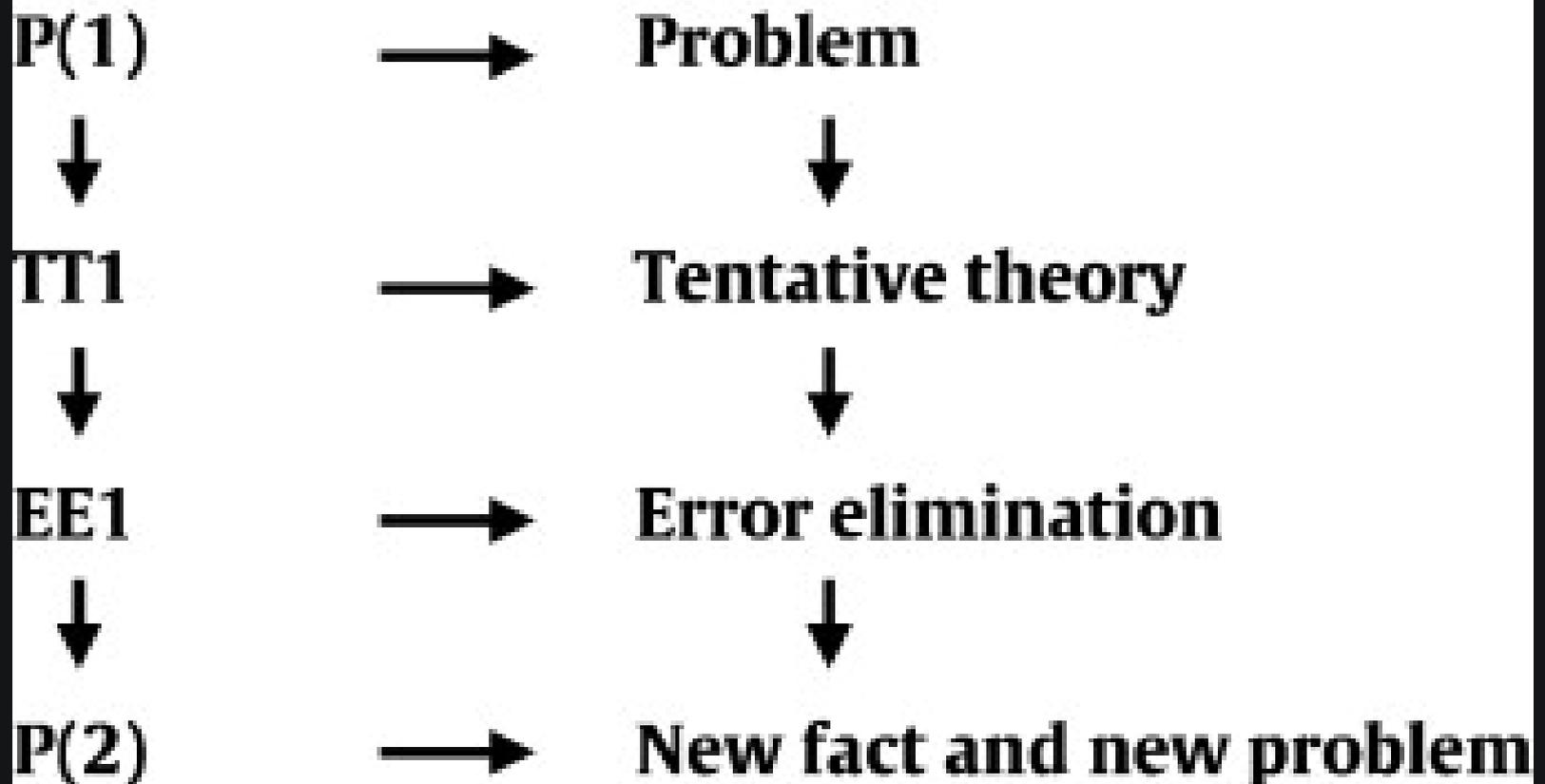
- Theories of knowledge, for example, attempt to explain how new knowledge is developed.
- Two of the most important and widely accepted of such theories are Karl Popper's falsifiability and Thomas Kuhn's structure of scientific revolution.



# KARL POPPER



# THEORY OF DEVELOPMENT





# THOMAS KUHN'S STRUCTURE OF SCIENTIFIC REVOLUTION

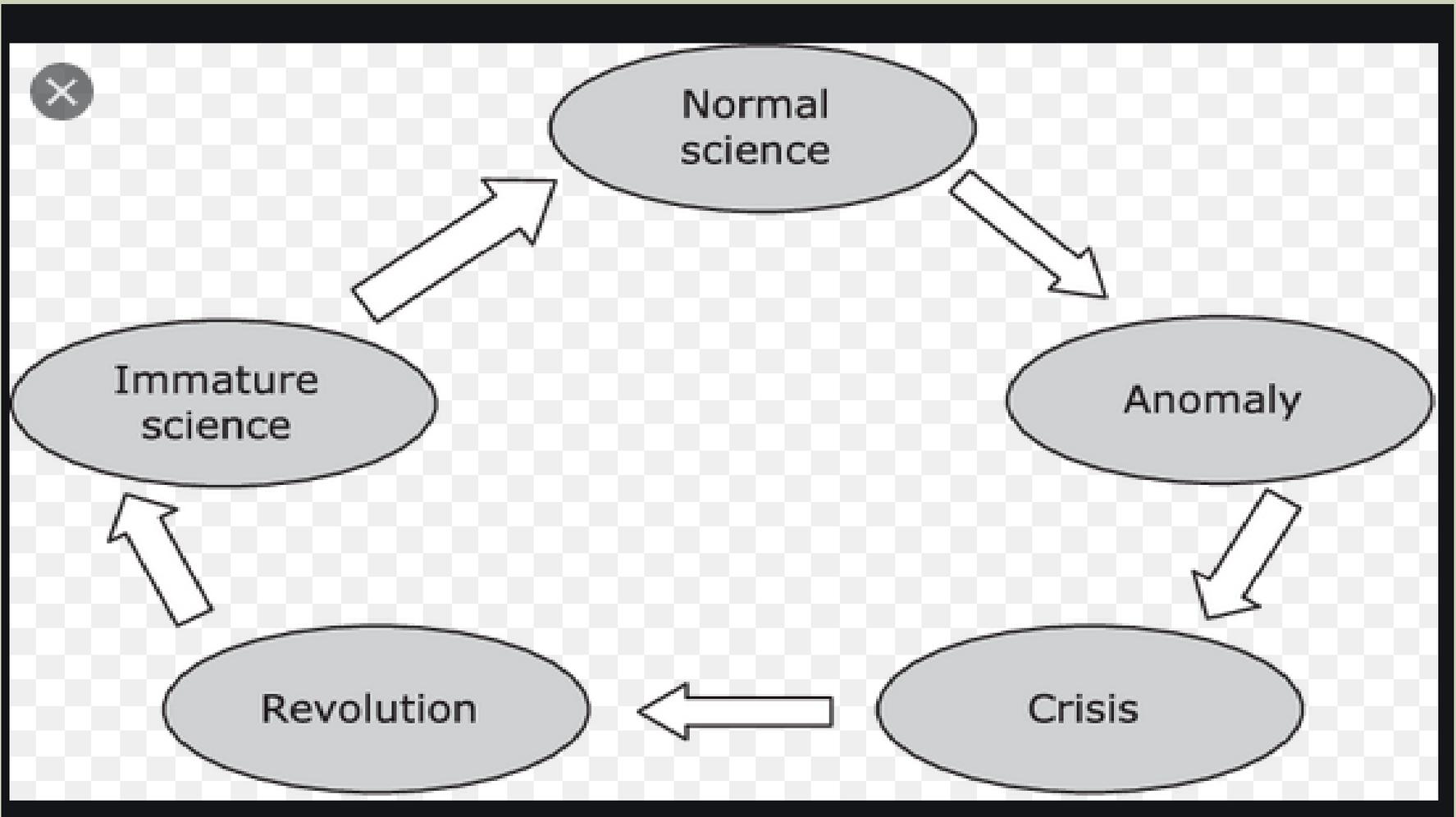


# NORMAL SCIENCE



- 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

