

## The Scientific Process:

A philosophy of understanding the world.

## Why use science in psychology?

- It allows us to use our curiosity
- It allows us to devise ways of observing behavior and mental processes
- It takes us beyond logic and common sense, which can be biased and misleading

## Four ways of knowing

- Dogmatism
  - truth by authority
- Rationalism
  - logic and reasoning
- Empiricism
  - truth through observation of the senses
  - Positivism- truth by observation of multiple, objective observers
- Science = Logical Positivism

## The Assumptions

- Nature is lawful
- Nature is deterministic
- Nature is understandable

## Attributes of a good scientist?

- uncertainty
- open-mindedness
- skepticism
- caution
- ethical awareness

## Attributes of good scientific evidence?

- empirical
  - learned through observation
- objective
  - personal biases and assumptions do not influence the conclusions
- systematic
  - observations are obtained in a methodical, step-by-step fashion
- controlled
  - other possible influencing factors are eliminated

## Four functions of science

- Description
  - Prediction
  - Determining Cause
  - Explanation/Understanding
- Important note: no single study aims to meet all four goals