

Theory and Causation in the Social Sciences

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Overview

- 1 Housekeeping
- 2 Recap
- 3 Theory Formation
- 4 Causation
- 5 Research Design

- Homework 1 will be graded and returned next class
- Remember, you need to choose a research topic ASAP so you can begin research towards identifying a good research question
- Make sure to sign the **attendance** sheet!

Recap from last class...

Fact

Observations of the world around us that are self-evidently true.

Hypothesis

A proposed explanation for a phenomenon - "scientific guess".

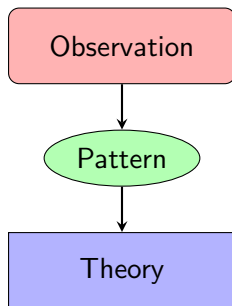
Law

Detailed description, usually using math, telling us how something works.

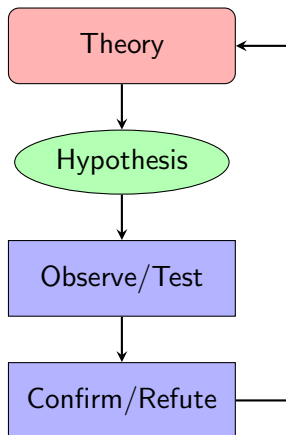
Theory

Penultimate step in the scientific method. When enough hypotheses are confirmed they build the bedrock of a theory, a system of interrelated ideas that are used to explain and predict particular phenomena.

Inductive Approach



Deductive Approach



Types of Theory

- Grand theorizing (Theory of realism in IR)
- Mid-range theorizing (Security dilemma in IR)
- Lower than mid-range? ...hypothesizing...

Causation variously understood...

- Granger Causality (robust/predictive)
- Treatment Causality (Manipulation)
- Generative Causality

- Probabilistic vs Deterministic
- "Causal Mechanism"
- Causation vs Correlation
- True Experiments, Natural Experiments, Observational Studies
- Statistical controls ("All else equal" /"controlling for all other" /"Holding constant" /etc.)

Threats to Causal Validity

- Ecological fallacy
- Reductionist fallacy
- Spurious relationship

- Micro, meso, macro
- Individual vs group vs structure
- Ex: International War (leaders, countries, structure)

Type of Study

- Longitudinal
- Cross-sectional
- Panel (both overtime and across space)