

Epistemology and Political Science

POLI 205 Doing Research in Political Science

Fall 2015

How Do We Know?

- **Epistemology:**
 - *the theory of knowledge, especially with regard to its methods, validity, and scope. Epistemology is the investigation of what distinguishes justified belief from opinion.*
 - *the study of the nature, extent, and justification of knowledge.*
- Epistemology → Methods
- Epistemology → *Inference*
- **Naturalism vs. Interpretation**

Naturalism

- Natural science has provided *systematic explanations* and *precise prediction*
- Have the social sciences?
- To do so the approaches of science should be adopted
 - *models and empirical generalizations*
- Science seeks *causal* explanations and knowledge comes from *observation, experiments, and the collection of data*
- How is causality established?
- What undermines *logical positivism*?
- What is *folk psychology*?

Assumptions of the Empirical Method¹

- **Realism:** There is a real world that exists independently of observers, even if we don't see it
- **Materialism:** Only concrete and observable (if only indirectly) entities have causal efficacy
- **Regularity:** Natural phenomena (human behavior and institutions) exhibit regularities and patterns that can be revealed by reason and observation
- **Verification and falsification:** Statements about the world must be verified or falsified by experience or data
- **Irrelevance of preferences:** To the maximum extent, one's values and biases should not affect the decision to reject or accept an empirical claim
- **Theory and causal explanation:** The goal of science is to create general, verified explanatory theories (even laws)

¹From Reynolds and Johnson pgs 54-55

Interpretation

- Can we assume that there is a political reality that exists and that in principle can be discovered that is independent of political life?
 - *social facts*
- Human actions cannot be explained scientifically but must be interpreted from the point of view of the actors.
Meaning and understanding are the proper goals
- How do we understand actions?
 - *we need to “see” how individuals themselves view the action*
- Therefore, we *interpret* actions as opposed to observing them

Methodology

TABLE 2-1

Methodological Locations in Political Science

	Nonempirical	Empirical
Goals	To understand behavior To interpret actions	Causal explanations and predictions of individual and institutional behaviors General theory and laws Information of practical use "Value-free" knowledge
Assumptions	Social facts (at least) are "constructed." Institutions are social creations. Objective observation not generally possible because our very senses are affected by culturally defined and imposed prior beliefs. Totally value-free research is impossible.	Realism (appearance and reality are the same). Independent, objective observation is possible. Behavior and, implicitly, institutions exhibit regularities. Claims about the real world must be verified. Attitudes (values, biases, beliefs) must not affect observation and analysis. There are no causeless effects.
Basic toolkit	Qualitative	Quantitative
Methods	Qualitative analysis (e.g., ethnography, content and document analysis, study of discourse) Case studies and comparisons	Case studies and comparisons Experiments and field experiments Mathematical models Surveys Statistical analysis of data Simulations
Objections	Observation is impressionistic, subjective, and nonsystematic. Knowledge is nontransmissible. Findings are tainted by investigator's values and biases.	Takes "politics out of political science." Concentration on formalism, quantitative measurement, and mathematical analysis leads to trivial and practically meaningless results.
Alleged biases	Conclusions are affected by political and social ideologies.	Inherently favors the status quo and existing power structures.

Source: This table is based partly on tables in Colin Hay, *Political Analysis: A Critical Introduction* (New York: Palgrave, 2002), chap. 1.

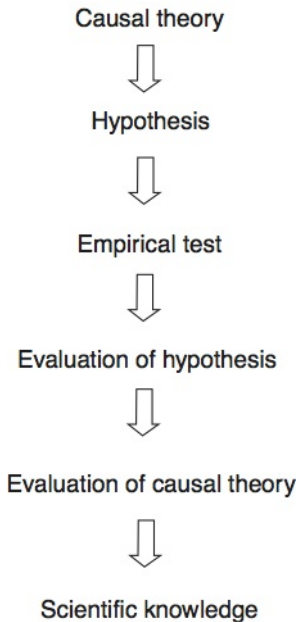
Political Science?

- Is *political science* a science?
- **Political Science:** Political science is about the scientific study of political phenomena
- How do we approach politics scientifically?
 - *Use the scientific method*
 - Empirical approach to epistemology
 - Developing causal theories
 - Scientific reasoning
 - Deduction and induction

The Search for Causal Explanations

- Causal Theory
 - **Theory:** A tentative conjecture about the *causes* of some phenomenon of interest
- Theories Generate Testable Hypotheses
 - **Hypothesis:** A theory-based statement about a relationship that we expect to *observe*
 - Null hypothesis
 - Working hypothesis

The Road to Scientific Knowledge



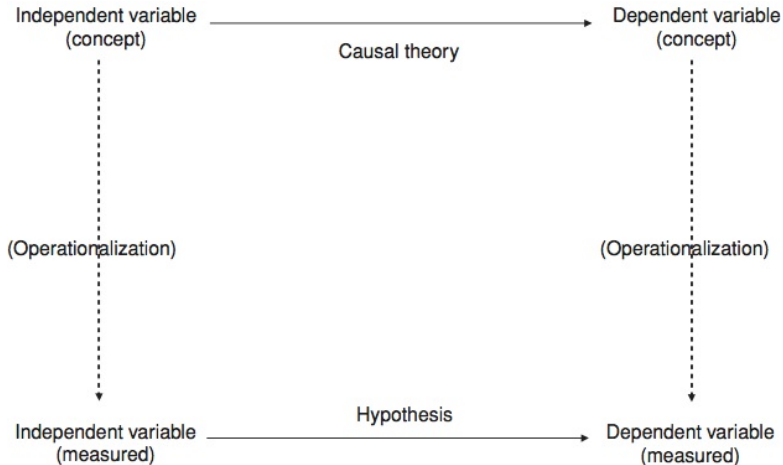
Concepts and Variables

- Theories are based on relationships between *concepts*
- Concepts are measured for empirical research and these measurements are called *variables*
 - Operationalizaion
- **Variable:** A definable quantity that can take on two or more values
 - Labels
 - Values

Variables and Causal Explanations

- **Dependent Variable:** The outcome variable, this is the concept we are trying to explain and/or predict
- **Independent Variable:** Predicts or explains the dependent variable

Theories, Variables, and Hypotheses



Scientific Reasoning

- **Deduction:** Reasoning from the general (theory) to the specific (hypotheses)
 - Begin with a theory, and test specific hypotheses
- **Induction:** Reasoning from the specific (hypotheses) to the general (theory)
 - Identify patterns among observations and arrive at a general theory

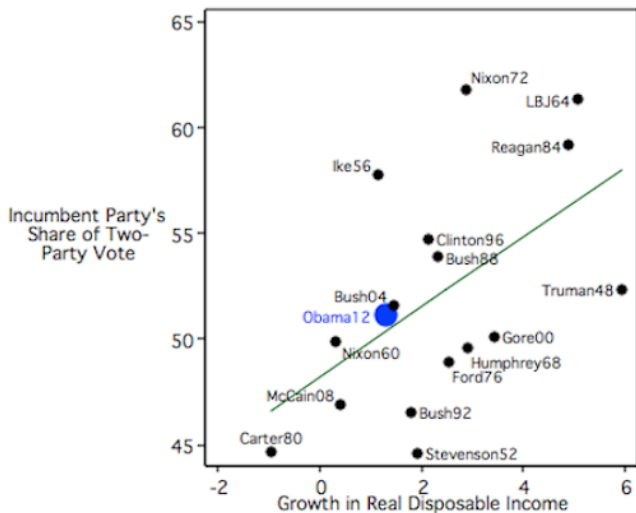
Example: Why do people vote?

- Deductive: Based on a series of *assumptions*
 - Citizens are rational
 - Rationality means weighing the costs and benefits
 - Cost to voting are high
 - Benefits low
- *Hypothesis*: Citizens will not vote

Example: Why do people vote?

- Inductive: Based on a series of *observations*
 - Public Survey 1: 4 of 5 respondents report voting
 - Public Survey 2: 3 of 5 respondents report voting
 - Public Survey n : Majority of respondents report voting
- *Conclusion*: Hypothesis not confirmed
- Connection between the economy and presidential elections?

Economic Voting and Presidential Elections



Rules of the Road

- Make your theories causal
- Don't let data alone drive your theories
- Consider only empirical evidence
- Avoid normative statements
- Pursue both generality and parsimony