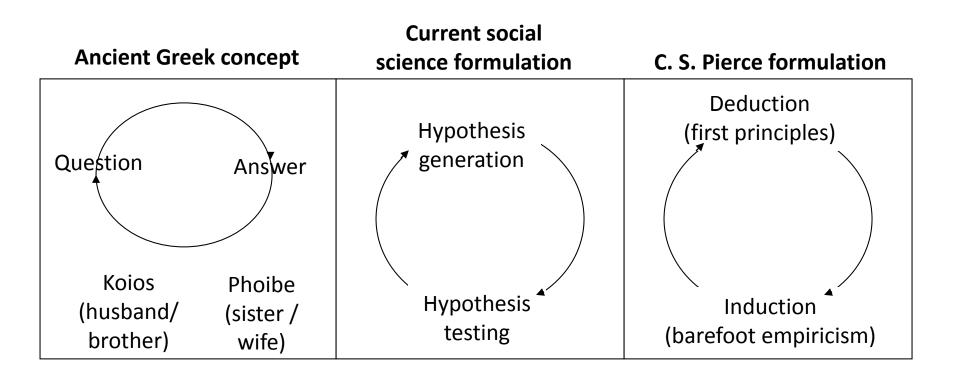
### Science involves both making (logically sound) arguments and testing them against other alternative explanations

Goal, in theory, is generation of knowledge



## The impulse to study politics "scientifically" is as old as science itself

#### From classical Greece...

"[G]overnments differ in kind, as will be evident to any one who considers the matter according to the method that has guided us so far. As in other departments of science, so in politics, the compound should always be disaggregated into the simplest elements, or essential parts, of the whole. We must therefore look at the elements of which the state is composed, in order to see how the different kinds of rule differ from one another and whether any scientific result can be attained about each one of them."

-- Aristotle, *The Politics*, Book 1, Chapter 1, c.350 BC

#### ...to the Scottish enlightenment

"So great is the force of laws, and of particular forms of government, and so little dependence have they of the humours and tempers of men, that consequences almost as general and certain may sometimes be deduced from then, as any which mathematical sciences afford us."

-- David Hume, "That Politics May be Reduced to a Science," Essay III in *Essays Moral, Political and Literary*, 1742.

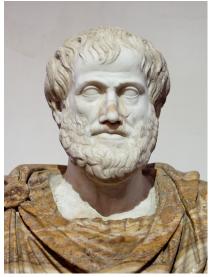


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### In this sense, "political science" is just a subset of "science"

Key elements of scientific method

- Testability (empirical verification)
- Controls
  - Ex ante vs. ex post
  - Including double-blind
- Replicability
- Prima facie assumptions of honesty and competence

Social science: outcomes are human behaviors and opinions

- Imposes certain limits on scientific method
- None of these limits are unique to social sciences, just more common

# Making a claim and verifying it empirically An example

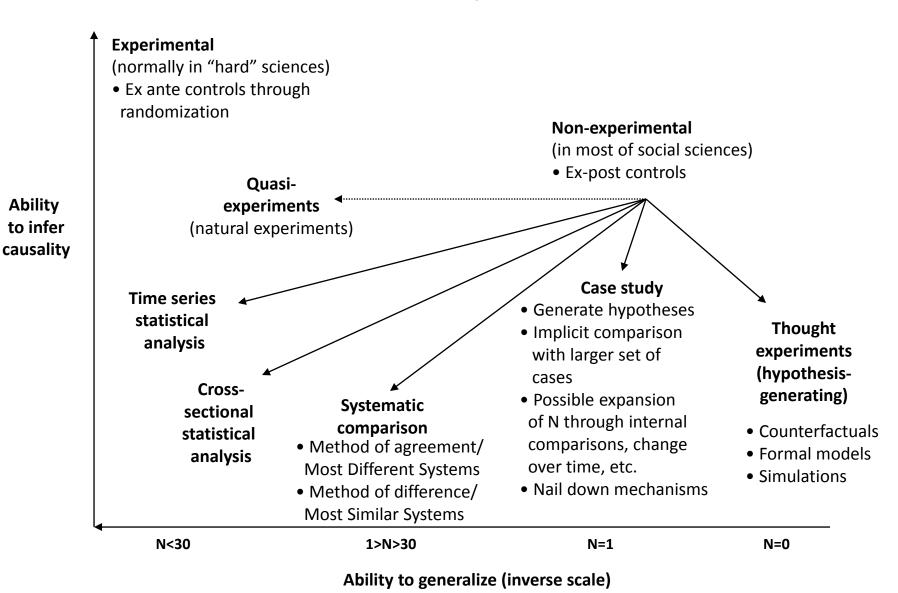
"All you need to run for Congress is a pretty face and a good head of hair"

- → [More plausible claim]
- → Empirical strategy?
- → [Causal claim]
- $\rightarrow$  [Mechanism(s)]
- → [Refined hypothesis]

### Political scientists use a range of methods to make and test arguments

**Ability** 

to infer



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