

The facts can't speak for themselves

why politics and persuasion are essential to
science

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background

- from Mozi to Comte, to Lasswell, to EBP – the dream of rational policy
- frustrations of experts when it fails to live up
- but maybe policy makers aren't the only ones at fault?
- scientists can communicate better, and understand politics and policy better
- but there is still resistance to the “dark arts” of politics and rhetoric

philosophy?

- can philosophy help?
- scientists against philosophers
- philosophers create the headaches they then try to solve
- a possible way forward – philosophy as suggesting organizing principles
- convergence on pragmatism is relevant to the dilemmas of expertise, evidence and policy

Aristotle

- Aristotle gives us two ideas that can help us think about evidence and policy:
 1. Science as demonstrative
 2. A version of rhetoric as how we persuade each other when we have only probable evidence

inferential gaps

- philosophy of science
 - inductive risks (a hot topic right now)
 - underdetermination of theories & pluralism
 - observation as theory dependent
 - background knowledge
- philosophy of language
 - the dream of taming language
 - the omnipresence of context

cognitive science of science

- so is science irrational?
- or does this question get things backwards?
- abstract standards vs successful inquiry
- cognitive psychology of actual reasoning
- biases and heuristics are not *irrational*
- logic is a tool, not a description or a normative standard

back to Aristotle

- the importance of rational reasoning about probable beliefs
- inferential gaps show us that scientific reasoning is only ever about probabilities
- rhetoric promotes effective attitudes to persuasion
- rhetoric is not abandoning reason, it is about how to persuade others that rigorously tested ideas should be taken seriously.

some key readings

Majone, G 1989, *Evidence, argument, and persuasion in the policy process*, Yale University Press, New Haven.

Douglas, H 2009, *Science, policy, and the value-free ideal*, University of Pittsburgh Press.

Chang, H 2012, *Is water H₂O?: evidence, realism and pluralism*, Springer Science & Business Media.

Récanati, F 2004, *Literal meaning*, Cambridge University Press, Cambridge.

Gigerenzer, G et al 1999, *Simple heuristics that make us smart*. Oxford University Press, Oxford.

Thagard, P 2012, *The cognitive science of science: explanation, discovery, and conceptual change*, MIT Press, Cambridge, Mass.