

Mathematical Modeling of Social Phenomena

Is there a point to modeling?

Overview of this lecture

- “Modernist” methodology
- Instrumentalism according to Friedman
- Rhetoric according to McCloskey
- Anarchism according to Feyerabend

“Modernist” methodology

1. Prediction (and control) is the goal of science.
2. Only the observable implications (or predictions) of a theory matter to its truth.
3. Observability entails objective, reproducible experiments.
4. If (and only if) an experimental implication of a theory proves false is the theory proved false.
5. Objectivity is to be treasured; subjective "observation" (introspection) is not scientific knowledge.
6. Kelvin's Dictum: *"When you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind."*

“Modernist” methodology (cont.)

7. Introspection, metaphysical belief, aesthetics, and the like may well figure in the discovery of an hypothesis but cannot figure in its justification.
8. It is the business of methodology to demarcate scientific reasoning from non-scientific, positive from normative.
9. A scientific explanation of an event brings the event under a covering law.
10. Scientists, for instance economic scientists, have nothing to say as scientists about values, whether of morality or art.
11. Hume’s Fork: Burn metaphysical treatises

Friedman and McCloskey

They both realize that “modernism” is not what economist do.

My recap is:

- Friedman turns the science into engineering
- McCloskey turns the science into politics

Positive v. Normative economics

Does it matter?

Is the distinction meaningful?

Physical and social sciences

Are there any essential differences?

What do Milton argue?

Minimal wages

Milton talks about minimal wages as an area where both sides want the same, but disagree on the theory.

Is this true in today's debate?

Predictability

There can only be one measure.

But, what does predictive even mean?

Why would “testing” conformity of
“assumptions” to “reality” be flawed?

Divide hypothesis

Hypothesis that brings prediction (i.e. model + story)

Description of where the hypothesis applies.

Why does he say that “the formula assumes a vacuum” is wrong?

“As if”

Claim: Business operates “as if” they were maximizing rationally their profitability.

How would someone caring about defend this “as if” claim?

Friedman: The Chicago School

“It is odd [...] that modernism in economic methodology is associated with the Chicago School [..., a] group so annoying to other economist [...] yet it] is part of the intellectual equipment of most economists, and its arguments come readily to their lips.”

- Deirdre McCloskey (p. 485)

What Friedman is doing

McCloskey: Friedman post-modern after all!
Aesthetics criterias such as simplicity,
fruitfulness to chose between an infinite amount
hypothesis

He ends up w/ putting up DIFFERENT rules for
what is scientific

Friedman's instrumentalism

1. A good hypothesis provides valid and meaningful predictions concerning the class of phenomena it is intended to explain. (premise)
2. The only test of whether an hypothesis is a good hypothesis is whether it provides valid and meaningful predictions concerning the class of phenomena it is intended to explain.
3. Any other facts about an hypothesis, including whether its assumptions are realistic, are irrelevant to its scientific assessment.

Friedman's instrumentalism: analogy

1. A good used car drives safely, economically and comfortably. (premise)
2. The only test of whether a used car is a good used car is to check whether it drives safely, economically and comfortably.
3. Anything one discovers by opening the hood and checking the separate components of a used car is irrelevant to its assessment.

McCloskey: Problems w/ modernism

What is the problem with falsification?

What is the problem with prediction?

Darwin: Didn't do it

von Mises: "Beyond the power of mortal men"

The American Question:

If you're so smart why aren't you rich?

McCloskey: Death of modernism?

“From a philosopher's point of view the worst flaw in the hostility to the ‘metaphysics’ that modernism sees everywhere is that the hostility is itself metaphysical. If metaphysics is to be cast into the flames, then the methodological declarations of the modernist family [...] will be the first to go. For this and other good reasons philosophers agree that strict logical positivism is dead, raising the question whether economists are wise to carry on with their necrophilia.”

- Deirdre McCloskey (p. 486)

McCloskey: Arrogance and pretension

Putting up rules for what is “scientific”

Rhetoric: “I am a Scientist: give way.”

Now, doesn't McCloskey do the same? Put up at least implicit rules?

(and what's wrong w/ pretension, anyway?)

McCloskey: Regressing on wisdom

“A good example is the typical procedure in econometrics. From economic theory, politics, and the workings of the economist's psyche, all of which are in the rhetorical sense unexamined, come hypotheses about some bit of the economy. The hypotheses are then specified as straight lines, linear models being those most easily manipulated. The straight lines are fitted to someone else's collection of facts. So far the official and workaday rhetoric correspond, and the one might with justice be called a guide to the other. Presently, however, they diverge. If the results of the fitting to the data are reasonable, on grounds that are not themselves subject to examination, the article is sent off to a journal. If the results are unreasonable, the hypothesis is consigned to a do loop: the economic scientist returns to the hypotheses or the specifications, altering them until a publishable article emerges.”

- Deirdre McCloskey (p. 494)

“But momentarily bewitched by the ceremony of regression”

- Deirdre McCloskey (p. 497)

McCloskey: Undressing economists

“It is no use complaining that we didn’t mean to introduce moral premises. We do.”

“It is better [...] to admit that metaphors in economics can contain political message than to use jargon innocently”

- Deirdre McCloskey (p. 508)

McCloskey: In defense of

- Mere rhetoric
- Argument from authority

McCloskey: On metaphors

‘A metaphor is not merely a verbal trick, but
“borrowing between and intercourse of thoughts,
a transaction between contexts.’

Harold Bloom

Feyerabend: Against method

What is Feyerabend's strongest argument?

What does a cynical mind like Feyerabend bring to the discussion?

Utilitarianism and modernism

Utilitarianism is certainly modernistic, and the fact that the rules of the game is easier to use as mediator for incompatible deontological systems. Make it a common language.

In analogy, modernism can function as a common rhetorical platform - for all tastes.

The role of humbleness

- Scientific certainty to believe in
- Scientific certainty to bet on
- Scientific certainty to preach
- Scientific certainty to die by
- Scientific certainty to let others die by

Argue for either

“Modernism”, Friedman, McCloskey or
Feyerabend.

Best?

Worst?

Parenthesis: Conway's Game of Life

<http://pmav.eu/stuff/javascript-game-of-life-v3.1.1/>