

Spatiality and Exploratory Data Analysis in the Theorizing of Routledge Vining: Rules of the Game and the Gaming of Rules

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ASSA Special Session on “Under-appreciated Economists”

A study of under-appreciated economists allows us a window through which to view the mainstream of economic research. It is appropriate that the panelists have a wide range of viewpoints.

The ASSA Panel

- ▶ Robert S. Browne, and his work on reparations (William Darity, Jr.)
- ▶ Spatiality and Exploratory Data Analysis in the Theorizing of Routledge Vining: Rules of the Game and the Gaming of Rules (M. Ali Khan)
- ▶ Harriet Martineau and hypothesis discovery (Sandra Peart and David Levy)
- ▶ William Thompson and the anticipation of Marx's historical materialism (Joseph Persky and Kirsten Madden)

An Abstract

In this talk, and the paper which is to follow it, the author

- ▶ reads this 1959 conceit through Rutledge Vining's 1956 UNESCO "review and interpretation of research on economics in the United States of America;"
- ▶ sights Vining's review, as well as his earlier neglected papers on the spatial dimension in economic theory, as pioneering for the subject of regional economics in so far as it has taken shape in the response of mainstream trade and development theory to the erasure of economic geography from mainstream Walrasian economic theory;
- ▶ relies on this sighting to throw light on Vining's perspective regarding economic theorizing as this viewpoint manifested itself especially, though not exclusively, in his controversy with Tjalling Koopmans on theory and measurement, and more specifically, on the sequencing of data analysis and conceptual formalization.

The Thrust of this Project on Routledge Vining

This project has two parts: Vining as a Theorist and Vining as a Practitioner.

My abstract concerns Vining as a pioneer of spatial economics, but in a way that underscores the methodology that he brought to the subject, as reflected in the Koopmans-Vining controversy: Vining the practitioner guided by the theorist-methodologist.

I had read Vining's great review of Knight's essays collected under the title *Truth and Freedom*, and thought that that would be enough of a pre-requisite and a preamble. This has not been so.

Vining's methodological prescriptions are rich and subtle enough that they necessarily spill over from the narrow confines of the exchange with Koopmans: they need to be looked at though both the inter-disciplinary and intra disciplinary registers.

Rough Outline for a (20-minute) Talk

And so the talk (rather the slides) will be based (articulated) on the following three connections:

- (i) The inter-disciplinary register. (a) A connection to the historian de Certeau in whose work I see a re-articulation of the Koopmans-Vining controversy. (b) A connection to the anthropologist/sociologist Bourdieu who towards the end of his life was examining mainstream economic theory. (c) Commodification in Marx.
- (ii) The intra-disciplinary register, the professional economics mainstream so to speak, (a) a connection to Debreu's conception of a commodity (b) to Gary Becker's conception of choice, (c) Malinvaud's conflicted 1988 recall of the Koopmans-Vining controversy.
- (iii) A connection to the econometric mainstream in an examination of the work of (a) Leamer and (b) Sims.

Debreu's 1959 Conceit

In his 1959 *magnum opus*, Gerard Debreu writes:

A Commodity is a good or a service completely specified physically, temporally, and spatially. [T]he full generality of the concept of commodity, as illustrated by all the examples above, should always be kept in mind.

- ▶ *By focusing attention on changes of dates one obtains, as a particular case of the general theory of commodities which will be developed below, a theory of saving, investment, capital, and interest.*
- ▶ *Similarly by focusing attention on changes of locations one obtains, as another particular case of the same general theory, a theory of location, transportation, international trade and exchange.*

The interpretation of the results in those terms will be left to the reader, since it offers no difficulty once the definition of a commodity has been grasped.

Chapter 1: Commodities

- ▶ *A commodity is, in the first place, an object outside us, a thing by its properties satisfies human wants of some sort or another.*
- ▶ *The nature of such wants, whether, for instance, they spring from the stomach or from fancy makes no difference.*
- ▶ *The value of a commodity, therefore, varies directly as the quantity, and inversely as the productiveness, of the labour incorporated in it.*
- ▶ *In general, the greater the productiveness of labour, the less is the labour time required for the production of the article, the less is the amount of labour crystallized in the article, and less is its value; and vice versa.*

Circumstances and Custom

The value of a commodity would remain constant if the labour time required for its production also remained constant. But the latter changes with every variation in the productiveness of labour. This productiveness is determined by various circumstances, amongst others, by:

- ▶ *the average amount of skill of the workmen,*
- ▶ *the state of science,*
- ▶ *the degree of practical application, the social organization of production,*
- ▶ *the extent and capabilities of the means of production,*
- ▶ *and by physical conditions.*

The different proportions in which different sorts of labour are reduced to unskilled labour as their standard, are established by a social process that goes on behind the backs of the producers, and consequently appear to be fixed by custom.

Becker's Rational Choice Approach to Behavior

- ▶ *The economic approach has been refined during the past two hundred years. It now assumes that individuals maximize their utility from basic preferences that do not change rapidly over time, and that the behavior of different individuals is coordinated by explicit and implicit markets. ...*
- ▶ *The economic approach is not restricted to material goods and wants to markets with monetary transactions, and conceptually does not distinguish between major and minor decisions or between “emotional” and other decisions.*
- ▶ *Indeed, I assert that the economic approach provides a framework applicable to all human behavior – to all types of decisions and to persons from all walks of life.*
- ▶ *My intention [is] to present a comprehensive analysis that is applicable, at least in part, to families in the past as well as in the present, in primitive as well as modern societies, and in Eastern and Western cultures.*

Michel de Certeau: An Introduction

Michel de Certeau is the author of nearly a score of books that range in subject matter from theology and the history of religions to anthropology and that include theoretical reflections on the writing of history as well as contributions to contemporary cultural criticism, literary theory, and the analysis of everyday life.

This is not merely a profusion of intellectual interests but the proper and legitimate exercise of certifiably acquired knowledge: advanced training in theology, history, comparative religions, psychoanalysis and anthropology.

Michel de Certeau: Some Selected References

1984: *The Practice of Everyday life*. Berkeley: University of California Press.

1986: *Heterologies: The Discourse on the Other*. Minneapolis: University of Minnesota Press.

1988: *The Writing of History Heterologies*. New York: Columbia University Press.

1992: *The Mystic Fable: The Sixteenth and Seventeenth Centuries*. Volumes I and II. Chicago: University of Chicago Press.

1996: *Culture in the Plural*. Minneapolis: University of Minnesota Press.

1996: *Capture of Speech and other Political Writings*. Minneapolis: University of Minnesota Press.

1992: *The Possession of Loudon*. Chicago: University of Chicago Press.

de Certeau's *Practice of Everyday Life*

[In] the current situation [one] can discern two mechanisms through which a body of dogma has always made itself believed:

- ▶ *one the one hand, the claim to be speaking in the name of the reality which, assumed to be inaccessible, is the principle of what is believed (a totalization), and the act of believing (something always unavailable, unverifiable, lacking),*
- ▶ *and on the other, the ability of a discourse authorized by “reality” to distribute itself in the form of elements that organize practices, that is, of articles of faith.*

de Certeau's *Establishment of the Real*

The media transform the great silence of things into its opposite. Formerly constituting a secret, the real now talks constantly.

- ▶ *News reports, information, statistics, and surveys are everywhere. No story has spoken so much or shown so much. Not even the ministers of the gods ever made them talk in such a continuous, detailed and imperative way as the producers of the revelations and rules do these days in the name of the current reality.*
- ▶ *Narrations about what's going-on constitute our orthodoxy. Debates about figures are our theological wars. The combatants no longer bear the arms of a defensive or offensive udea. They move about camouflaged as facts, data and events. They present themselves as messengers from a "reality."*

A particular problem arises when, instead of being a discourse on other discourses, as is usually the case, theory has to advance over an area where there are no longer any discourses. There is a sudden unevenness of terrain: the ground on which verbal language rests begins to fail.

Every theoretical effort has had to give a more or less direct explanation of this relationship to its non-discursive activity, to this immense "remainder" constituted by the part of human experience that has not been tamed or symbolized in language.

Bourdieu's *Economy of Practices*

The use of market methods to deal with phenomenon that are viewed as lying outside the market.

Economic theory has allowed to be foisted upon it a definition of the economy of practices which reduces the universe of exchanges to mercantile exchange which is objectively and subjectively oriented toward the maximization of profit, i.e., (economically) self-interested, it has implicitly defined the other forms of exchange as noneconomic, and therefore disinterested.

Two Polar Types: Homo Oeconomicus, bourgeois man with his world of double-entry accounting, versus artist/intellectual in a world of art-for-art's sake and pure theory.

A general science of the economy of practices, capable of reappropriating the totality of the practices which, although objectively economic, are not and cannot be recognized socially as economic, and which can be performed only at the cost of a whole labor of dissimulation (euphemization), must endeavour to grasp capital and profit in all their forms, and to establish laws of their conversions.

Interpretation of generous or charitable calculated acts of class appeasement forgets that the most sincerely disinterested acts may be those best corresponding to objective interest. These are capital conversions the direction and moment of which are determined by a “sense of investment” which is the less likely to be seen the more skillful it is. Innocence is the privilege of those who move in their field of activity like fish in water.

Malinvaud 1988 on Econometric Methodology

When we look back and try to give a broad evaluation of the achievement of the simultaneous-equation work of the 1940s, we of course know that the theory was not complete by the end of this period.

- ▶ *Alternative estimators had to be discovered,*
- ▶ *small-sample properties to be investigated,*
- ▶ *nonlinear simultaneous-equation models to be considered,*
- ▶ *efficient computational softwares to be built,*
- ▶ *even pedagogical presentations of the theory and of its algebra to be found.*

Nevertheless, after thirty more years of theoretical research in this field, the Cowles Commission construction essentially stands untouched; new wings and pinions have been added, good maps have been drawn, but the central building needs no repair. This was a perfectly sound and impressive piece of methodological work. No doubt or questioning can be expressed in this respect.

Malinvaud 1988 Doubts and Qualifications

T. Koopmans wrote a twenty-page review of the book under the title "Measurement without Theory." The review concentrated on the appropriate methodology for the analysis of business fluctuations; it opposed the National Bureau empiricism, qualified as belonging to "the Kepler stage," as against the structural-equation approach, claimed to belong to "the Newton stage." ... the review was definitely a plea for the Cowles Commission approach and a critique of the then much better known National Bureau methodology.

But the latter soft expression of a doubt does not seem to have received much weight in the thoughts of Cowles people during the following years. T. Haavelmo shows a complete confidence in the necessity and universality of the probability approach. It is typical of a position consistently taken in Cowles Commission writings about econometric methodology. The force of the movement was too strong for the rather cautious but thoughtful words of R. Vining to have changed its course.

Vining's soft expression of doubt

*The discussion seems somewhat strained to me, and ... I believe that one might raise the possibility that Koopmans' argument contains a misleading emphasis if not an error.... The work of Burns and Mitchell that is being criticized purports to be a **work of discovery and hypothesis-seeking**, and it is not clear at all what the meaning of 'efficiency' should be in this context. Statistical efficiency is an attribute of an estimation and testing procedure rather than of a **procedure of search**.*

The discovery of such relations suitable for the prediction procedure that Koopmans has in mind has yet to be publicly presented, and the phrase 'underlying behavior equation' is left utterly devoid of content [particularly in the field of business fluctuations].

Malinvaud again on Vining's expression of doubt

*Vining insisted at length on the facts that the Burns and Mitchell book was explicitly designed to outline certain methods adopted in an explorative study of economic variations, that factual systematized knowledge in economics was meager, and that it was perhaps more important for economists to concentrate on problem I, “the searching for regularities and interrelations of regularities and the **feeling around** for interesting theoretical models,” rather than on the subsequent problems of testing, estimation, and prediction.*

Koopmans' Response

“...there remains scope for doubt whether all hypothesis-seeking activity can be described and formalized as a choice from a preassigned range of alternatives,” i.e., whether all hypothesis-seeking activity can apply the probability approach.

Current expressions of doubt: Leamer and Sims

Some relevant work of E. E. Leamer

1978: Specification Searches: Ad Hoc Inference with Nonexperimental Data. New York: Wiley.

1983. Let's Take the Con Out of Econometrics. *American Economic Review* **73(1)**, 31-43.

2001: The Economic Geography of the Internet Age (co-author: M. Storper). *Journal of International Business Studies* **32(4)**, 1-34

2004: Are the roads red? Comments on "Size Matters." *The Journal of Socio-Economics* **33**, 555-557.

2009: Macroeconomic Patterns and Stories. Berlin: Springer.

2010: Tantalus on the Road to Asymptopia. *Journal of Economic Perspectives* **24(2)**, 31-46.

Leamer's Statistics-Metastatistics Distinction

Leamer's 1978 book deals with a special topic of metastatistics: specification searches.

Statistics is the theory of inferences ideally drawn from data. Metastatistics is the theory of inferences actually drawn from data. Statistical theory takes as given the model, the data, and the purity of the researcher's motives. Metastatistics analyzes how the researcher's motives and opinions influence his choice of model and his choice of data. Metastatistics includes the study of memory and computing failures; it also deals with the social mechanism by which information is transmitted among individuals.

Current expressions of doubt: Leamer and Sims

Some relevant work of C. A. Sims

1980: Macroeconomics and reality. *Econometrica* **48** (1), 1-48.

1996: Macroeconomics and Methodology. *Journal of Economic Perspectives* **10** (1), 105-120.

2011: Statistical Modeling of Monetary Policy and its Effects.
Nobel lecture.

Sims on *Macroeconomics and Reality*

I will argue that the style in which their builders construct claims for a connection between these models and reality – the style in which “identification” is achieved for these models – is inappropriate, to the point at which claims for identification in these models cannot be taken seriously.

After developing the conclusion that the identification claimed for existing large-scale models is incredible, I will discuss what ought to be done in consequence. The line of argument is: large-scale models do perform useful forecasting and policy-analysis functions despite their incredible identification; the restrictions imposed in the usual style of identification are neither essential to constructing a model which can perform these functions nor innocuous.

Malinvaud (1988) on Sims (1980)

Some of the writings of C. Sims and other econometricians working with him seem to argue for a complete replacement of the traditional macroeconometric methods by the new multidimensional time-series analysis they are promoting. Accepting to go that far would be tantamount to rejecting the probability approach.... such a revolution cannot be accepted. But, seen as providing a complement to present practices, the proposed analyses are quite valuable.

C. Sims's writings must properly be understood as a plea for more conscious exploratory analysis of the data, before any model is specified. They then transpose to econometrics recommendations made for all fields of application by some mathematical statisticians who, following J. Tukey, now promote all kinds of unconstrained data analysis.

As long as they are not understood as a negation of the probability approach but as stressing the importance of a well-conceived first exploratory phase in any analysis of data sets, these recommendations are healthy.

They may expose statisticians to the risk of being dominated by computer specialists who know no subject matter of the field and think only of algorithms; but we econometricians are too well aware of the importance of economic theory to be in danger of that.

Summary and Punch-Line

More than an under-appreciated economist, the work of Routledge Vining is a fruitful source for current conversations on a variety of substantive, methodological and technical issues: on theory versus practice, hypothesis-seeking versus prediction, structural versus reduced form econometrics, among others.

Thank you David for showing these. Sorry that I am not there to talk around them.