

1. It's not meant at introducing econ ideas but primarily at helping...

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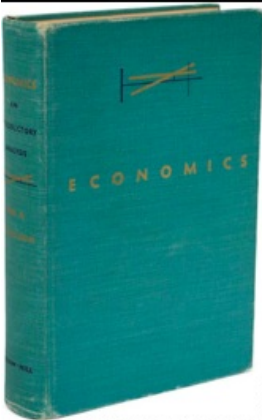
Tweestorming a rough chronology of economics since World War II

Caveats:

1. It's not meant at introducing econ ideas but primarily at helping econ undergrads embed ideas & tools seen in micro/macro courses in specific times & places before going deeper in some episodes

The transformation of economics since 1940

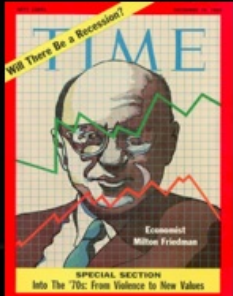
a chronology



an economy whose equilibrium points will have all the properties of a competitive equilibrium. There will be $m + n + 1$ participants, the m consumption units, the n production units, and a fictitious participant who chooses prices, and who may be termed the *market participant*.

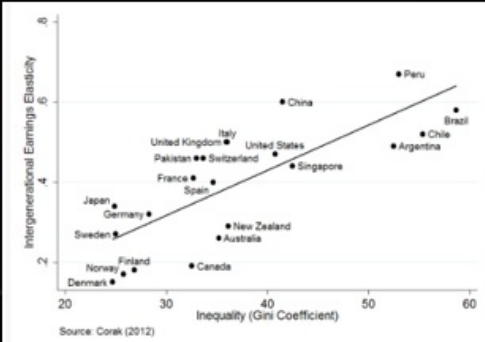
For any consumption unit i , let z_i denote a point in $X_1 \times \dots \times X_{i-1} \times X_{i+1} \times \dots \times X_m \times Y_1 \times \dots \times Y_n \times P$, i.e., z_i has as components z_{ij} ($j \neq i$), y_j ($j = 1, \dots, n$), p . Define

$$A_i(z_i) = \left\{ z_i \mid z_i \in X_i, p \cdot z_i \leq p \cdot y_i + \max \left[0, \sum_{j=1}^n a_{ij} p \cdot y_j \right] \right\}.$$



Will There Be a Recession?
Economic
Milton Friedman

SPECIAL SECTION
Into The 70s: From Violence to New Values



Intergenerational Earnings Elasticity

Inequality (Gini Coefficient)

Source: Corak (2012)

Country	Inequality (Gini Coefficient)	Intergenerational Earnings Elasticity
Peru	55	0.7
Brazil	58	0.6
Chile	58	0.5
Argentina	55	0.4
China	45	0.5
Italy	35	0.4
United Kingdom	35	0.35
United States	40	0.35
Pakistan	30	0.3
Switzerland	35	0.3
France	35	0.25
Spain	35	0.25
Singapore	45	0.25
Japan	30	0.2
Germany	30	0.2
Sweden	30	0.15
New Zealand	40	0.15
Australia	40	0.15
Norway	30	0.1
Finland	30	0.1
Denmark	30	0.05
Canada	40	0.05

2. it's historiographically naïve, focused on US, white male mainstream econs b/c it's what became econ "core" taught everywhere. Leads me to ask, in final lecture, "is econ an objective science?" through pointing to sex, race, geo & status uniformity of contributors to the field

3. range of influences covered, from math theorems to shifts in political ideologies, wars & computers is deliberate. My course is built on belief that both histories ignoring contexts/pressures & histories ignoring economists' genuine quest for scientific knowledge are incomplete

1. My timeframe makes interwar, its diversity of core places & practices the 'prehistory'

In UK, Keynes couches new ways of seeing savings, demand, expectations, employment, deficit in traditional *style * cas2.umkc.edu/economics/peop... (see Keynes talking

📺 Rare archive footage of John Maynard Keynes! [#ThrowbackThursday](#)

Keynes hated the Gold Standard (“a barbarous relic”!), so here he is talking about the positive implications of scrapping it.

What economic policy would you get rid of? [#economics #econtwitter](#)
pic.twitter.com/pxlPhmdE9y

— Econ Films (@econfilm) [January 30, 2020](#)

)

speculator. Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done. The measure of success attained by Wall Street, regarded as an institution of which the proper social purpose is to direct new investment into the most profitable channels in terms of future yield, cannot be claimed as one of the outstanding triumphs of *laissez-faire* capitalism — which is not surprising, if I am right in thinking that the best brains of Wall Street have been in fact directed towards a different object.

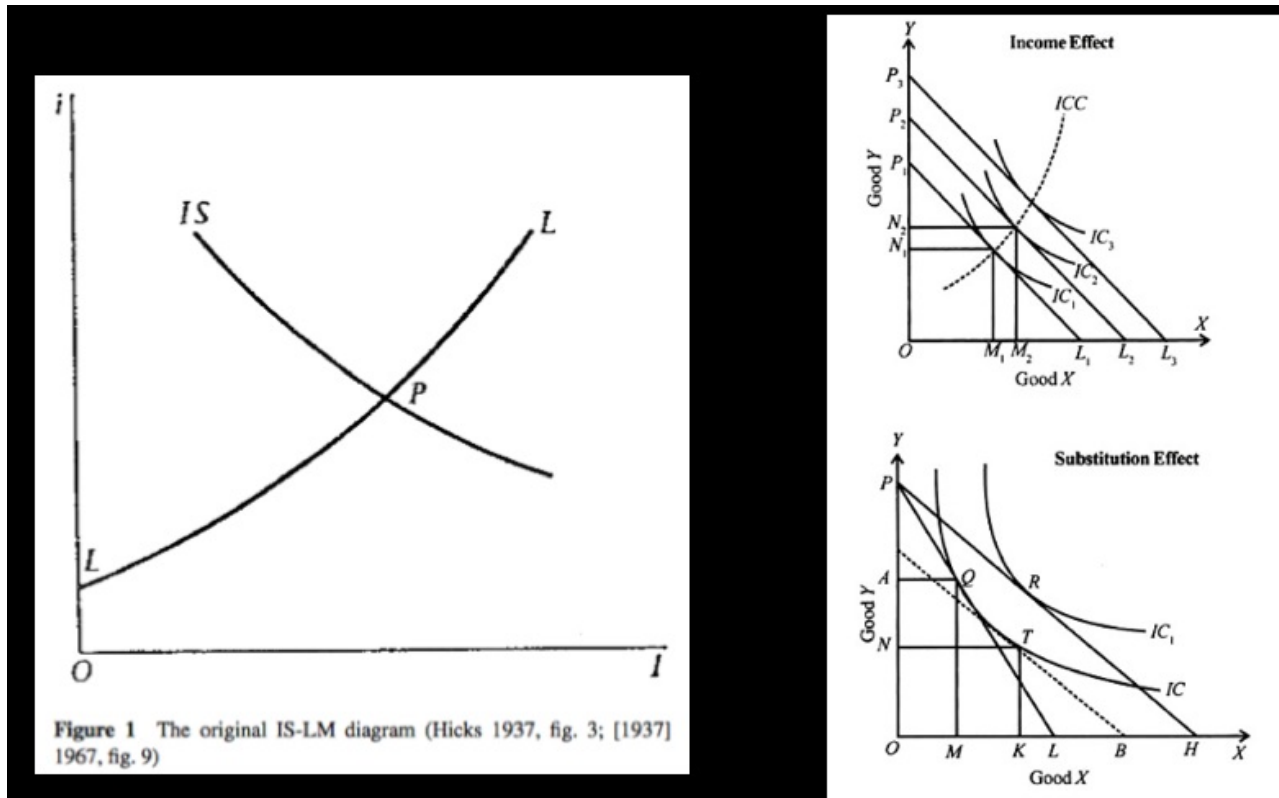
These tendencies are a scarcely avoidable outcome of our having successfully organised “liquid” investment markets. It is usually agreed that casinos should, in the public interest, be inaccessible and expensive. And perhaps the same is true of Stock Exchanges. That the sins of the London Stock Exchange are less than those of Wall Street may be due, not so much to differences in national character, as to the fact that to the average Englishman Throgmorton Street is, compared with Wall Street to the average American, inaccessible and very expensive. The jobber’s “turn”, the high brokerage charges and the heavy transfer tax payable to the Exchequer, which attend dealings on the London Stock Exchange, sufficiently diminish the liquidity of the market (although the practice of fortnightly accounts operates the other way) to rule out a large proportion of the transactions characteristic of Wall Street.^[5] The introduction of a substantial Government transfer tax on all transactions might prove the most serviceable reform available, with a view to mitigating the predominance of speculation over enterprise in the United States.

To be fair, not many understood said theory (below is Samuelson reading the General Theory, continuing “it is badly written...not well suited for classroom use... arrogant...genius”). Keynes himself taught a simplified chart version, not only the one proposed by Hicks in 1937...

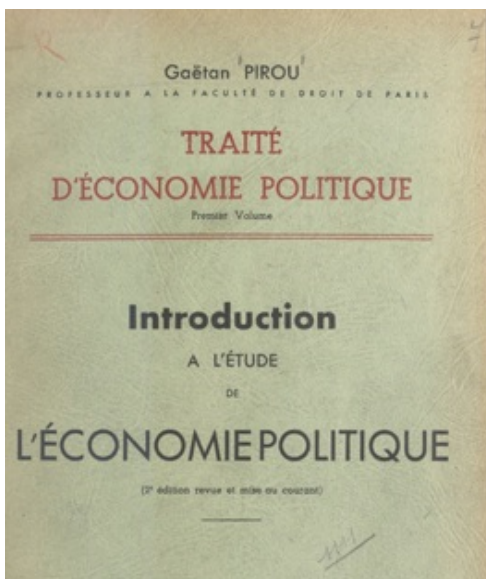
pretensions would have been complete except for an uneasy realization that I did not at all understand what it was about. And I think I am giving away no secrets when I solemnly aver—upon the basis of vivid personal recollection—that no one else in Cambridge, Massachusetts, really knew what it was about for some 12 to 18 months after its publication. Indeed, until the appearance of the mathematical models of Meade, Lange, Hicks, and Harrod there is reason to believe that Keynes himself did not truly understand his own analysis.

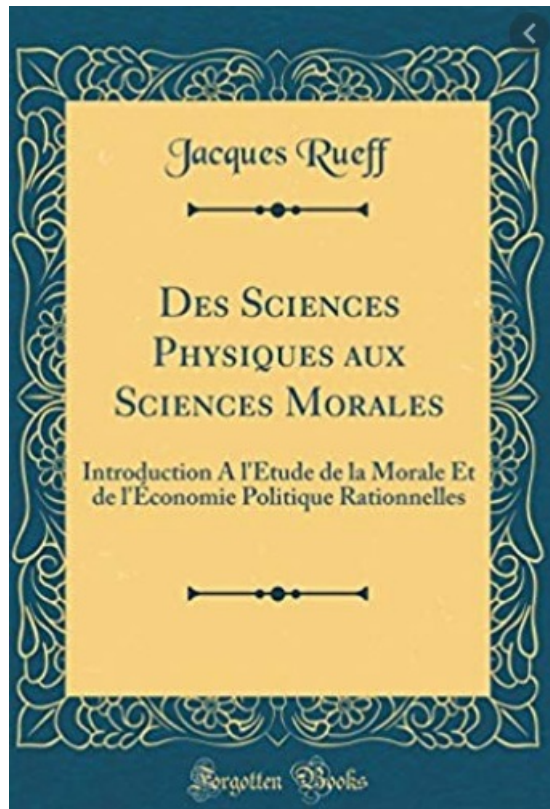
... in famous attempt to compare simplified version of Keynes's apparatus & "typical" classical theory [public.econ.duke.edu/~kdh9/Courses/...](http://public.econ.duke.edu/~kdh9/Courses/)

Hicks & others we also busy reframing consumer choice theory as consistency in Paretian setting

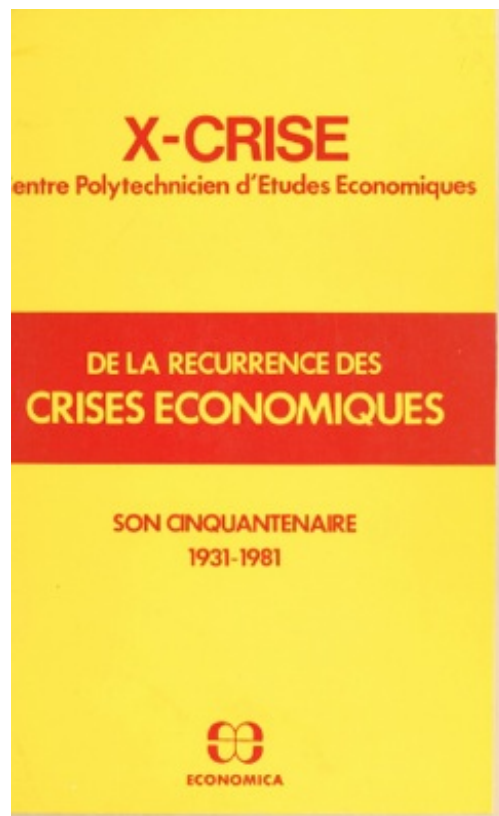


French landscape was very ≠. Roughly 2 traditions coexisted. Econ taught in law school (Pirou) as broad depiction of institutions to train civil servants & "economistes ingenieurs" (Dupuis, Colson, Divisia...), public engineers faced with econ calculus questions





The latter group upheld an utopia, that of replacing ideological debates w/ forum to “discuss and examine, in objective & disinterested way, problems faced by the modern world, by using scientific method in which we were trained.” In 1930s, they created X-crise



In Netherlands, physics-trained Tinbergen wrote 1st macroeconomic representation of "an economy" (then a new concept). Keynes voices skepticism. Marginal but spreading desire to combine theory, math & stats lead to foundation of Econometric Society papers.ssrn.com/sol3/papers.cf...

Tinbergen's Dutch Model: Equations and Model Structure

TABLE II. — *List of equations assumed and tested.*

1. $l = 0,36a_{-1}$
2. $p = 0,15(r_A' + 2l) + 0,08u$
3. $q = 0,74q_A' + 0,16(s_A' + 2l)$
4. $u = u_A + u'$
5. $u' = L + E' - 2,49p$
6. $v_A' + 3y_A' = 0,51Z_{-1}$
7. $a = b + 0,20u_A' + 0,98x_A'$
8. $y_A' = 0,69b$
9. $u = 1,72u_A' + 4,35x_A'$
10. $x_A' - 0,71u_A' = -0,42p + 0,39p_A'$
11. $y_A' - v_A' = 0,86(q_A' - q)$
12. $L = a + l$
13. $Z = I + U' + U_A + 1,7b + 0,3b_{-1} + 0,48q - L - X_A' - U_A'$
 $- Y_A' + 0,24[s_A' - (s_A')_{-1}] + 0,36[r_A' - (r_A')_{-1}]$
 $+ 0,47[p_A' - (p_A')_{-1}] + 0,3(Z - Z_{-1})$
14. $E = 0,48Z + 0,20Z_{-1}$
15. $E' = 0,065(E + E_{-1})$
16. $E' = 0,435(E + E_{-1})$
17. $U_A = u_A + 0,88p_A$
18. $U' = u' + 2,49p$
19. $U_A' = u_A' + 0,58p_A'$
20. $V_A' = v_A' + 0,13q_A'$
21. $X_A' = x_A' + 0,41r_A'$
22. $Y_A' = y_A' + 0,13s_A'$

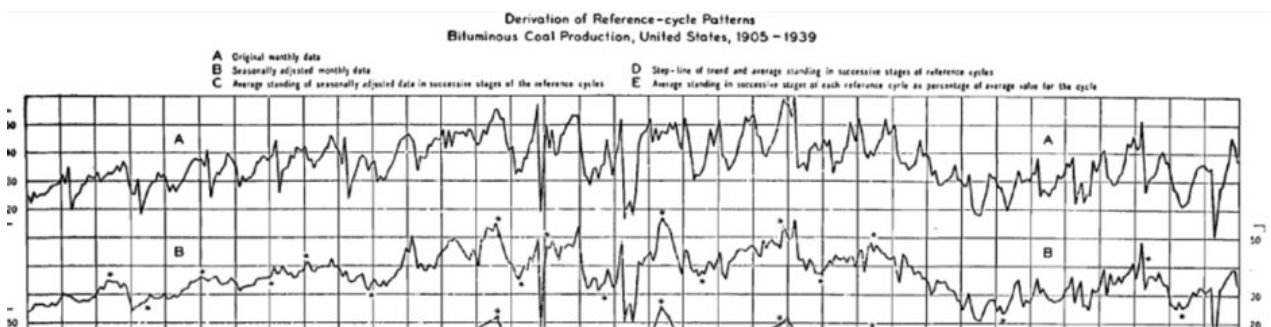


Yet founding econometrics on probability was seen as impossible: econ events do not repeat. In 1944, Oslo economist Haavelmo proposed alternative: consider observed econ phenomena as drawn from distribution of possible ones by Nature
fitelson.org/woodward/haave...

to the actual, “true” variables. The model thereby becomes *an a priori hypothesis* about real phenomena, stating that every system of values that we might observe of the “true” variables will be one that belongs to the set of value-systems that is admissible within the model. The idea behind this is, one could say, that Nature has a way of selecting joint value-systems of the “true” variables such that these systems are as if the selection had been made by the rule defining our theoretical model. Hypotheses in the above sense are thus the joint implications—and the only testable implications, as far as *observations* are concerned—of a theory *and* a design of experiments. It is then natural to adopt the convention that a theory is called true or false according as the hypotheses implied are true or false, when tested against the data chosen as the “true” variables. Then we may speak, interchangeably, about testing hypotheses or testing theories.

US then hosted many ways of doing econ, from marginalism to then powerful & varied brand of institutionalism (Commons, Means, Clark offered detailed depiction of private & public institutions)

At NBER, Mitchell gathered loads of data w/ purpose of measuring business cycles



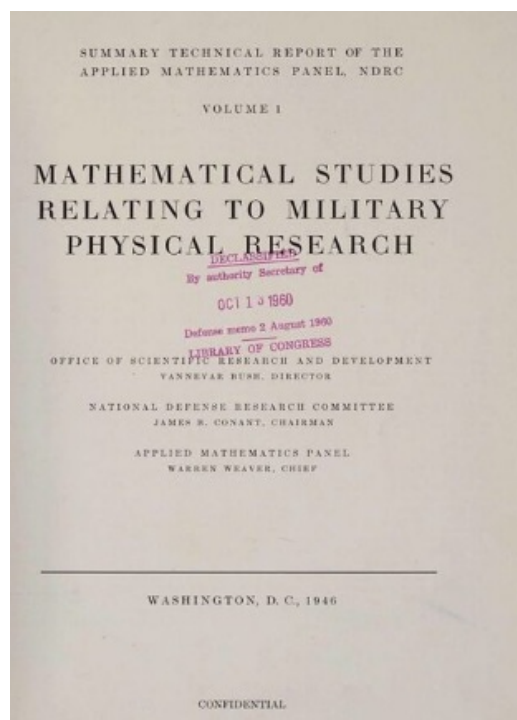
2. Second World War was total game changer

1st, b/c of demographic transformation in suppliers of econ: massive emigration of econ, mathematicians, physicists (Von Neumann, Morgenstern, Hayek, Schumpeter, Wald, Marschak & more), some settling down at New School's University in Exile



Emigrés econs brought with them econometrics, general equilibrium, games & public policies based on planning to US, some immediately absorbed & improved in multiple interdisciplinary scientific bodies servicing war effort.

This resulted in:



-new ways of representing an "economy" (national accountings, $Y=C+I+G$ identities, Leontief's input-output tables)

-ways of controlling production & interactions (Operation research, linear programming & simplex, sampling, statistical decision theory, game theory...)

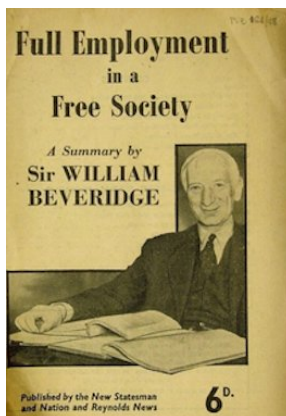
TABLE
Allocation of Goods and Services by
[All figures in

INDUSTRY PRODUCING	INDUSTRY								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Agricul- turo and fishing	Food tobacco, and kindred products	Ferrous metals	Motor vehicles, indus- trial and heating equip- ment	Metal fabri- cating	Non- ferrous metals and their prod- ucts	Nonme- talic mine- rals and their prod- ucts	Fuel and power	Chem- icals
1. Agriculture and fishing	950	4,998	....	....	....	....	....	....	176
2. Food, tobacco and kindred products	645	1,530	....	....	....	....	....	....	47
3. Ferrous metals	24	....	1,188	479	861	43	....	....	....
4. Motor vehicles, industrial and heating equipment	188	72	4	1,645	7	9	19	109	7
5. Metal fabricating	433	306	37	611	717	12	5	137	40
6. Nonferrous metals and their products	5	23	109	117	221	1,325	4	51	89
7. Nonmetallic minerals and their products	14	137	29	70	64	6	280	6	127
8. Fuel and power	474	168	318	162	164	65	185	2,452	197
9. Chemicals	357	133	36	34	108	3	17	13	828
10. Lumber, paper, and their products, printing and publishing	94	260	1	35	61	6	46	4	69
11. Textiles and leather	66	43	....	105	8	1	2	....	13
12. Rubber	54	3	....	195	22	....	....	1	4
13. All other manufacturing	2	....	....	13	23	....	....	....	1
14. Construction	342	70	41	24	42	8	18	821	18
15. Transportation	793	392	266	108	135	75	295	2,300	222
16. Trade	1,446	4,052	78	1,260	1,254	25	394	1,892	800

1
Industry of Origin and Destination, 1939
[millions of dollars]

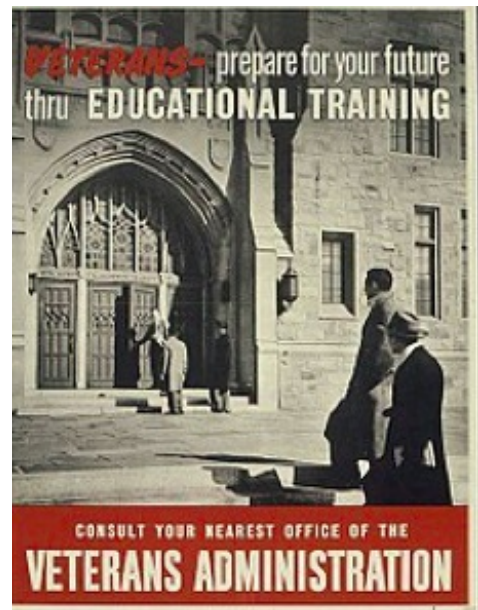
INDUSTRY	PURCHASING											Total gross output	
	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)		
	Lumber, paper, and their products, printing, leather and publi- shing	Textiles and leather	Rubber manu- factur- ing	All other manu- factur- ing	Con- struc- tion	Trans- por- tation	Trade	Foreign coun- tries (expor- to)	Business and con- sumer services	House- holds and Govern- ment	Unallo- cated and stocks		
1. Agriculture and fishing	185	583	....	7	167	....	....	453	....	4,495	461	12,475
2. Food, tobacco and kindred products	7	156	....	2	....	....	....	269	1	15,751	391	18,799
3. Ferrous metals	64	....	....	....	592	69	....	171	1	12	383	3,887
4. Motor vehicles, industrial and heating equipment	96	102	16	....	423	77	76	409	3	2,819	1,591	7,672
5. Metal fabricating	63	16	....	12	1,301	386	168	544	195	1,657	2,118	8,692
6. Nonferrous metals and their products	5	1	....	50	144	....	....	159	6	58	589	2,956
7. Nonmetallic minerals and their products	51	2	5	8	1,401	13	2	65	2	282	170	2,734	
8. Fuel and power	302	138	33	44	127	768	712	519	111	4,990	1,823	13,592	
9. Chemicals	120	326	31	42	426	16	....	203	38	1,508	672	4,911
10. Lumber, paper, and their products, printing and publishing	2,192	56	5	29	910	9	270	142	1,406	1,961	1,375	8,893	
11. Textiles and leather	84	3,122	58	15	2	....	8	168	29	7,879	429	12,032
12. Rubber	1	30	20	2	4	32	20	41	33	348	360	1,170	
13. All other manufacturing	10	117	....	180	16	30	55	71	373	1,075	394	2,360
14. Construction	42	22	4	11	....	828	189	....	251	7,358	....	10,089
15. Transportation	387	52	31	8	....	138	4	103	....	1,919	493	7,621
16. Trade	995	2,928	270	550	2,618	18,562

-quick institutionalization of economists' newly recognized social use: Beveridge report & White Paper on Employment Policy in UK, Commissariat General au Plan, INSEE & ENA in France, 1946 Employment Act & Council of Econ Advisors in US (excerpt below)



The Congress declares that it is the continuing policy and responsibility of the Federal Government to use all practicable means, consistent with its needs and obligations and other essential national policies, and with the assistance and cooperation of both small and larger businesses, agriculture, labor, and State and local governments, to coordinate and utilize all its plans, functions, and resources for the purpose of creating and maintaining, in a manner calculated to foster and promote free competitive enterprise and the general welfare, conditions which promote useful employment opportunities, including self-employment, for those able, willing, and seeking to work, and promote full employment and production, increased real income, balanced growth, a balanced Federal budget, adequate productivity growth, proper attention to national priorities, achievement of an improved trade balance through increased exports and improvement in the international competitiveness of agricultural business, and industry, and reasonable price stability as provided in [section 1022b\(b\) of this title](#).

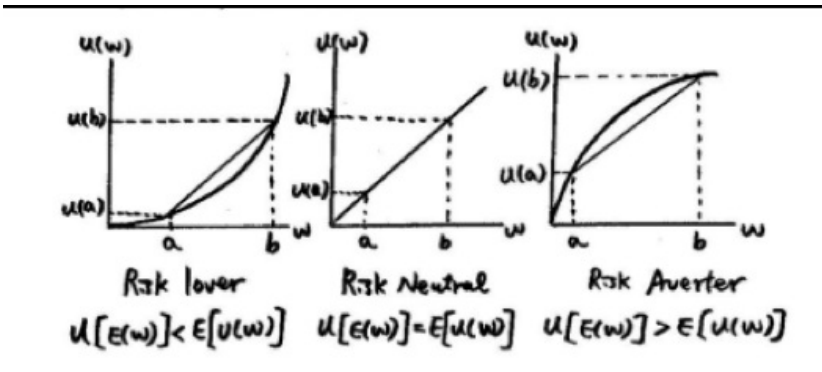
If you add veterans flooding unis, econs enter Cold War in high demand, w/ set of new tools yet to stabilize & skepticism from hard scientists (NSF established without social science division) & politicians (conflation of social sciences, planning & socialism by McCarthyites)



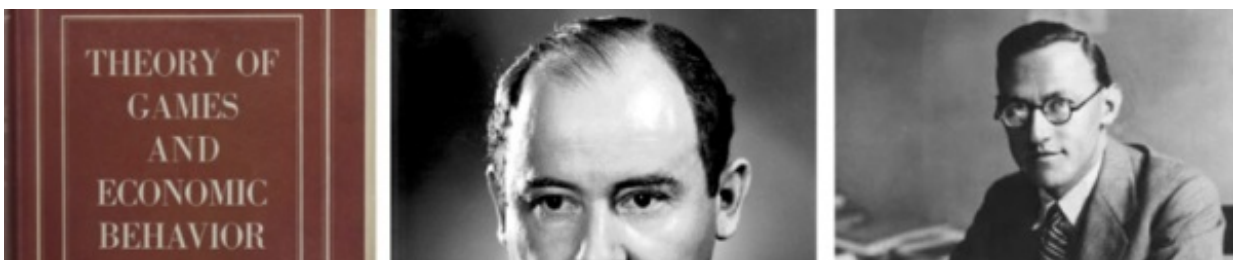
3.1950-65: Cold War & Golden Age of Keynesianism

Ideological & science race spurred by Cold War cradled new identity for econ: "science of rational decision"

Building blocks included Von Neumann & Morgenstern's 1944 Theory of Games, including their expected utility theory...



Nash soon built on advances in deriving fixed-point theorems to propose solution concept for non-cooperative games & RAND researchers began experimenting to study repeated prisoners' dilemma outcome



Prisoner's Dilemma, or Prisoners' Dilemma?: Hoisted from the Archives **Hoisted from the Archives**:_[Prisoner's Dilemma]

(https://web.archive.org/web/20000903010012/http://www.j-bradford-delong.net/economists/prisoners_dilemma.html): An extended passage from William ... <https://www.bradford-delong.com/2018/10/prisoners-dilemma-or-prisoners-dilemma-hoisted-from-the-archives.html>

Repeated Prisoner's dilemma between Armen Alchian and John Williams

Round	AA	JW	AA's Comments	JW's Comments
1	D	C	JW will play D--sure win. Hence if I play C--I lose	Hope he's bright.
2	D	C	What is he doing?!!	He isn't, but maybe he'll wise up.
3	D	D	Trying mixed?	OK, dope.
4	D	D	Has he settled on D?	OK, dope.
5	C	D	Perverse!	It isn't the best of all possible worlds.
6	D	C	I'm sticking to D since he will mix for at least 4 more times.	Oh ho! Guess I'll have to give him another chance.
7	D	C		Cagey, isn't he? Well...
8	D	D		In time he could learn, but not in ten moves or so.
9	D	D	If I mix occasionally, he will switch--but why will he ever switch from D?	
67	D	C		He won't share.
68	C	D		He'll punish me for trying!
69	D	D		
70	D	D		I'll try once more to share--by taking.
71	D	C		This is like toilet training a child--you have to be very patient.
72	C	C		
73	C	C		
74	C	C		
75	C	C		
76	C	C		
77	C	C		
78	C	C		
79	C	C		
80	C	C		
81	D	C		
82	C	D		He needs to be taught about that.
83	C	C		

Young Arrow studying benchmark econ organization noticed Nash's use of Kakutani's theorem, one that French math Debreu looking for pure axiomatic systems knew from studying topology. In 1954, they offered proof existence of competitive equilibrium in general equilibrium setting

EXISTENCE OF AN EQUILIBRIUM FOR A COMPETITIVE ECONOMY

BY KENNETH J. ARROW AND GERARD DEBREU¹

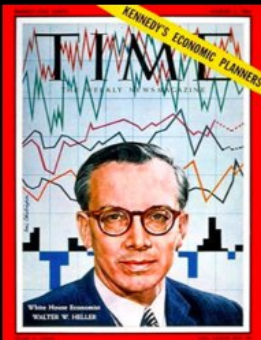
A. Wald has presented a model of production and a model of exchange and proofs of the existence of an equilibrium for each of them. Here proofs of the existence of an equilibrium are given for an *integrated* model of production, exchange and consumption. In addition the assumptions made on the technologies of producers and the tastes of consumers are significantly weaker than Wald's. Finally a simplification of the structure of the proofs has been made possible through use of the concept of an abstract economy, a generalization of that of a game.

At MIT, another synthesis was taking shape, based on Samuelson's reading of (Hicks's) Keynes in Foundations, Solow's modeling of long term & growth, & the duo's identification of a US Phillips Curve in 1960 (Below is Samuelson 1955 version of Economics)

In recent years 90 per cent of American Economists have stopped being 'Keynesian economists' or 'anti-Keynesian economists'. Instead they have worked toward a synthesis of whatever is valuable in older economics and in modern theories of income determination. The result might be called neo-classical economics and is accepted in its broad outlines by all but about 5 per cent of extreme left wing and right wing writers.

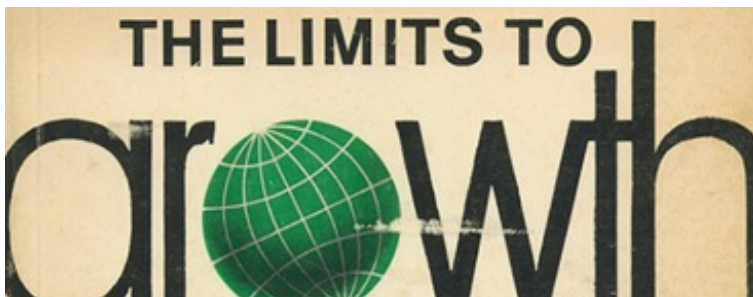
This US brand of Keynesianism was translated into policy as Kennedy brought Heller, Tobin and Gordon to the Council of Econ Advisors, w/ Solow as staff members & Samuelson as shadow advisors. They campaigned for a tax cut & to make public deficits acceptable, convinced Kennedy

Things are different now. Just count. Paul Samuelson and Dick Musgrave and countless others have been advising Kennedy since summer. Paul was offered the chairmanship of the Council of Economic Advisers and turned it down. It went instead to Walter Heller. . . . Jim Tobin will be a member of the Council of Economic Advisers and he is as good an economist as we have. Bob Roosa is undersecretary of Treasury. Speaking of RAND, Charlie Hitch . . . has just been appointed Assistant Secretary of Defense. (Solow 1961 to Sargent)



d. These are avoidable losses. Economics is no exact science; but economists are almost unanimous in holding that an active fiscal policy can prevent this waste. And experience in other countries, where popular and parliamentary devotion to outworn fiscal doctrine is less rigid, provides impressive evidence to support them.

As Johnson implemented tax cut & War on Poverty, western societies entered a state of crisis & so did econ (or at least an age of paradoxes): students, black citizens & women rebelled, cities & the Gold Standard broke, oil prices, unemployment & environmental concerns surged



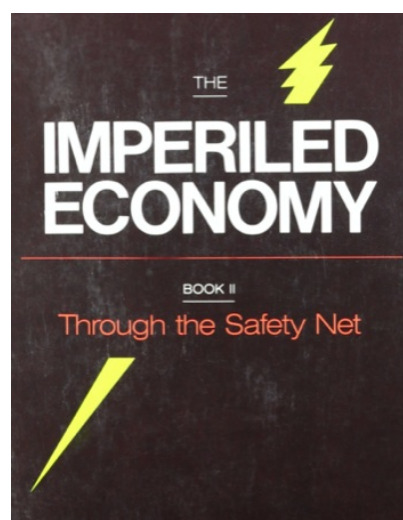
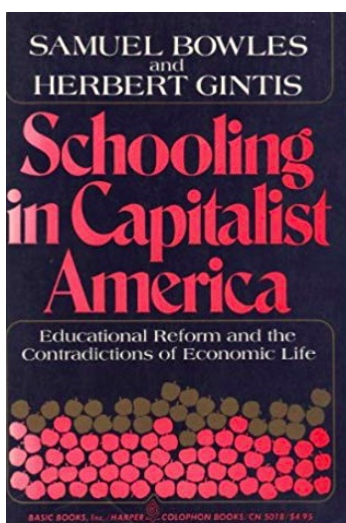
1.1965-1980: Crises

The period was one of paradoxes. For instance, on the one hand, Sonnenschein, Mantel & Debreu showed that the next steps in general equilibrium program, aka equilibrium uniqueness & stability, would be hard (if not impossible) to reach, but on the other....

... from 1970s onward, econ fields in search of recognition had to reorganize their lit around preferably general equilibrium based workhorse models. Some did (Public econ, IO or political econ), some failed or refused (urban, development, ag). Field journals & societies mushroomed

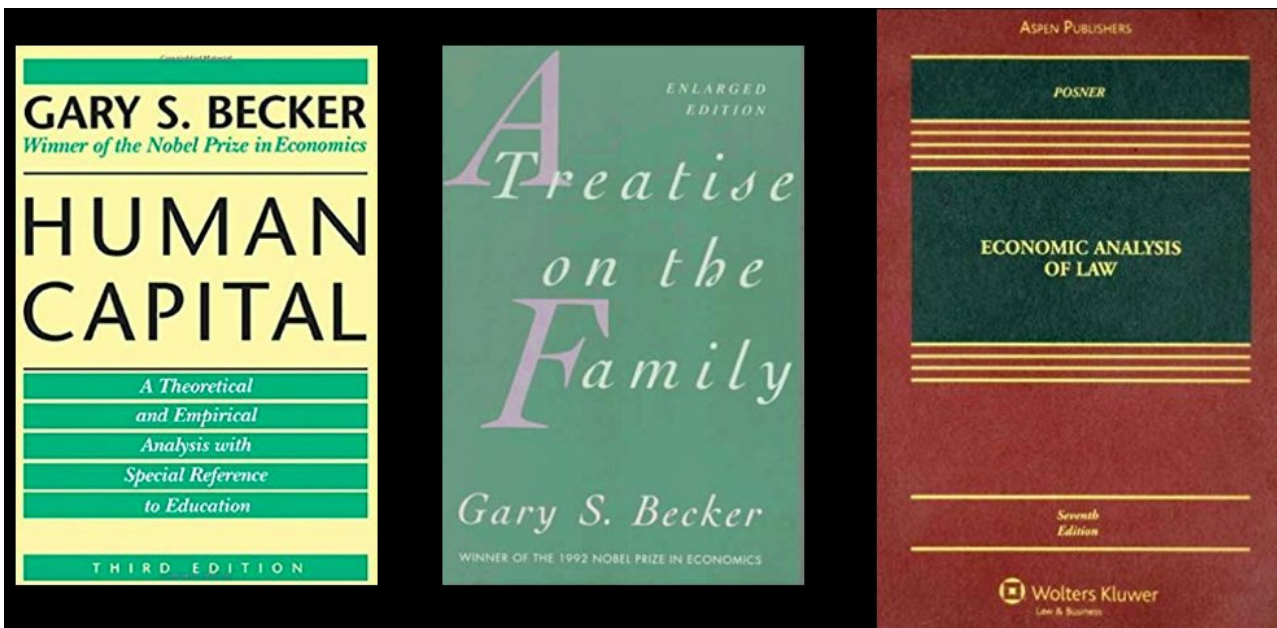


Consolidation of "mainstream" models & methods pushed some econs to self-identify as heterodox. URPE founded in 1968. Radical econs were then powerful voices, advocating interdisciplinary, arguing neoclassical framework cannot explain power, inequality, oppression, structures



Published by
Union for Radical Political Economics

2nd paradox: on the one hand, rational choice behavior econ models were successfully exported to raising children, choosing constitutions, voting, committing crime, waging a war & more ('econ imperialism'), by the likes of Becker, Posner, Hirschleifer, Buchanan, Olson...



... & intellectual appeal of explaining/predicting large array of social behavior through parsimonious set of assumptions (emphasized by Friedman in 1953 essay) was huge. On the other, rational choice framework increasingly challenged by econ experimenting w/ psychologists

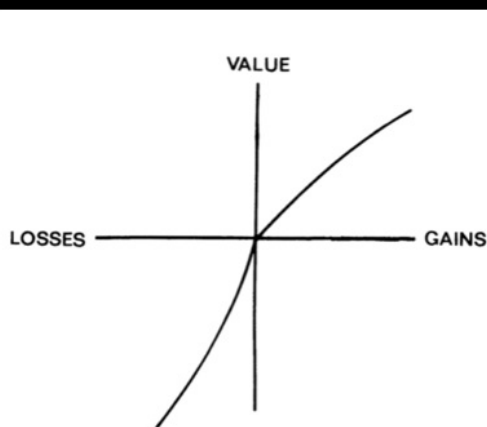


FIGURE 3.—A hypothetical value function.

PROSPECT THEORY: AN ANALYSIS OF DECISION UNDER RISK

BY DANIEL KAHNEMAN AND AMOS TVERSKY¹

This paper presents a critique of expected utility theory as a descriptive model of decision making under risk, and develops an alternative model, called prospect theory. Choices among risky prospects exhibit several pervasive effects that are inconsistent with the basic tenets of utility theory. In particular, people underweight outcomes that are merely probable in comparison with outcomes that are obtained with certainty. This tendency, called the certainty effect, contributes to risk aversion in choices involving sure gains and to risk seeking in choices involving sure losses. In addition, people generally discard components that are shared by all prospects under consideration. This tendency, called the isolation effect, leads to inconsistent preferences when the same choice is presented in different forms. An alternative theory of choice is developed, in which value is assigned to gains and losses rather than to final assets and in which probabilities are replaced by decision weights. The value function is normally concave for gains, commonly convex for losses, and is generally steeper for losses than for gains. Decision weights are generally lower than the corresponding probabilities, except in the range of low probabilities. Overweighting of low probabilities may contribute to the attractiveness of both insurance and gambling.

3rd paradox: on the one hand, econs developed software (TROLL, TSP, GIVE DATABANK)

& made money from selling forecasts, database & computer time-sharing services (DRI, Chase, Wharton) & governments launched longitudinal surveys such as PSID in 1968...

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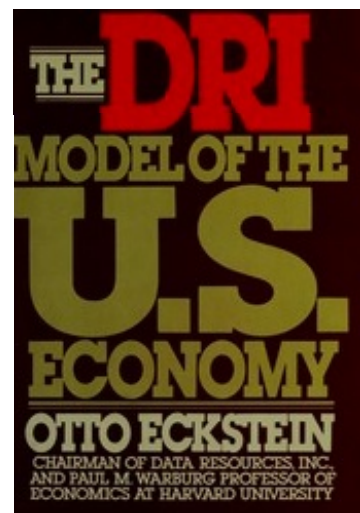


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...on the other, econometrics, then almost single way of confronting hypotheses to data, had become, according to Leamer (1981), completely disparaged. Econ failure to 'randomize' or to 'control' for such & such variable was seen increasingly problematic

Let's Take the Con out of Econometrics

By EDWARD E. LEAMER*

rose. The consuming public is hardly fooled by this chicanery. The econometrician's shabby art is humorously and disparagingly labelled "data mining," "fishing," "grubbing," "number crunching." A joke evokes the Inquisition: "If you torture the data long enough, Nature will confess" (Coase). Another suggests methodological fickleness: "Econometricians, like artists, tend to fall in love with their models" (wag unknown). Or how about: "There are two things you are better off not watching in the making: sausages and econometric estimates."

This is a sad and decidedly unscientific state of affairs we find ourselves in. Hardly anyone takes data analyses seriously. Or perhaps more accurately, hardly anyone takes anyone else's data analyses seriously. Like

droppings on his boots. Another image, drawn by Orcutt, is even more damaging: "Doing econometrics is like trying to learn the laws of electricity by playing the radio." However, we need not now submit to the tyranny of images, as many of us have in the past.

I. Is Randomization Essential?

What is the real difference between these two settings? Randomization seems to be the answer. In the experimental setting, the fertilizer treatment is "randomly" assigned to plots of land, whereas in the other case nature did the assignment. Now it is the

4th paradox: academic macro entered state of permanent war that policy-makers couldn't adjudicate. Friedman scored big time with his 1967 AEA presidential address introducing natural rate of unemployment, challenging inflation-unemployment tradeoff...

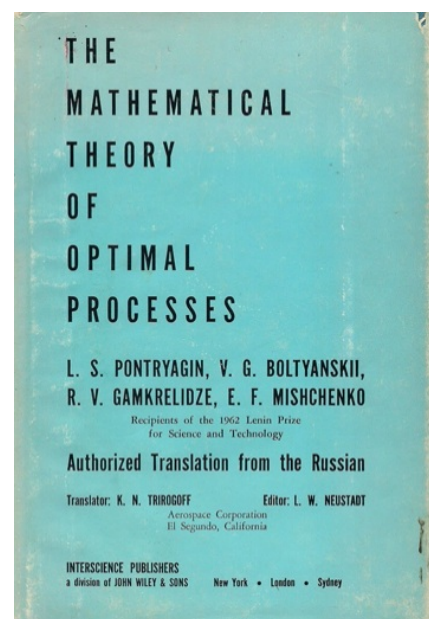
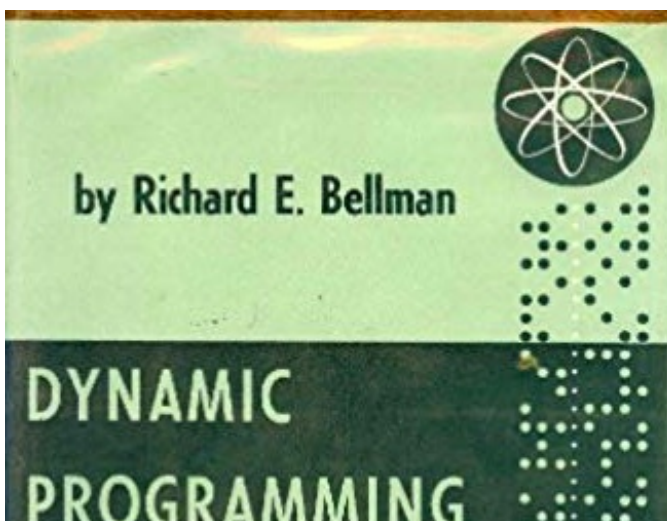
To state this conclusion differently, there is always a temporary trade-off between inflation and unemployment; there is no permanent trade-off. The temporary trade-off comes not from inflation per se, but from unanticipated inflation, which generally means, from a rising rate of inflation. The widespread belief that there is a permanent trade-off is a sophisticated version of the confusion between "high" and "rising" that we all recognize in simpler forms. A rising rate of inflation may reduce unemployment, a high rate will not.

... but as his plea to replace interest rates management w/ money supply growth rule was somewhat implemented by Fed chairman Paul Volcker in 1979, his views were challenged by sets of methodological, theoretical and policy more radical criticisms



- Finally, in taking its decisions to intervene in the financial markets to help control the money supply, the Federal Reserve, Mr. Volcker said, would place “greater emphasis” on how much money the banks have in reserves and “less emphasis” on the interest rate they charge each other for overnight loans.

Lucas’ 1972 attempt to demonstrate neutrality of money didn’t stick long, but modeling strategy did: rational expectations, microfoundations & equilibrium dynamics fueled by dissemination of Bellman & Pontryagin’s dynamic optimization maths



His wrath was particularly targeted at large-scale Keynesian macroeconomic models which, he argued, didn't model policy-invariant deep micro relationships therefore failed to predict consequence of policy regime changes. In 78 paper w/ Sargent, he declared Keynesian macro dead

Our first and most important point is that existing Keynesian macroeconomic models cannot provide reliable guidance in the formulation of monetary, fiscal, or other types of policy. This conclusion is based in part on the spectacular recent failures of these models and in part on their lack of a sound theoretical or econometric basis. Second, on the latter ground, there is no hope that minor or even major modification of these models will lead to significant improvement in their reliability.

Third, *equilibrium* models can be formulated which are free of these difficulties and which offer a different set of principles to identify structural econometric models. The key elements of these models are that agents are rational, reacting to policy changes in a way which is in their best interests privately, and that the impulses which trigger business fluctuations are mainly unanticipated shocks.



Most academic macros acquiesced to modeling strategies, found empirical invariance concerns irrelevant & rejected "inefficiency of discretionary policies" conclusions. Central bank & private firms macros paid little attention, money & financial markets were discussed separately

5.1980-2008: reformation

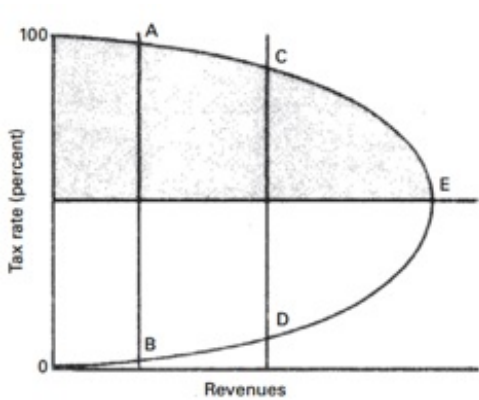
This period was largely devoted to solving paradoxes, yet in suddenly overhauled political setting where Reagan/Thatcher govs placed new demands on them (cost/benefit evaluation of policies, market-like allocations, Washington consensus implementation)



Academic econs navigated blurred boundaries between science & politics, given that most prominent contributors also publicized “free market” ideologies on TV shows (

Watch Video At: <https://youtu.be/R5Gppi-O3a8>

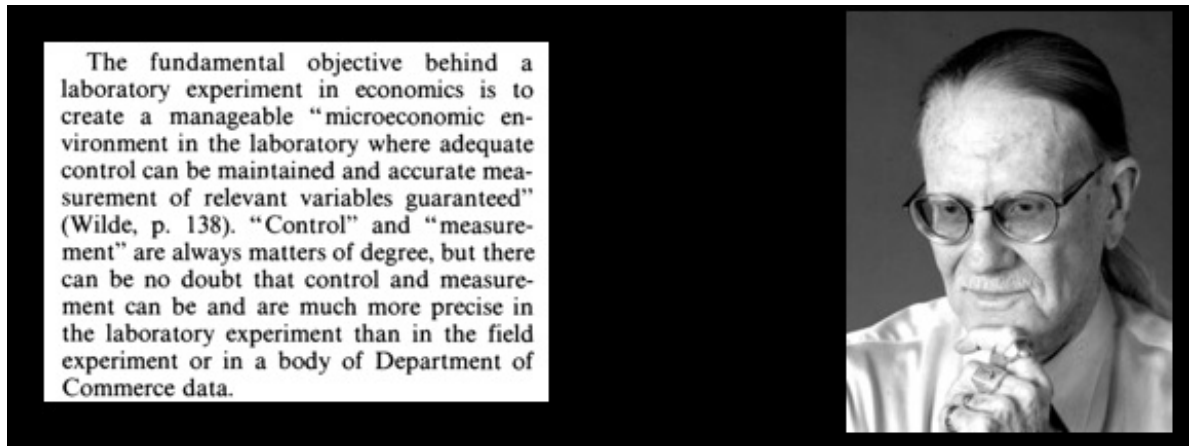
), & competed with “pop econ” supply-siders products like the Laffer curve



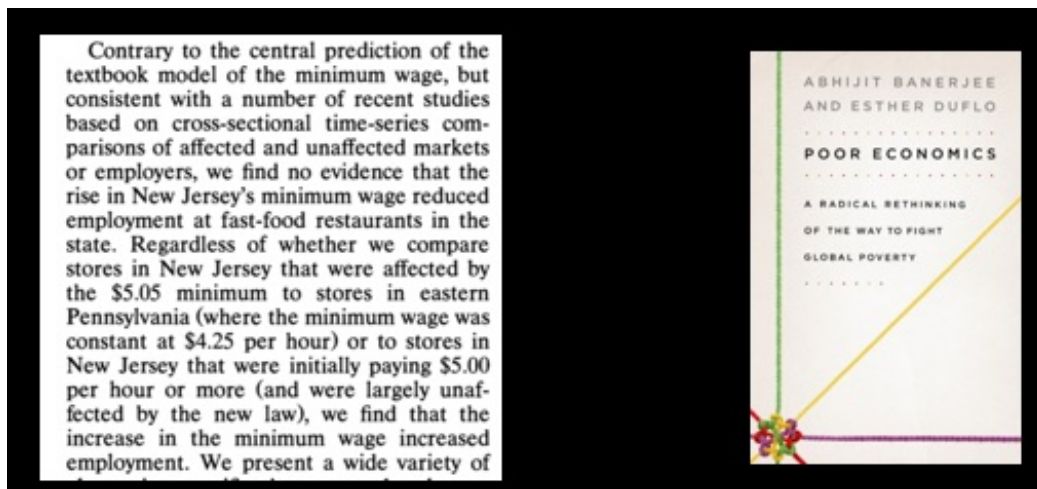
Another big change was introduction of PC by IBM in 1981, followed by development of more software like STATA, then languages like R more recently. Allowed econs to explore several ways to solve econometrics crisis & rebalance theory/metrics relationships



Quest ranged from development of calibration, VARs, S-VARs, Bayesian analysis, monte carlo methods in macro to development of experimental econ by Smith, Plott & others. Took not only new labs, but fight to get experimental settings recognized as legit by editors (Smith here)



Search for better ‘control’ went beyond lab, into the field, w/ development of randomized control experiments (Banerjee/Duflo/Kremer, JPAL, dev econ, etc), & quasi experimental techniques like natural experiment by Card&Krueger(their method was soon accepted, conclusions less so)



Innovations no less important in theoretical econ: some opted for incremental changes, bringing imperfect info, contracts, & non-convexities in models (Romer, Krugman, etc), non-cooperative game theory finally spread as econ went from studying to engineering allocation mechanism

THE ECONOMIST AS ENGINEER: GAME THEORY, EXPERIMENTATION, AND COMPUTATION AS TOOLS FOR DESIGN ECONOMICS¹

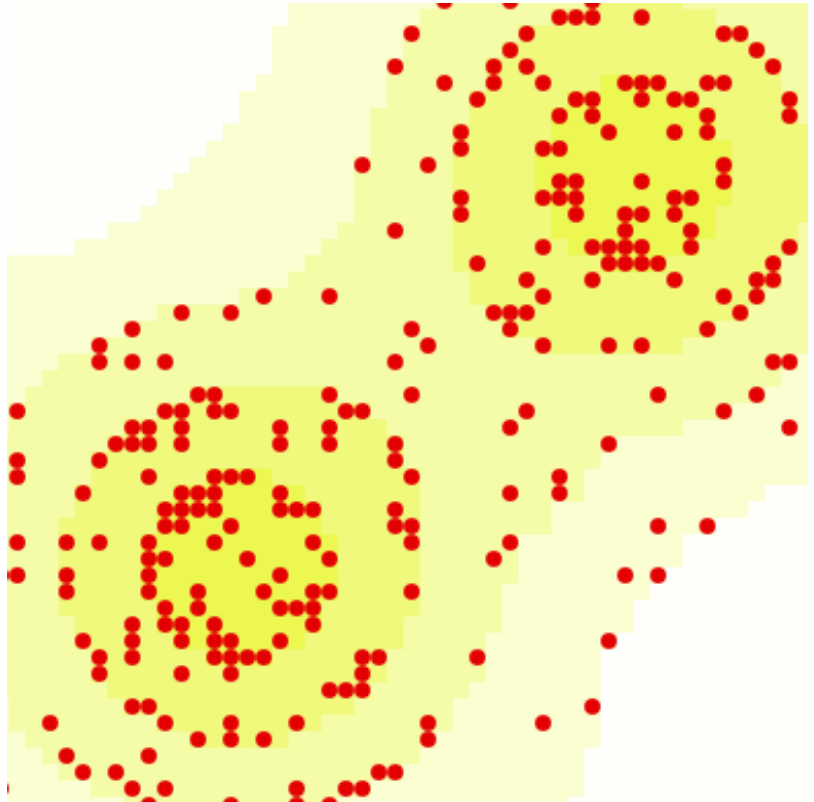
BY ALVIN E. ROTH²

Examples included development of kidney market & auction mechanism to sell electromagnetic spectrum in 1994. Some more radical theories were tamed (like behavioral econ), other matured but got marginalized (Austrian, Post Keynesian, Feminists, marxists, evolutionary, complexity)

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In 1990s, as long expansion unfolded, macros agreed on set of stylized facts, reached some consensus on workhorse model (intertemporal GE w/ frictions known as DSGE) though not on monetary/fiscal policies & confidently spread those models to central banks

Then 2008 crisis hit

You've noticed that my history inevitably becomes thinner as I get closer to present. Post-2008, of course, is no history yet, and I can only suggest to students that, as previous post-crises periods, there are a lot of debates around, & that they should follow some:

3 paths in macro

1) Lots of research enriching preserved core model : adding financial frictions, better microfoundations (heterogeneity of households/firms, better empirics, departures from rational expectations through piecemeal use of behavioral econ), more search & matching

2) More radical departures like agent-based modeling (aka simulations w/ large number of agents w/ decision heuristics & learning rules)

3) Even more radical challenge to writing 'models' as best method; recover institutional descriptive methods

Roughly 3 general types of response to skepticism

1) More stringent empirical standards. Some advocate RCTs as only Gold standard able to adjudicate causality questions. Other try to tame 'big data' (meaning that real-time recording of econ behaviors provide more data than...

can be handled by empirical techniques, as has already happened in the past) through making machine learning consistent with causality identification methods characteristics of econ. These econs also have to debate their def of causality with statisticians (PO vs DAGs debate)

2) Other on the contrary argue that econs should reclaim lost role 1) describing/quantifying w/o causal analysis (see debate on measuring wealth inequality) 2) reclaiming normative analysis & discussing/theorizing entire sets of social structures (Piketty or Weyl among others)

3) Middle-of-the-road position advocate building library of models for various purposes, not being slave to them, combining them w/ judgment & recognizing systematic biases in mainstream models (Rodrick; follow debates around EFIP manifesto. Others?)

Key ≠ with previous post-crises periods is 1) that econ is much more hierarchized a profession, & this shows no sign of relaxing but 2) rise of social media allow them to shortcut hierarchies (see MMT debate). Not sure what overall effect on next generation of models will be

Wrap up: this often caricatural chronology is my 6-hours introduction to a course in which students then go read (more subtle & rich) past debates on mathematization; theory and data; realism, generality & tractability; objectivity & ideology



Understanding the development of contemporary economics through major controversies : syllabus, lecture summaries and reflections This Spring I taught a history of recent economics course to undergraduate students majoring in mathematics and economics. The syllabus is here. I have reproduced the reading list with some links to... <https://beatricecherrier.wordpress.com/2019/04/22/understanding-the-development-of-modern-economics-through-major-controversies-syllabus-lecture-summaries-and-reflections/>

My bet is that studying longstanding debates & historical dynamics of the field will help them navigate this transitional era & better articulate their own methodological choices as economists. And if you agree, then your students should get a history course too

/end/