

## Not Going Away:

Representative-Agent Models and  
Microfoundations in the Making of  
a New Consensus in  
Macroeconomics

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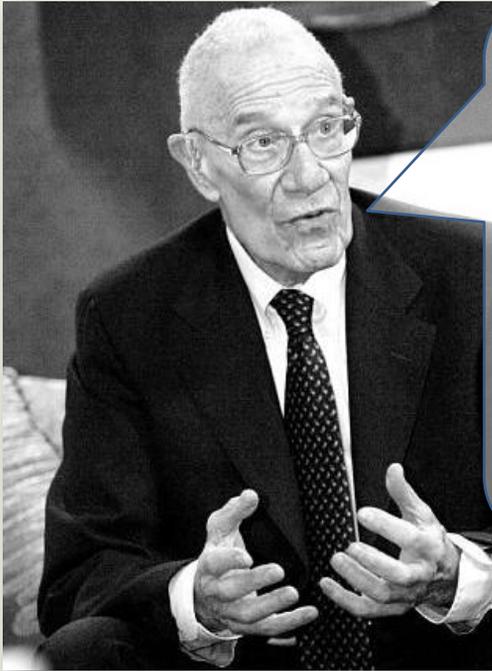
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When the outside world  
tells us that no two  
economists ever agree on  
anything, it is talking about  
macroeconomics. (1983)





Macroeconomics is now, as it has always been, the subject of intense controversy.

(1979)

While macroeconomics is often thought as a deeply divided field, with less of a shared core and correspondingly less cumulative progress than in other areas of economics, in fact, there are fewer fundamental disagreements among macroeconomists now than in the past decades. This is due to important progress in resolving seemingly intractable debates.

(2009)



## Macroeconomics

- Defined as the branch of economics concerned with fluctuations and effects of government policies on the whole economy
- Particular to this field: stormy history
  - Competing schools, Revolutions and Counter-revolutions, Controversies
  - No common core
  - Field starts anew every 20 years (Blanchard 2000)

## Macroeconomics

- **Problems** with stormy history:
  - Epistemological fear: lack of scientific credibility
  - Not good advisors
- **Cure**: narrative of consensus and progress
  - Scientific prestige: steady accumulation of knowledge
  - Enthusiasm about theory shaping a better world (Mishkin 2007, Chari & Kehoe 2006, Goodfriend 2007, Galí & Gertler 2007)

A discussion of the century's progress in general economic theory—with primary emphasis upon what is taught in courses on “microeconomic theory”...—would surely be more suitable if my aim were to boost the prestige of my own field among the many distinguished representatives of other disciplines present here. But the story would be one with little suspense. For it would not be too much of an oversimplification to present the field as having progressed smoothly and steadily, developing theories of ever greater power and broader scope within an essentially unchanged explanatory framework, based on the concepts of optimizing individual behavior and market equilibrium, that were already central to economic thought in the previous century. Macroeconomics instead has been famously controversial.... Discussions of twentieth-century developments in macroeconomics make frequent references to “revolutions” and “counter-revolutions”, and the question of whether there has been progress at all ... is a more lively topic of debate among economists than one might believe would be possible in the case of a topic with such a canonical status in the curriculum.

(Woodford 2000, 2)

## Macroeconomics

- **How can a consensus emerge?**
  - “Facts have a way of not going away” (Blanchard 2008)
  - “Positions vigorously defended in the past have to be conceded in the face of further argument and experience” (Woodford 2009)
  - A vitriolic generation of macroeconomists retired and was replaced by “a younger generation of macroeconomists who have adopted a culture of greater civility” (Mankiw 2006)

## Goal:

- Discuss how macroeconomists see the new consensus;
- Stress the role played by the representative-agent hypothesis and “microfoundations” in the making of this synthesis
- Doing that, I revisit De Vroey’s Marshall-Walras Divide

## Battling Macroeconomics

- Prior battles:
  - Friedman-Phelps attack on Keynesian orthodoxy (1950s-1960s): the Phillips curve
  - Rational expectations
  - Lucas’s critique
- New classicals, RBC theorists, new Keynesians: address these criticisms

## Battling Macroeconomics

- 1970s-80s-early 90s: New Battle
  - New classicals, RBC theorists *versus* new Keynesians
- New Classical/RBC economics' tenets:
  - Choices of real variables based on real factors
  - Agents are “consistent and successful optimizers” (Hoover 1988)
  - Rational expectations: no systematic errors
  - Perfect competition
  - Flexible prices

## Battling Macroeconomics

- New Classical/RBC neutrality results (Akerlof 2007):
  - C: function of permanent (not current) income
  - Irrelevance of current profits to investment spending (Modigliani-Miller th.)
  - Natural rate theory of unemployment (LR vertical Phillips curve)
  - (Monetary) Policy is irrelevant
  - Taxes and budget deficits are irrelevant to C (Ricardian Equiv.)

## Battling Macroeconomics

- New Classical/RBC differences:
  - Empirical approach: econometrics versus calibration
  - Money: monetary policy and inflation stabilization
  - Propagation mechanism through information: imperfect vs. perfect

## Battling Macroeconomics

- New Keynesian economics:
  - Nominal rigidities
  - Market failures
  - Costly fluctuations
  - Stabilization policies can be welfare improving

The debate over the source and propagation of economic fluctuations rages as fiercely today as it did 50 years ago in the aftermath of Keynes's *The General Theory* and in the midst of the Great Depression. Today, as then, there are two schools of thought. The classical school emphasizes the optimization of private economic actors, the adjustment of relative prices to equate supply and demand, and the efficiency of unfettered markets. The Keynesian school believes that understanding economic fluctuations requires not just studying the intricacies of general equilibrium, but also appreciating the possibility of market failure on a grand scale.

(Mankiw 1989)

## Battling Macroeconomics

- New Classicals/RBC/New Keynesians: common ground
  - Rational expectations
  - Favored general equilibrium models
  - Benchmark: representative agents in an environment of complete markets

## Synthesizing Macroeconomics

- New Neoclassical Synthesis (Goodfriend & King 1997) or “New Keynesian model”
- Late 1990s: still not completely clear
- From the 2000s, methodological consensus: Bridge methodological divide micro/macro with GE models with Keynesian insights

## Synthesizing Macroeconomics

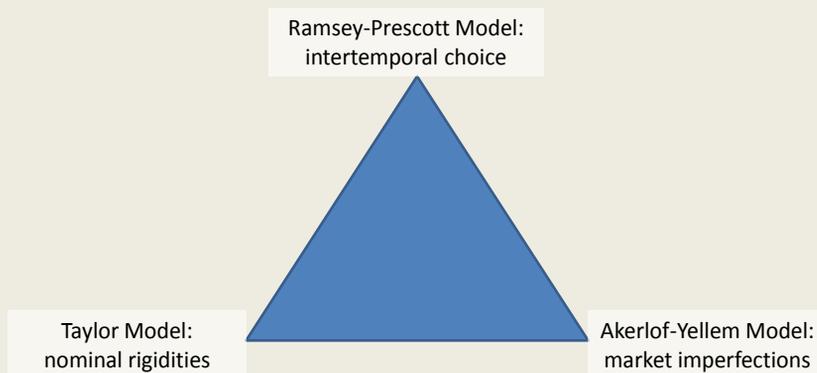
- New Synthesis:
  - Single structural model for SR and LR analysis
  - Rational expectations
  - Representative agent is pervasive
  - “Big-tent approach to data” (Chari & Kehoe 2008)
  - Real shocks account for most of variances
  - Nominal shocks useful for discriminating among competing models
  - Monetary policy IS relevant: equilibrium properties and response to real shocks

## Synthesizing Macroeconomics

- New Synthesis going to the policy space:
  - Woodford (2003): “foundations of a theory of monetary policy”
  - Christiano, Eichenbaum and Evans (2005)
  - Smets and Wouters (2003, 2007)
- Blanchard (1997): too much advertising
  - “new” and “synthesis”
  - Principles behind new consensus were always part of macroeconomics

## Synthesizing Macroeconomics

- Blanchard’s (1997) triangle:



## Synthesizing Macroeconomics

- Blanchard's (1997) triangle:
  - Defined in the space of representative-agent+microfoundations *à la* Lucas+rational expectations
  - Macroeconomists traded in that triangle: expand and transform it
    - Model not yet ready for practice (CKM 2009)
    - Macroeconomists as engineers still use old tools
    - Labor market rigidities (unemployment)
    - State dependent pricing
    - Go beyond rational expectations
    - Heterogeneity
    - Abandon complete markets

## Synthesizing Macroeconomics

- Blanchard's (1997) triangle:
  - Disagreement tend to rise outside the triangle: questions like
    - Money non-neutrality (LR)
    - Appropriate type of microfoundations
    - Non-clearing markets
    - Richer types of dynamics
    - No representative agent

## Synthesizing Macroeconomics

Solow's (2008) criticism to Chari & Kehoe (2006), who stated that macroeconomics now is "firmly grounded on the principles of economic theory"

- Macro = "Ramsey model transformed from a normative account of socially optimal growth into a positive story that is supposed to describe ... a modern industrial capitalist economy"

## Synthesizing Macroeconomics

Solow's (2008):

- Sonnenschein-Mantel-Debreu theorems: (aggregate) excess demand functions should be continuous and homogeneous of degree zero in prices and satisfy Walras' Law
- Many macro models without a representative agent in favorable environment can satisfy these requirements

## Synthesizing Macroeconomics

Solow's (2008):

I suppose it could also be true that the bow to the Ramsey model is like wearing the school colors or singing the Notre Dame fight song: a harmless way of providing some apparent intellectual unity, and maybe even a minimal commonality of approach. That seems hardly worthy of grown-ups, especially because there is always a danger that some of the in-group come to believe the slogans, and it distorts their work.

## Synthesizing Macroeconomics

Chari and Kehoe's reply (2008):

- RA: modern macro do not end here and it does not end "too far from where Solow prefers": incorporating heterogeneity
- Sonnenschein-Mantel-Debreu:

Fortunately for macroeconomics, the Sonnenschein–Mantel–Debreu result notwithstanding, discipline is available elsewhere. If we have microeconomic data on how individual households and firms behave, then theory imposes discipline on the behavior of aggregates over and above Walras' Law and zero-degree homogeneity.

## Hybridism in the Marshall-Walras Divide?

- De Vroey (2004), trading technology
  - Walras: auctioneer setting prices
  - Marshall: monetary economy with price setters, separate markets as locus of information
- RBC = Walrasian pragmatic DGE models
- New Keynesian = Marshallian pragmatic DGE models
- New synthesis? “Hard to envisage”; two rival paradigms

## Hybridism in the Marshall-Walras Divide?

- My proposal: use Galison’s (1999) **trading zone** idea
- Local coordination among otherwise different “schools”

## Conclusions

- Views macroeconomists have on the consensus reflect the way they see the past;
- Macro: revolutions and/or steady accumulation of knowledge;
- Methodological consensus;
- Nowadays: vast amount of versions of a similar history is being told, when books (Galí 2008) and articles (“primers”) are showing us the way to practice this modern macro (DSGE);
- Synthesis: just a truce (Mankiw 2006);
- Yes, each can claim its own victory;
- But I favor trading in the triangle;