Has economics changed since the crisis? As usual, the answer is: it depends. If we look at the macroeconomic theory of PhD programs and top journals, the answer is clearly, no. Macroeconomic theory remains the same self-contained, abstract art form that it has been for the past twenty-five years.

As Joan Robinson once put it, economic theory is the art of pulling a rabbit out of a hat right after you've stuffed it into the hat in full view of the audience. The development of theory since the crisis has followed this mold.

One prominent example: Immediately after the crash of 2008, Paul Krugman, writing in venues like the New York Times, announced that with interest rates at their zero lower bound, we had entered the Alice-in-Wonderland universe of the “liquidity trap” — a world in which the conclusions of orthodox economics are turned upside down and “perverse” Keynesian claims become true. Fiscal policy was now effective, printing money posed no danger of inflation, trade deficits really did cost jobs, and so on. He explicated these ideas using the “IS-LM” model found in undergraduate textbooks — a simple device that hasn’t played a role in professional academic work in decades.
Some years later, he and economist Gauti Eggertsson unveiled an elaborate mathematical New Keynesian model in the approved academic style, which showed that, indeed, if interest rates are fixed at zero, fiscal policy, normally powerless, becomes highly effective. This exercise may have been a display of technical skill. But what do we learn from it? The formal model was retrofitted to generate the argument that Krugman and others had already been making for years. I suppose what someone like Krugman might say in his defense is that he wanted to find out if the rabbit would fit in the hat. But if you do the math right, it always does.

What’s funnier in this case is that it turned out the rabbit actually didn’t fit. As the conservative economist John Cochrane gleefully pointed out, Krugman and Eggertsson’s math also implies that in a liquidity trap raising taxes on wages should boost employment — a bizarre policy conclusion that no one would accept. But since the authors didn’t believe in such a conclusion before writing down the equations, they didn’t believe it afterward either. As Eggertsson judiciously put it, “there may be reasons outside the model” to reject the idea of increasing payroll taxes.

The kind of academic macroeconomic theory Krugman and Eggertsson were deploying is a strange beast indeed. The heart of it is the idea that the economy can be thought of as a single infinitely-lived individual calculating the trade-off between leisure and consumption over all future time. For an orthodox macroeconomist — anyone who hoped to be hired at a research university in the past thirty years — this approach isn’t just one tool among others. It is macroeconomics. Every question has to be expressed as finding the utility-maximizing path of consumption and production over all eternity, under a precisely defined set of constraints. Otherwise it doesn’t scan.

It might seem like an odd default, given the obvious fact that real economies contain households, businesses, governments, and other distinct entities, none of which can turn income in the far distant future into spending today. But it has the advantage of fitting real-life macroeconomic problems — which at face value would seem to involve uncertainty, conflicting interests, coordination failures — into the scarce-means-and-competing-ends, Robinson Crusoe-type vision that has long been economics’ home ground.

At the same time, many producers of this kind of model actually have a quite realistic understanding of the behavior of real economies, often informed by firsthand experience in government. The combination of real insight and tight genre constraints leads to a strange style of theorizing, where the goal is to produce a model that satisfies the methodological conventions of the discipline while arriving at a conclusion that you’ve already reached by other means. It’s the economic equivalent of the college president in Randall Jarrell’s *Pictures from an Institution*.
About anything, anything at all, Dwight Robbins believed what Reason and Virtue and Tolerance and a Comprehensive Organic Synthesis of Values would have him believe. And about anything, anything at all, he believed what it was expedient for the president of Benton College to believe. You looked at the two beliefs, and lo! the two were one. Do you remember, as a child without much time, turning to the back of the arithmetic book, getting the answer to a problem, and then writing down the summary hypothetical operations by which the answer had been, so to speak, arrived at? It is the only method of problem-solving that always gives correct answers.

Columbia economist Michael Woodford, perhaps the leading theorist of “New Keynesian” macroeconomics, more or less admits that the purpose of his models is to justify the countercyclical interest rate policy already pursued by central banks, in a language acceptable to academic economists. Of course, the central bankers themselves don’t learn anything from such an exercise — and you will scour the minutes of Fed meetings in vain for any learned discussion of “first-order ARIMA technology shocks” — but they presumably find it reassuring to hear that what they already believed is consistent with the most modern economic theory.

Left critics often imagine economics as an effort to understand reality that’s gotten hopelessly confused, or as a systematic effort to uphold capitalist ideology. But both of these claims are, in a way, too kind — they assume that economic theory is “about” the real world in the first place. Better to think of it as a self-contained art form, whose apparent connections to economic phenomena are the results of a confusing overlap in vocabulary. Think about chess and medieval history: the statement that “queens are most effective when supported by strong bishops” might be reasonable in both domains, but its application in the one case will tell you nothing about its application in the other.

**The Other Mainstream**

But despite its hegemony over the peak institutions of academic economics, this mainstream is not the only mainstream. The macroeconomics of the policy world — central bankers, Treasury staffers, *Financial Times* editorialists — only intermittently attentive to peer-reviewed journals in the best of times, has gone its own way; the pieties of a decade ago have much less of a hold today. And within the elite academic world, there’s plenty of empirical work that responds to the developments of the past ten years, even if it doesn’t — yet — add up to an alternative vision.

Empirical macroeconomics has made a number of genuinely interesting departures. Several areas have been particularly fertile: the importance of financial conditions and credit constraints; government budgets as a tool to stabilize demand and employment; the links between macroeconomic outcomes and the distribution of income; and the importance of aggregate demand even in the long run.

Not surprisingly, the financial crisis spawned a new body of work trying to assess the importance of credit, and financial conditions more broadly, for macroeconomic outcomes. A large number of empirical papers tried to assess how important access to credit was for household spending and business investment, and how much of the swing from boom to
bust could be explained by the tighter limits on credit. Perhaps the outstanding figures here are Atif Mian and Amir Sufi, who assembled evidence that the boom in lending in the 2000s reflected mainly an increased willingness to lend on the part of banks, rather than an increased desire to borrow on the part of families; and that the subsequent debt overhang explained a large part of depressed income and employment in the years after 2008.

While Mian and Sufi occupy solidly mainstream positions (at Princeton and Chicago, respectively), their work has been embraced by a number of radical economists who see vindication for long-standing left-Keynesian ideas about the financial roots of economic instability. Markus Brunnermeier (also at Princeton) and his co-authors have also done interesting work trying to untangle the mechanisms of the 2008 financial crisis, and to generalize them, with particular attention to the old Keynesian concept of liquidity. That finance is important to the economy is not, in itself, news to anyone other than economists; but this new empirical work is valuable in translating this general awareness into concrete usable form.

In the United States, there’s been particular interest in using variation in government spending and unemployment across states to estimate the effect of the former on the latter. The outstanding work here is probably that of Gabriel Chodorow-Reich. Like most entries in this literature, Chodorow-Reich’s suggests fiscal multipliers that are higher than almost any mainstream economist would have accepted a decade ago, with each dollar of government spending adding perhaps two dollars to GDP. Similar work has been published by the International Monetary Fund, which surprisingly acknowledged that past studies had “significantly underestimated” the positive effects of fiscal policy.

The IMF has also revisited its previously ironclad opposition to capital controls — restrictions on financial flows across national borders. More broadly, it has begun to offer, at least intermittently, a platform for work challenging the Washington Consensus it helped establish in the 1980s, though this shift predates the crisis of 2008. The changed tone coming out of the IMF’s research department has so far been matched only occasionally by a change in its lending policies.

Income distribution is another area where there has been a flowering of more diverse empirical work in the past decade. Here, of course, the outstanding figure is Thomas Piketty. With his collaborators (Gabriel Zucman, Emmanuel Saez, and others) he has practically defined a new field. Income distribution has always been a concern of economists, of course, but it has typically been assumed to reflect differences in “skill.” The large differences in pay that appeared to be unexplained by education, experience, and so on were often attributed to “unmeasured skill.”

Piketty made distribution — between labor and capital, not just across individuals — into something that evolves independently, and that belongs to the macro level of the economy as a whole rather than the micro level of individuals. When his book Capital in the Twenty-First Century was published, a great deal of attention was focused on the formula “r > g,” supposedly reflecting a deep-seated tendency for capital accumulation to outpace economic growth. But in recent years there’s been an interesting evolution in the empirical work Piketty and his co-authors have published, focusing on countries like Russia and China, which didn’t feature in the original survey.
Political and institutional factors like labor rights and the legal forms taken by businesses have moved to center stage, while the formal reasoning of “r > g” has receded — sometimes literally to a footnote. While no longer embedded in the grand narrative of *Capital in the Twenty-First Century*, this body of empirical work is extremely valuable, especially since Piketty and company are so generous in making their data publicly available. It has also created space for younger scholars to make similar long-run studies of the distribution of income and wealth in countries that the Piketty team hasn’t yet reached, like Rishabh Kumar’s superb work on India. It has also been extended by other empirical economists, like Loukas Karabarbounis and co-authors, who have looked at changes in income distribution through the lens of market power and the distribution of surplus within the corporation — not something a University of Chicago economist would have been likely to study a decade ago.

A final area where mainstream empirical work has wandered well beyond its pre-2008 limits is the question of whether aggregate demand — and money and finance more broadly — can affect long-run economic outcomes. The conventional view, still dominant in textbooks, draws a hard line between the short run, where demand and money matter, and the long run, where the path of the economy depends strictly on “real” factors — population growth, technology, and so on. Here again, the challenge to conventional wisdom has been prompted by real-world developments. On the one hand, weak demand — reflected in historically low interest rates — has seemed to be an ongoing rather than a cyclical problem. Lawrence Summers dubbed this phenomenon “secular stagnation,” reviving a phrase used in the 1940s by the early American Keynesian Alvin Hansen.

On the other hand, it has become clear that the productive capacity of the economy is not something separate from current demand and production levels. Unemployed workers stop looking for work; businesses operating below capacity don’t invest in new plants and equipment or develop new technology. This has manifested itself most clearly in the fall in labor force participation over the past decade, which has been considerably greater than can be explained on the basis of the aging population or other demographic factors.

The bottom line is that an economy that spends several years producing less than it is capable of, will be capable of producing less in the future. This phenomenon, usually called “hysteresis,” has been explored by economists like Laurence Ball, Summers, and Brad DeLong, among others. The existence of hysteresis, among other implications, suggests that the costs of high unemployment may be greater than previously believed, and conversely that public spending in a recession can pay for itself by boosting incomes and taxes in future years.

These empirical lines are hard to fit into the box of orthodox theory — not that people don’t try. But so far they don’t add up to more than an eclectic set of provocative results. The creativity in mainstream empirical work has not yet been matched by any effort to find an alternative framework for thinking of the economy as a whole. For people coming from non-mainstream paradigms — Marxist or Keynesian — there is now plenty of useful material in mainstream empirical macroeconomics to draw on. But these new lines of empirical work have been forced on the mainstream by developments in the outside world that were too pressing to ignore. For the moment, at least, they don’t imply any systematic rethinking of economic theory.
Second Thoughts

Perhaps the central feature of the policy mainstream a decade ago was a smug and, in retrospect, astonishing complacency that the macroeconomic problem had been solved by independent central banks like the Federal Reserve. For a sense of the pre-crisis consensus, consider this speech by a prominent economist in September 2007, just as the United States was heading into its worst recession since the 1930s:

One of the most striking facts about macropolicy is that we have progressed amazingly…. In my opinion, better policy, particularly on the part of the Federal Reserve, is directly responsible for the low inflation and the virtual disappearance of the business cycle in the last twenty-five years…. The story of stabilization policy of the last quarter-century is one of amazing success.

You might expect the speaker to be a right-wing Chicago type like Robert Lucas Jr, whose claim that “the problem of depression prevention has been solved” was widely mocked after the crisis broke out. But in fact it was Christina Romer, soon headed to Washington as the Obama administration’s top economist.

In accounts of the internal debates over fiscal policy that dominated the early days of the administration, Romer often comes across as one of the heroes, arguing for a big program of public spending against more conservative figures like Summers. So it’s especially striking that in the 2007 speech she spoke of a “glorious counterrevolution” against Keynesian ideas. Indeed, she saw the persistence of the idea of using deficit spending to fight unemployment as the one dark spot in an otherwise cloudless sky.

There’s more than a little irony in the fact that opponents of the massive stimulus Romer ended up favoring drew their intellectual support from exactly the arguments she had been making just a year earlier. But it’s also a vivid illustration of a consistent pattern: ideas have evolved more rapidly in the world of practical policy than among academic economists.

For further evidence, consider a 2016 paper by Jason Furman, Obama’s final chief economist, on “The New View of Fiscal Policy.” As chair of the White House Council of Economic Advisers, Furman embodied the policy-economics consensus _ex officio_. Though he didn’t mention his predecessor by name, his paper was almost a point-by-point rebuttal of Romer’s “glorious counterrevolution” speech of a decade earlier. It starts with four propositions shared until recently by almost all respectable economists: that central banks can and should stabilize demand all by themselves, with no role for fiscal policy; that public deficits raise interest rates and crowd out private investment; that budget deficits, even if occasionally called for, need to be strictly controlled with an eye on the public debt; and that any use of fiscal policy must be strictly short-term.

None of this is true, suggests Furman. Central banks cannot reliably stabilize modern economies on their own, increased public spending should be a standard response to a downturn, worries about public debt are overblown, and stimulus may have to be maintained indefinitely. While these arguments obviously remain within a conventional framework in which the role of the public sector is simply to maintain the flow of private
spending at a level consistent with full employment, they nonetheless envision much more active management of the economy by the state. It’s a remarkable departure from textbook orthodoxy for someone occupying such a central place in the policy world.

Another example of orthodoxy giving ground under the pressure of practical policymaking is Narayana Kocherlakota. When he was first appointed as president of the Federal Reserve Bank of Minneapolis, he was positioned on the right of debates within the Fed, confident that if the central bank simply followed its existing rules the economy would quickly return to full employment, and rejecting the idea of active fiscal policy. But after a few years on the Fed’s governing Federal Open Market Committee (FOMC), he had moved to the far-left, “dovish” end of opinion, arguing strongly for a more aggressive approach to bringing unemployment down by any means available, including deficit spending and more aggressive unconventional tools at the Fed. This meant rejecting much of his own earlier work, perhaps the clearest example of a high-profile economist repudiating his views after the crisis; in the process, he got rid of many of the conservative “freshwater” economists in the Minneapolis Fed’s research department.

The reassessment of central banks has gone even farther. For twenty or thirty years before 2008, the orthodox view of central banks offered a twofold defense against the dangerous idea — inherited from the 1930s — that managing the instability of capitalist economies was a political problem. First, any mismatch between the economy’s productive capabilities (aggregate supply) and the desired purchases of households and businesses (aggregate demand) could be fully resolved by the central bank; the technicians at the Fed and its peers around the world could prevent any recurrence of mass unemployment or runaway inflation. Second, they could do this by following a simple, objective rule, without any need to balance competing goals.

During those decades, Alan Greenspan personified the figure of the omniscient central banker. Venerated by presidents of both parties, Greenspan was literally sanctified in the press — a 1990 cover of the *International Economy* had him in papal regalia, under the headline, “Alan Greenspan and His College of Cardinals.” A decade later, he would appear on the cover of *Time* as the central figure in “The Committee to Save the World,” flanked by Robert Rubin and the ubiquitous Summers. And a decade after that, he showed up as Bob Woodward’s *Maestro*.

In the past decade, this vision of central banks and central bankers has eroded from several sides. The manifest failure to prevent huge falls in output and employment after 2008 is the most obvious problem. The deep recessions in the US, Europe, and elsewhere make a mockery of the “virtual disappearance of the business cycle” that people like Romer had held out as the strongest argument for leaving macropolicy to central banks. And while Janet Yellen or Mario Draghi may be widely admired, they command nothing like the authority of a Greenspan.

The pre-2008 consensus is even more profoundly undermined by what central banks *did* do than what they failed to do. During the crisis itself, the Fed and other central banks decided which financial institutions to rescue and which to allow to fail, which creditors would get
paid in full and which would face losses. Both during the crisis and in the period of stagnation that followed, central banks also intervened in a much wider range of markets, on a much larger scale.

In the United States, perhaps the most dramatic moment came in late summer 2008, when the commercial paper market — the market for short-term loans used by the largest corporations — froze up, and the Fed stepped in with a promise to lend on its own account to anyone who had previously borrowed there. This watershed moment took the Fed from its usual role of regulating and supporting the private financial system, to simply replacing it.

That intervention lasted only a few months, but in other markets the Fed has largely replaced private creditors for a number of years now. Even today, it is the ultimate lender for about 20 percent of new mortgages in the United States. Policies of quantitative easing, in the US and elsewhere, greatly enlarged central banks’ weight in the economy — the Fed’s assets jumped from 6 percent of GDP to 25 percent, an expansion that is only now beginning to be unwound. These policies also committed central banks to targeting longer-term interest rates, and in some cases other asset prices as well, rather than merely the overnight interest rate that had been the sole official tool of policy in the decades before 2008.

While critics (mostly on the Right) have objected that these interventions “distort” financial markets, this makes no sense from the perspective of a practical central banker. As central bankers like the Fed’s Ben Bernanke or the Bank of England’s Adam Posen have often said in response to such criticism, there is no such thing as an “undistorted” financial market. Central banks are always trying to change financial conditions to whatever they think favors full employment and stable prices. But as long as the interventions were limited to a single overnight interest rate, it was possible to paper over the contradiction between active monetary policy and the idea of a self-regulating economy, and pretend that policymakers were just trying to follow the “natural” interest rate, whatever that is. The much broader interventions of the past decade have brought the contradiction out into the open.

The broad array of interventions central banks have had to carry out over the past decade have also provoked some second thoughts about the functioning of financial markets even in normal times. If financial markets can get things wrong so catastrophically during crises, shouldn’t that affect our confidence in their ability to allocate credit the rest of the time? And if we are not confident, that opens the door for a much broader range of interventions — not only to stabilize markets and maintain demand, but to affirmatively direct society’s resources in better ways than private finance would do on its own.

In the past decade, this subversive thought has shown up in some surprisingly prominent places. **Wearing his policy rather than his theory hat**, Paul Krugman sees
... a broader rationale for policy activism than most macroeconomists—even self-proclaimed Keynesians—have generally offered in recent decades. Most of them ... have seen the role for policy as pretty much limited to stabilizing aggregate demand.... Once we admit that there can be big asset mispricing, however, the case for intervention becomes much stronger.... There is more potential for and power in [government] intervention than was dreamed of in efficient-market models.

From another direction, the notion that macroeconomic policy does not involve conflicting interests has become harder to sustain as inflation, employment, output, and asset prices have followed diverging paths. A central plank of the pre-2008 consensus was the aptly named “divine coincidence,” in which the same level of demand would fortuitously and simultaneously lead to full employment, low and stable inflation, and production at the economy's potential. Operationally, this was embodied in the “NAIRU” — the level of unemployment below which, supposedly, inflation would begin to rise without limit.

"If financial markets can get things wrong so catastrophically during crises, shouldn’t that affect our confidence in their ability to allocate credit the rest of the time? "
Over the past decade, as estimates of the NAIRU have fluctuated almost as much as the unemployment rate itself, it’s become clear that the NAIRU is too unstable and hard to measure to serve as a guide for policy, if it exists at all.

Illustrations by Mariano Pascual

It is striking to see someone as prominent as IMF chief economist Olivier Blanchard write (in 2016) that “the US economy is far from satisfying the ‘divine coincidence’” — meaning that stabilizing inflation and minimizing unemployment are two distinct goals. But if there's no clear link between unemployment and inflation, it's not clear why central banks should worry about low unemployment at all, or how they should trade off the risks of prices rising undesirably fast against the risk of too-high unemployment.

To make matters worse, a number of prominent figures — most vocally at the Bank for International Settlements — have argued that we should not be concerned only with conventional price inflation, but also with the behavior of asset prices, such as stocks or real estate. This “financial stability” mandate, if it is accepted, gives central banks yet another mission. The more outcomes central banks are responsible for, and the less confident we are that they all go together, the harder it is to treat central banks as somehow apolitical, as not subject to the same interplay of interests as the rest of the state.

Given the strategic role occupied by central banks in both modern capitalist economies and economic theory, this rethinking has the potential to lead in some radical directions. How far it will actually do so, of course, remains to be seen. Accounts of the Fed's most recent conclave in Jackson Hole, Wyoming suggest a sense of “mission accomplished” and a desire to get back to the comfortable pieties of the past. Meanwhile, in Europe, the collapse of the intellectual rationale for central banks has been accompanied by the development of the most powerful central bankocracy the world has yet seen. So far the European Central
Bank has not let its lack of democratic mandate stop it from making coercive intrusions into the domestic policies of its member states, or from serving as the enforcement arm of Europe’s creditors against recalcitrant debtors like Greece.

One thing we can say for sure: any future crisis will bring the contradictions of central banks’ role as capitalism’s central planners into even sharper relief.

Many critics were disappointed the 2008 crisis did not lead to an intellectual revolution on the scale of the 1930s. But the image of stasis you’d get from looking at the top journals and textbooks isn’t the whole picture — the most interesting conversations are happening somewhere else. For a generation, leftists in economics have struggled to change the profession, some by launching attacks (often well aimed, but ignored) from the outside, others by trying to make radical ideas parseable in the orthodox language. One lesson of the past decade is that both groups got it backward.

Keynes famously wrote that “Practical men who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist.” But in recent years the relationship seems to have been more the other way round. If we want to change the economics profession, we need to start changing the world. Economics will follow.