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OPINION

The state of economics

The other-worldly philosophers

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Although the crisis has exposed bitter divisions among economists, it could still be good for economics. Our first article looks at the turmoil among macroeconomists. Our second (see [article](#)) examines the foundations of financial economics

Illustration by Brett Ryder



ROBERT LUCAS, one of the greatest macroeconomists of his generation, and his followers are “making ancient and basic analytical errors all over the place”. Harvard’s Robert Barro, another towering figure in the discipline, is “making truly boneheaded arguments”. The past 30 years of macroeconomics training at American and British universities were a “costly waste of time”.

To the uninitiated, economics has always been a dismal science. But all these attacks come from within the guild: from Brad DeLong of the University of California, Berkeley; Paul Krugman of Princeton and the *New York Times*; and Willem Buiter of the London School of Economics (LSE), respectively. The macroeconomic crisis of the past two years is also provoking a crisis of confidence in macroeconomics. In the last of his Lionel Robbins lectures at the LSE on June 10th, Mr Krugman feared that most macroeconomics of the past 30 years was “spectacularly useless at best, and positively harmful at worst”.

These internal critics argue that economists missed the origins of the crisis; failed to appreciate its worst symptoms; and cannot now agree about the cure. In other words, economists misread the economy on the way up, misread it on the way down and now mistake the right way out.

On the way up, macroeconomists were not wholly complacent. Many of them thought the housing bubble would pop or the dollar would fall. But they did not expect the financial system to break. Even after the seizure in interbank markets in August 2007, macroeconomists misread the danger. Most were quite sanguine about the prospect of Lehman Brothers going bust in September 2008.

Nor can economists now agree on the best way to resolve the crisis. They mostly overestimated the power of routine monetary policy (ie, central-bank purchases of government bills) to restore prosperity. Some now dismiss the power of fiscal policy (ie, government sales of its securities) to do the same. Others advocate it

with passionate intensity.

Among the passionate are Mr DeLong and Mr Krugman. They turn for inspiration to Depression-era texts, especially the writings of John Maynard Keynes, and forgotten mavericks, such as Hyman Minsky. In the humanities this would count as routine scholarship. But to many high-tech economists it is a bit undignified. Real scientists, after all, do not leaf through Newton's "Principia Mathematica" to solve contemporary problems in physics.

They accuse economists like Mr DeLong and Mr Krugman of falling back on antiquated Keynesian doctrines—as if nothing had been learned in the past 70 years. Messrs DeLong and Krugman, in turn, accuse economists like Mr Lucas of not falling back on Keynesian economics—as if everything had been forgotten over the past 70 years. For Mr Krugman, we are living through a "Dark Age of macroeconomics", in which the wisdom of the ancients has been lost.

What was this wisdom, and how was it forgotten? The history of macroeconomics begins in intellectual struggle. Keynes wrote the "General Theory of Employment, Interest and Money", which was published in 1936, in an "unnecessarily controversial tone", according to some readers. But it was a controversy the author had waged in his own mind. He saw the book as a "struggle of escape from habitual modes of thought" he had inherited from his classical predecessors.

That classical mode of thought held that full employment would prevail, because supply created its own demand. In a classical economy, whatever people earn is either spent or saved; and whatever is saved is invested in capital projects. Nothing is hoarded, nothing lies idle.

Keynes appreciated the classical model's elegance and consistency, virtues economists still crave. But that did not stop him demolishing it. In his scheme, investment was governed by the animal spirits of entrepreneurs, facing an imponderable future. The same uncertainty gave savers a reason to hoard their wealth in liquid assets, like money, rather than committing it to new capital projects. This liquidity-preference, as Keynes called it, governed the price of financial securities and hence the rate of interest. If animal spirits flagged or liquidity-preference surged, the pace of investment would falter, with no obvious market force to restore it. Demand would fall short of supply, leaving willing workers on the shelf. It fell to governments to revive demand, by cutting interest rates if possible or by public works if necessary.

The Keynesian task of "demand management" outlived the Depression, becoming a routine duty of governments. They were aided by economic advisers, who built working models of the economy, quantifying the key relationships. For almost three decades after the second world war these advisers seemed to know what they were doing, guided by an apparent trade-off between inflation and unemployment. But their credibility did not survive the oil-price shocks of the 1970s. These condemned Western economies to "stagflation", a baffling combination of unemployment and inflation, which the Keynesian consensus grasped poorly and failed to prevent.

The Federal Reserve, led by Paul Volcker, eventually defeated American inflation in the early 1980s, albeit at a grievous cost to employment. But victory did not restore the intellectual peace. Macroeconomists split into two camps, drawing opposite lessons from the episode.

The purists, known as "freshwater" economists because of the lakeside universities where they happened to congregate, blamed stagflation on restless central bankers trying to do too much. They started from the classical assumption that markets cleared, leaving no unsold goods or unemployed workers. Efforts by policymakers to smooth the economy's natural ups and downs did more harm than good.

Illustration by Brett Ryder



America's coastal universities housed most of the other lot, "saltwater" pragmatists. To them, the double-digit unemployment that accompanied Mr Volcker's assault on inflation was proof enough that markets could malfunction. Wages might fail to adjust, and prices might stick. This grit in the economic machine justified some meddling by policymakers.

Mr Volcker's recession bottomed out in 1982. Nothing like it was seen again until last year. In the intervening quarter-century of tranquillity, macroeconomics also recovered its composure. The opposing schools of thought converged. The freshwater economists accepted a saltier view of policymaking. Their opponents adopted a more freshwater style of modelmaking. You might call the new synthesis brackish macroeconomics.

Pinches of salt

Brackish macroeconomics flowed from universities into central banks. It underlay the doctrine of inflation-targeting embraced in New Zealand, Canada, Britain, Sweden and several emerging markets, such as Turkey. Ben Bernanke, chairman of the Fed since 2006, is a renowned contributor to brackish economics.

For about a decade before the crisis, macroeconomists once again appeared to know what they were doing. Their thinking was embodied in a new genre of working models of the economy, called "dynamic stochastic general equilibrium" (DSGE) models. These helped guide deliberations at several central banks.

Mr Buiter, who helped set interest rates at the Bank of England from 1997 to 2000, believes the latest academic theories had a profound influence there. He now thinks this influence was baleful. On his blog, Mr Buiter argues that a training in modern macroeconomics was a "severe handicap" at the onset of the financial crisis, when the central bank had to "switch gears" from preserving price stability to safeguarding financial stability.

Modern macroeconomists worried about the prices of goods and services, but neglected the prices of assets. This was partly because they had too much faith in financial markets. If asset prices reflect economic fundamentals, why not just model the fundamentals, ignoring the shadow they cast on Wall Street?

It was also because they had too little interest in the inner workings of the financial system. "Philosophically speaking," writes Perry Mehrling of Barnard College, Columbia University, economists are "materialists" for whom "bags of wheat are more important than stacks of bonds." Finance is a veil, obscuring what really matters. As a poet once said, "promises of payment/Are neither food nor raiment".

In many macroeconomic models, therefore, insolvencies cannot occur. Financial intermediaries, like banks, often don't exist. And whether firms finance themselves with equity or debt is a matter of indifference. The Bank of England's DSGE model, for example, does not even try to incorporate financial middlemen, such as

banks. "The model is not, therefore, directly useful for issues where financial intermediation is of first-order importance," its designers admit. The present crisis is, unfortunately, one of those issues.

The bank's modellers go on to say that they prefer to study finance with specialised models designed for that purpose. One of the most prominent was, in fact, pioneered by Mr Bernanke, with Mark Gertler of New York University. Unfortunately, models that include such financial-market complications "can be very difficult to handle," according to Markus Brunnermeier of Princeton, who has handled more of these difficulties than most. Convenience, not conviction, often dictates the choices economists make.

Convenience, however, is addictive. Economists can become seduced by their models, fooling themselves that what the model leaves out does not matter. It is, for example, often convenient to assume that markets are "complete"—that a price exists today, for every good, at every date, in every contingency. In this world, you can always borrow as much as you want at the going rate, and you can always sell as much as you want at the going rate.

Before the crisis, many banks and shadow banks made similar assumptions. They believed they could always roll over their short-term debts or sell their mortgage-backed securities, if the need arose. The financial crisis made a mockery of both assumptions. Funds dried up, and markets thinned out. In his anatomy of the crisis Mr Brunnermeier shows how both of these constraints fed on each other, producing a "liquidity spiral".

What followed was a furious dash for cash, as investment banks sold whatever they could, commercial banks hoarded reserves and firms drew on lines of credit. Keynes would have interpreted this as an extreme outbreak of liquidity-preference, says Paul Davidson, whose biography of the master has just been republished with a new afterword. But contemporary economics had all but forgotten the term.

Fiscal fisticuffs

The mainstream macroeconomics embodied in DSGE models was a poor guide to the origins of the financial crisis, and left its followers unprepared for the symptoms. Does it offer any insight into the best means of recovery?

In the first months of the crisis, macroeconomists reposed great faith in the powers of the Fed and other central banks. In the summer of 2007, a few weeks after the August liquidity crisis began, Frederic Mishkin, a distinguished academic economist and then a governor of the Fed, gave a reassuring talk at the Federal Reserve Bank of Kansas City's annual symposium in Jackson Hole, Wyoming. He presented the results of simulations from the Fed's FRB/US model. Even if house prices fell by a fifth in the next two years, the slump would knock only 0.25% off GDP, according to his benchmark model, and add only a tenth of a percentage point to the unemployment rate. The reason was that the Fed would respond "aggressively", by which he meant a cut in the federal funds rate of just one percentage point. He concluded that the central bank had the tools to contain the damage at a "manageable level".

Since his presentation, the Fed has cut its key rate by five percentage points to a mere 0-0.25%. Its conventional weapons have proved insufficient to the task. This has shaken economists' faith in monetary policy. Unfortunately, they are also horribly divided about what comes next.

Mr Krugman and others advocate a bold fiscal expansion, borrowing their logic from Keynes and his contemporary, Richard Kahn. Kahn pointed out that a dollar spent on public works might generate more than a dollar of output if the spending circulated repeatedly through the economy, stimulating resources that might otherwise have lain idle.

Today's economists disagree over the size of this multiplier. Mr Barro thinks the estimates of Barack Obama's Council of Economic Advisors are absurdly large. Mr Lucas calls them "schlock economics", contrived to justify Mr Obama's projections for the budget deficit. But economists are not exactly drowning in research on this question. Mr Krugman calculates that of the 7,000 or so papers published by the National Bureau of Economic Research between 1985 and 2000, only five mentioned fiscal policy in their title or abstract.

Illustration by Brett Ryder



Do these public spats damage macroeconomics? Greg Mankiw, of Harvard, recalls the angry exchanges in the 1980s between Robert Solow and Mr Lucas—both eminent economists who could not take each other seriously. This vitriol, he writes, attracted attention, much like a bar-room fist-fight. But he thinks it also dismayed younger scholars, who gave these macroeconomic disputes a wide berth.

By this account, the period of intellectual peace that followed in the 1990s should have been a golden age for macroeconomics. But the brackish consensus also seems to leave students cold. According to David Colander, who has twice surveyed the opinions of economists in the best American PhD programmes, macroeconomics is often the least popular class. “What did you learn in macro?” Mr Colander asked a group of Chicago students. “Did you do the dynamic stochastic general equilibrium model?” “We learned a lot of junk like that,” one replied.

It takes a model to beat a model

The benchmark macroeconomic model, though not junk, suffers from some obvious flaws, such as the assumption of complete markets or frictionless finance. Indeed, because these flaws are obvious, economists are well aware of them. Critics like Mr Buiter are not telling them anything new. Economists can and do depart from the benchmark. That, indeed, is how they get published. Thus a growing number of cutting-edge models incorporate one or two financial frictions. And economists like Mr Brunnermeier are trying to fit their small, “blackboard” models of the crisis into a larger macroeconomic frame.

But the benchmark still matters. It formalises economists’ gut instincts about where the best analytical cuts lie. It is the starting point to which the theorist returns after every ingenious excursion. Few economists really believe all its assumptions, but few would rather start anywhere else.

Unfortunately, it is these primitive models, rather than their sophisticated descendants, that often exert the most influence over the world of policy and practice. This is partly because these first principles endure long enough to find their way from academia into policymaking circles. As Keynes pointed out, the economists who most influence practical men of action are the defunct ones whose scribblings have had time to percolate from the seminar room to wider conversations.

These basic models are also influential because of their simplicity. Faced with the “blooming, buzzing confusion” of the real world, policymakers often fall back on the highest-order principles and the broadest presumptions. More specific, nuanced theories are often less versatile. They shed light on whatever they were designed to explain, but little beyond.

Would economists be better off starting from somewhere else? Some think so. They draw inspiration from neglected prophets, like Minsky, who recognised that the “real” economy was inseparable from the financial. Such prophets were neglected not for what they said, but for the way they said it. Today’s economists tend to be open-minded about content, but doctrinaire about form. They are more wedded to their techniques than to their theories. They will believe something when they can model it.

Mr Colander, therefore, thinks economics requires a revolution in technique. Instead of solving models "by hand", using economists' powers of deduction, he proposes simulating economies on the computer. In this line of research, the economist specifies simple rules of thumb by which agents interact with each other, and then lets the computer go to work, grinding out repeated simulations to reveal what kind of unforeseen patterns might emerge. If he is right, then macroeconomists, like zombie banks, must write off many of their past intellectual investments before they can make progress again.

Mr Krugman, by contrast, thinks reform is more likely to come from within. Keynes, he observes, was a "consummate insider", who understood the theory he was demolishing precisely because he was once convinced by it. In the meantime, he says, macroeconomists should turn to patient empirical spadework, documenting crises past and present, in the hope that a fresh theory might later make sense of it all.

Macroeconomics began with Keynes, but the word did not appear in the journals until 1945, in an article by Jacob Marschak. He reviewed the profession's growing understanding of the business cycle, making an analogy with other sciences. Seismology, for example, makes progress through better instruments, improved theories or more frequent earthquakes. In the case of economics, Marschak concluded, "the earthquakes did most of the job."

Economists were deprived of earthquakes for a quarter of a century. The Great Moderation, as this period was called, was not conducive to great macroeconomics. Thanks to the seismic events of the past two years, the prestige of macroeconomists is low, but the potential of their subject is much greater. The furious rows that divide them are a blow to their credibility, but may prove to be a spur to creativity.

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