

The Crisis in Financial Innovation¹

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It is a great honor to receive this prize from the International Schumpeter Society. It is especially an honor to receive it in Vienna, the European capital where Schumpeter received the education that was central to his intellectual development. I have had a few occasions over the years to enjoy the hospitality of the Austrian National Bank and the University of Vienna. It is always a pleasure to be back in this exceptional city.

My own points of contact with Joseph Schumpeter are necessarily indirect. My dissertation supervisor at Yale, the economist and economic historian William Parker, had taken Schumpeter's course at Harvard.² Bill always insisted that he was a disciple of Schumpeter's colleague, Abbot Peyton Usher, himself a specialist in the history of technology. But Bill also being an aspiring historian of technology, it is hard to imagine that he could have avoided Schumpeter's influence. Schumpeter's books were prominent on Parker's reading lists and on the shelves of his library at 28 Hillhouse Avenue. I also spent seven years as a young professor of economics at Harvard, where I resided in Littauer Center, the building where Schumpeter famously had an office. Actually, he had a suite of two offices, one being insufficient to house all his books. It may or may not be a coincidence that I also have a suite of two offices, for the same reason, in Evans Hall.

At Berkeley, my connection with Schumpeter is my emeritus colleague, the eminent labor economist Lloyd Ulman. Lloyd was a graduate student at Harvard after World War II, and even now he describes Schumpeter's lectures and seminars like they were only yesterday. He describes Schumpeter's close connection with his students, to whom he referred as "My babies..." I'm not sure that graduate students today would react well to this form of address. But the time and effort that Schumpeter devoted to getting future members of the economics profession to think broadly is an example that more of us should emulate.

The importance of thinking broadly when engaged in research in the social sciences – to bring to bear on economics elements from sociology, political science, and history – is a hallmark of Schumpeter's work. Recent events – the financial crisis and the Great Recession – underscore the importance of the point. More generally, this is an especially appropriate time to reflect on Schumpeter's contributions to economics and how he arrived at them. One's work, Schumpeter emphasized, is a reflection of one's social milieu (a point to which I will return). And the period through which we are passing is marked by just the kind of extraordinary economic and financial crisis that characterized the decades when Schumpeter himself did his

¹ Remarks on the occasion of the award of the Schumpeter Prize of the International Schumpeter Society, Vienna, 20 January 2010.

² If you read Tom McGraw's biography of Schumpeter, you'll see a photo on p. 472 of Schumpeter in 1950 presenting a paper at the Harvard Center for Research on Entrepreneurial History with what appears to be a young William Parker in the background.

most important work. It is interesting to speculate about what Schumpeter would have thought of our crisis.

No doubt he would have been of the view that the crisis was rooted in earlier excesses. He appreciated the limits to rational decision making and the tendency to engage in herd behavior, and therefore the propensity for markets to boom and bust. He understood these tendencies in terms similar to those of present-day economists specializing in behavioral economics and the economics of information. He understood how easy credit can combine with new technologies to produce an unsustainable boom followed by a disruptive crash: his favorite examples (from the history of my country) were the railway boom of the 19th century and the haphazard growth of the motor vehicle industry in the 20th. The boom financed by easy credit had the benefit of allowing more extensive experimentation with the commercialization of these new technologies than would have occurred in its absence. The bust then weeded out the failed projects and unsuccessful entrepreneurs. These dynamics were intrinsic to the operation of the capitalist system.

In other words, Schumpeter was something of a liquidationist. Not to the extent of Treasury Secretary Andrew Mellon, who famously defended the cleansing effect of the Depression by urging President Hoover to “Liquidate labor, liquidate stocks, liquidate the farmers, liquidate real estate....purge the rottenness out of the system.” But he did see downturns as correcting earlier mistakes and thus as having a cleansing function. He was conscious that corners had been cut and laws had been broken in the pursuit of quick profits in the 1920s. He thus regarded the decline in stock values and the initial stages of the 1929-30 downturn as “for moral reasons a most sanitary thing.”

But he also saw the need for government intervention to prevent the process from leading to the breakdown of the economic and financial system. The 1929-32 downturn in the United States, he insisted, remained an unexceptional recession with mainly constructive, cleansing effects until it was allowed to infect the banking system and spawn a full-blown financial crisis. That said, he was skeptical about Keynesian policies.³ He was, of course, a skeptic of all things Keynesian, given his self-conscious competition with Keynes for the mantle of greatest economist of the 20th century. Were he alive today, I suspect that Schumpeter would argue that we made the wrong choice in the last couple of years by relying so heavily on Keynesian pump priming while not doing enough to fix our broken banking systems, through recapitalization and, where necessary, temporary nationalization. A sound and stable financial system that can efficiently allocate investible funds and not just a certain level of aggregate spending, he would have argued, is required for economic stability and, importantly, for the innovation that incubates technological progress. Propping up demand while leaving the banks weak will make for a credit-less, innovation-poor recovery. Moreover, propping up demand will allow the banks to stagger on – this of course having been the express purpose of policy in the United States – in turn allowing many of the same bank CEOs who played a role in fomenting the crisis to remain in place. So much for the cleansing effect of the downturn.

I see some merit to this line of argument, although I don't buy it entirely. In particular, I think that cleansing the financial system of excesses at the cost of double digit unemployment is

³ See for example the third of the Lowell Lectures that Schumpeter delivered in Boston in 1941.

too high a price. We've seen in the recent crisis, and we've seen from research on the 1930s, that Keynesian policies can work.⁴ I would have liked to see more Keynesian stimulus this time, not less, given how unemployment has risen more than expected. But I also would have liked to see stronger action by governments to fix broken banking systems, including temporary nationalization where necessary. Then and only then, once recovery was underway, I would have liked to see policy actions to throw out incompetent bank management, reform perverse compensation practices, and otherwise strengthen incentives for sensible behavior in financial markets. Of course, whether those responsible for policy in a democracy are capable of this kind of rational, time consistent action is another question about which Schumpeter would have raised doubts.

It is also interesting to ask what Schumpeter would have thought of the role of financial innovation in the crisis. He was of course a firm believer in the merits of financial innovation and development. He emphasized the role of finance in capitalist dynamics. His very definition of capitalism was as "innovation financed by credit." He insisted that many of the most important technological and commercial innovations of the 19th and 20th centuries would have been impossible without financial innovations like the joint-stock company and limited liability.

But one wonders what he would have thought of collateralized debt obligations and credit default swaps. As you know, there is now – how should I put it politely – a "spirited" debate about whether recent financial innovations have any positive social value, or whether they have simply been weapons of mass financial destruction. On the one hand, there is the presumption in the markets and in policy circles – given the importance of lobbying one might ask whether or not they are different things – that financial innovation has and continues to be a good thing, and that heavy-handed regulation which interferes with it would have more costs than benefits. As President Obama put it in a speech in Philadelphia on September 14th, 2009, we must guard against financial reforms and new regulations that "stifle innovation and enterprise."⁵

On the other hand, there is the view that the main purpose of recent financial innovations has been to facilitate regulatory arbitrage by shifting off balance sheet investments that would be more costly were they held on balance sheet, making it necessary to hold capital against them and provision against losses. The main purpose of financial innovation has been not been to provide more efficient diversification of risk, so that a given amount of risk can be held more safely, but to shift that risk to naïve investors who don't know what they are holding (perhaps because they take the press releases of the rating agencies at face value) and to investors who are confident of being bailed out if things go wrong. The main purpose of financial innovation has been to give banks new instruments, like hidden fees on credit cards and negative amortization mortgages, that allow them to profit at the expense of unsophisticated individuals and households. You may say that I am offering a caricature of this view, but reputable figures such as Paul Volcker assert that the only socially valuable financial innovation of the last 30 years is the automatic teller machine.

⁴ The research to which I refer is Miguel Almunia, Agustin Benetrix, Barry Eichengreen, Kevin O'Rourke and Gisela Rua (2009), "From Great Depression to Great Credit Crisis: Causes, Consequences and Lessons," NBER Working Paper (November).

⁵ Barack Obama, "Financial Rescue and Reform," as prepared for delivery at Federal Hall, Philadelphia, 14 September 2009, www.whitehouse.gov.

Personally, I would distinguish between financial innovation itself and the willy-nilly manner in which we have permitted innovations to be used. I continue to believe that many financial innovations, including more complex financial instruments, are in principle good. They can be used to shift risk to those best able to hold it. They can provide insurance for those with limited risk-bearing capacity. They can reduce financing costs for those engaged in production, investment and innovation. But given the number of unsophisticated users in the marketplace and the extent of asymmetric information, nothing ensures that a specific innovation will have these positive effects.

A popular analogy is pharmaceuticals. Modern biological science in the harness of the pharmaceutical industry holds out the promise of progress on some of our most difficult diseases. But it also can be abused, given the incentive of producers to rush products to the market and less-than-complete information on the part of consumers. How therapeutic drugs are used is therefore not left up to the individual. Pharmaceuticals are regulated; in many cases the individual must first get a prescription from a qualified professional (think of the doctor as the equivalent of the licensed financial analyst). Because of the complexity of the instrument and how quickly the technology changes, the qualified professional works under restrictions laid down by a board of experts (think of how new drugs have to be licensed before they can be prescribed), who give their approval to dispensing a new drug only after a vigorous program of testing.

Given the complexity of modern financial instruments and the extent of asymmetric information, it seems obvious that we should do for financial products what we do for pharmaceuticals. We are moving in that direction in the United States, at least provisionally, with the inclusion in the recent financial reform bill voted out of the House Banking Committee of a provision to create a Consumer Financial Products Safety Commission. Whether this will come to pass and, if so, how vigorously we will enforce the presumption that safety must be documented before a new product can enter the marketplace, only time will tell.

In this light, it is less than reassuring that we fell down so disastrously on the regulatory job in recent years. How would Schumpeter have understood this failure? I suspect that he would have pointed to excessive confidence in the ability of social scientists to capture the uncertainties of economic life using mathematical tools. Schumpeter spent his early life pursuing what he called “an exact economics” – an economics in which complex problems could be specified in mathematical terms and analyzed using tools like the calculus. This of course turned out to be a quixotic effort, on Schumpeter’s part and more generally. But it did not prevent financial engineers from embracing mathematical tools and applying them in the form of concepts like Value at Risk. This gave the masters of the universe confidence, false confidence in the event, that they were capable of reducing economic and financial uncertainties to mathematical formulae and managing their consequences. So long as things went well, those utilizing the technique were well compensated. The technique was implemented more widely. More business-school students were trained in its use. Meanwhile, the fact that the structure of the market can change and that uncertainty, unlike risk, cannot be captured by a simple set of mathematical formulas was out of sight, out of mind. The older Schumpeter of course abandoned his quest for an exact economics in favor of a more sociological approach. The

problem for financial stability, one supposes, is that there is always a new generation entering the market (and the academy) naively confident in the power of technique and less than appreciative in the importance of the social context.

Schumpeter would no doubt have also emphasized the role of ideology in shaping views of regulation. Looking back, one cannot help but be impressed by the role of deregulationist ideology, especially in the U.S. and UK in the wake of Reagan and Thatcher, in setting the stage for the subsequent crisis. The idea that markets, left to their own devices, get it right and that governments, when they intervene, can only get it wrong became deeply ingrained in intellectual and policy discourse. The idea that we should move in the direction of light-touch regulation of financial markets and institutions, where banks are relied on to manage their risks using their own internal models (along with the ratings they purchase on the securities they issue) reflected this ideology. So did policies under the Bush Administration to starve the regulators of the financial and human resources needed to do their jobs. That we may now be turning back in the other direction reminds us that crises can weaken even deeply ingrained ideological presumptions, but at what price?

Schumpeter in his later years was sensitive to the role of ideology in scholarly and policy analysis. This was the theme of his 1948 presidential address to the American Economic Association entitled “Science and Ideology.”⁶ In it he emphasized that where you stand depends on where you sit – that an individual’s outlook is fundamentally colored by his personal and cultural background – in a bow to Marx, by his “class affiliations” was how Schumpeter put it. This is more of a problem in the social sciences than in mathematics and physics, Schumpeter concluded, for whom “all falling stones look alike.”

Some natural scientists would dispute this. But they would not dispute Schumpeter’s final point, that when ideological biases gain currency in scholarly and policy debate they tend to become reinforcing. When other banks, in boom times, are making gobs of money originating collateralized debt obligations and using CDS to insure them, the ideological bases for these practices provide further justification for the activity. When other banks are investing larger and larger shares of their funds in high-yielding investments and holding less as capital because their internal models of Value at Risk tell them that a small capital cushion will suffice, the argument that modern bankers, having mastered the science of risk management, should go along with these practices becomes irresistible. To be sure, other factors, like compensation practices that made it obscenely profitable for those taking the key decisions to go along, played a role in the process. But without a self-reinforcing ideology, it is hard to imagine that the privatization of risk management and the excessive risk taking that resulted in our current crisis could have proceeded as far as they did.

What was Schumpeter’s solution to this problem? In “Science and Ideology” he recommended an economics better informed by the analysis of actual historical events and

⁶ Published as Joseph Schumpeter (1949), “Science and Ideology,” *American Economic Review* 29 (March), pp. 345-359.

processes, as opposed to the building of time- and place-invariant mathematical models.⁷ It was not that economic historians are less subject to ideological biases – after all, we have social origins too – but that we are more aware of the existence of such biases because we are in the business of analyzing social origins and their consequences.

While the crisis has been bad for the reputation of mainstream macroeconomics, it has been a good crisis for economic history. The case for economic history as now conventionally made is that financial market participants and policy makers should study history so that they are able to look beyond recent events. A knowledge of history will serve as a caution that when an asset class is booming that boom will last forever. History will remind them that what goes up can come down. This is history as a corrective to the “this time is different” fallacy.⁸

I would argue the role of history is more than just this. It reminds us that modeling choices are not independent of the social milieu of the modeler. And it is a reminder that social processes, including economic and financial processes, are complex and nonlinear in ways that can render counterproductive and dangerous efforts to reduce them to simple formulae that float in their own mathematical ether, suspended above social and political processes. It reminds us that it can be equally counterproductive and dangerous to make policy on that basis.

Thank you very much.

⁷ And as he wrote in his *History of Economic Analysis* (1954, p. 13), “...most of the fundamental errors currently committed in economic analysis are due to lack of historical experience more than any other shortcoming of the economist’s equipment.”

⁸ As in Carmen Reinhart and Kenneth Rogoff (2009), *This Time is Different: Six Centuries of Financial Folly* (Princeton, Princeton University Press).