

Mainstream economics and Iceland's economic collapse

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The disaster which befell Iceland's economy in early October 2008 had long been foreseeable. It reflected the collapse of the business model of the Icelandic commercial banks following their privatization, on the one hand, and the inadequacy of the concurrent economic policies of the government, on the other. However, the business and economic policy practices involved were not specifically Icelandic but reflected deep-rooted and long-standing presuppositions of mainstream economics, both methodological and analytical. These include Paul A. Samuelson's hypothesis in his Ph. D. thesis at Harvard in the early 1940s that a real-world market economy is a "system in 'stable' equilibrium or motion" and the notion that money is a factor of production. Neither of these presuppositions have any foundation in reason and logic.

The market economy as equilibrium system

Embedded in Samuelson's hypothesis is the idea that any incipient displacement of the conditions of market equilibrium triggers offsetting corrective reactions by the forces which drive the market system along its dynamic equilibrium path. This concept is borrowed from Newtonian mechanics in which gravity is held to steer the path of all material particles in the universe, but no *a priori* or empirical grounds exist for assuming it to be applicable to market economies. In fact, it had been resoundingly falsified by the Great Depression. Instead, the sole "argument" in its favor was that it paved the way for economic analysis by calculus. Still, the stable-equilibrium hypothesis is no worse than some other things which economic scholars can imagine and it was benign while ensconced within an academe's ivory tower. Moreover, it is fair to surmise that it would not have passed muster had it occurred to Harvard's economics faculty that the hypothesis might be taken seriously after 1970. For it implies that monetary equilibrium will be ensured if governments and central banks step aside to make way for the equilibrium which is held to reside in market forces. Now that market forces have driven national monetary systems and that of the world as a whole to the brink of disaster, the obvious can no longer be denied: the hypothesis is counter-factual.

In testimony before a congressional committee on October 23, 2008, Alan Greenspan, former Chairman of the US Federal Reserve Board, acknowledged that "Those of us who have looked to the self-interest of lending institutions to protect shareholders' equity, myself included, are in a state of shocked disbelief." A long-time believer in Samuelson's hypothesis, Greenspan confessed: "The whole intellectual edifice collapsed in the summer of last year."

"I made a mistake in presuming that the self-interests of organizations, specifically banks and others, were such as that they were best capable of protecting their own shareholders and their equity in the firms," Greenspan continued. "I have found a flaw. I don't know how significant or permanent it is. But I have been very distressed by that fact." The committee chairman sought clarification of the matter: "In other words, you found that your view of the world, your ideology, was not right, it was not working," "Absolutely, precisely," Greenspan replied. "You know, that's precisely the reason I was shocked, because I have been going for 40 years or more with very considerable evidence that it was working exceptionally well."

Alan Greenspan's ideology, known as The Washington Consensus, has shaped the policy views of key financial and economic agencies in Washington D.C., including the Federal Reserve Board, the Treasury, the International Monetary Fund and the World Bank. Following privatization of Iceland's state banks in 2003, the Central Bank, the Ministry of Finance, and the Financial Supervisory Authority were guided by The Washington Consensus. For as John Maynard Keynes famously observed, "The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men ... are usually the slaves of some defunct economist."

A defunct economist's ruling idea

The concept of general equilibrium entered the tool kit of science as a framework for the Laplacian 19th century construction of Newtonian mechanics. Leon Walras, whom Joseph A. Schumpeter hailed as the greatest of all purely theoretical economists, proceeded in late 19th century to apply it to economics as *if* all real-world exchange transactions observed at a given point in time were interrelated through an economic calculus. Thus, their "configuration" would reflect underlying maximizing-minimizing behavior of economic agents whose motivations were functionally equivalent to gravitational interaction which Laplace held to determine the *positions* and *paths* of all particles in the universe. Moving through universal space guided by the net sum of gravitational forces exerted on them by the rest of the universal mass, all such particles would be in general equilibrium at all points in time. Alas, the analogy is fundamentally flawed in that any given particle remains itself through time whereas any given exchange transaction observed as a point of intersection of underlying but non-observed demand and supply curves of economic agents is a unique one-time occurrence. Samuelson's attempt in the 1950s to develop a revealed-preference theory of consumer behavior aimed at circumventing this fatal flaw in any application of the Laplacian/Walrasian framework to observed real-world exchange transactions.

The attempt was besides the point for, as Walras seems to have realized late in life, when applied to the universe of successive point-observations of exchange transactions, the general equilibrium concept implies that real-world market economies are *always* in general equilibrium at any given instant of observation. Also, given the unique one-time occurrence aspect of each set of such instantaneous point-observations, it follows that *in principle* there exists no observable functional relationship between successive general equilibrium states. Some such considerations led Keynes to suggest in a letter to John Hicks in 1934 that "Walras's theory and all others along these lines are little better than nonsense." (Letter dated December 9, 1934, quoted by Robert Skidelsky, *John Maynard Keynes: the Economist as Savior, 1920-1927* (1992), p. 615.)

In *Foundations of Economic Analysis*, Samuelson effectively contested this *logical* conclusion on *hypothetical* grounds in the form of "a Correspondence Principle between comparative statics and dynamics" predicated on the stable-equilibrium hypothesis, brazenly asserting that "any sector of economic theory which cannot be cast into the mold of such a [stable equilibrium] system must be regarded with suspicion as suffering from haziness." (Atheneum, New York, 1979, p. 9) This hypothetical refutation of a logical point remains the foundation of The Washington Consensus.

In the presentation in 1970 of the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel to Samuelson, special mention was made of his “famous Correspondence Principle whereby a bridge was built between static and dynamic analysis, which earlier had usually been regarded as two completely different methods of analysis.” Greenspan did not identify it as such, but that was the “intellectual edifice [which] collapsed in the summer of [2007].”

Money and stable-equilibrium models

The structural disintegration of world monetary arrangements, which left Greenspan in “a state of shocked disbelief”, has been ongoing and evolving ever since the fall in the early 1970s of the Bretton Woods system. At that time, both Samuelson and Milton Friedman applauded the dawn of a new world monetary order in *Newsweek* magazine. I had given thought to the subject matter as an economist with the International Monetary Fund, and wrote to both *Newsweek* columnists expressing a different view. This was mainly for the record as also was the case with my letter of December 1996 to one of Greenspan's colleagues on the U.S. Federal Reserve Board, Laurence Meyer. At the time, a financial crisis in Mexico had just caught U.S. officials by surprise. I noted that the Fed's macro-economic forecasting models had similarly failed to detect any signs of gathering trouble in the rapid build-up of the ratio of paper assets to world real output during the past quarter century and cautioned that, so long as the Federal Reserve Board continued to use forecasting models based on orthodox monetary economics, it was fair to surmise that Meyer and his colleagues would be setting themselves up for “nasty surprises” – or “shocked disbelief” as Greenspan put it when the surmise came true twelve years later.

In the 1980s, senior officials of the International Monetary Fund withheld authorization for me to circulate within the IMF working papers which challenged the foundational presuppositions of The Washington Consensus for, as one of them – A. Shakour Shaalan, current Dean of the IMF Executive Board – explained, “Mr. Tómasson thinks that he is right and that the world is wrong.” In summer of 2007, world history did what rational argument could not do – blow to smithereens the intellectual pretensions of modern orthodox economics. This should not have surprised Sir Andrew Crockett, a former colleague and critic of my working papers at the IMF and later Managing Director of the Bank of International Settlements, or Professor Patrick Minford, former economic advisor to British Prime Minister Margaret Thatcher to whom I wrote a letter in January 1997, concluding with respect to post-Bretton Woods world monetary arrangements: “[This] house of cards is certain to come crashing down.”

Harvard-MIT Johnny-come-latelies

Samuelson's stable-equilibrium hypothesis of the early 1940s, it turns out, may have originated a few years earlier with John von Neumann.

“In a new [1937] breakthrough,” a modern author has written, “John von Neumann first formulated a balanced and steady-state growth of a general economic equilibrium and proved the existence of a solution. The breakthrough did not lie in the subject matter, which was still allocation and relative price in general equilibrium using maxima and minima. Indeed, all economists can appreciate the simple beauty,

yet high degree of generality, characterizing the von Neumann model. There is substitution in both production and consumption. The model “can handle capital goods without fuss and bother,” as Dorfman-Samuelson-Solow put it. There is explicit optimization in the model: the solution weeds out all but the most profitable process or processes. There are free and economic goods, indeed the solution tells us which will be free and which economic.” (Hans Brems, *Pioneering Economic Theory, 1630-1980, A Mathematical Restatement*, The Johns Hopkins University Press, Baltimore and London, 1986, p. 299.)

Not quite. For among the mathematical solutions of von Neumann's "breakthrough" paper was one where *all* goods may in time become “free” goods! In a working note dated February 22, 1988 I traced the steps whereby von Neumann arrived at that conclusion as follows:

1. von Neumann assumed “that the natural factors of production, including labour, can be expanded in unlimited quantities.” (John von Neumann, *A Model of General Economic Equilibrium*, reprinted in *Precursors in Mathematical Economics: An Anthology*, ed. by W. J. Baumol and S. M. Goldfeld, London, 1968, p. 297.)
2. He also defined a “free good” to be one whose supply exceeds the need for it.
3. Thus, “free goods” within von Neumann’s model may be “free” one day and “non-free” the next, although he did not make that point.
4. Since *all* factors of production “can be expanded in unlimited quantities” by assumption, von Neumann’s model has built into its premises the conclusion that *all* goods may in time become “free” goods.
5. Since *time* is not an essential feature of any general equilibrium model, why should only *one* or *some* rather than *all* goods be held to be “free” and not “economic”?
6. Speaking of a mathematical equation relating to the subject matter, von Neumann said: “[Its] meaning is: it is impossible to consume more of a good G in the total process than is being produced. If, however, less is consumed, i.e., if there is excess production of G, G becomes a free good and its price $y = 0$.” (*Op. cit.*, p. 299.)
7. von Neumann recognized that there was *mathematically* nothing to preclude *all* goods from being available in infinite supply so that all goods would be “free”.
8. von Neumann declared this mathematical possibility to be “meaningless”. (*Op. cit.*, p. 298.)
9. *In principle*, a mathematical model can only yield conclusions which are already implied by its premises.
10. Therefore, when von Neumann found it “meaningless” that all goods could be “free goods”, he effectively declared the premises of his model to be “meaningless”. [As Euclidean geometry would be if its axioms did not preclude the intersection of all straight lines.]

In von Neumann's case, therefore, a "necessary element [was] omitted to be taken into account: and thus the only effect of the operation [was] to mislead," as Bentham had cautioned with respect to the use of mathematics in political economy.

In the late 1970s, I took up related issues in correspondence with Paul Samuelson, noting that the law of supply and demand was only applicable to goods and services whose production required use of "scarce" factor services. Considering that the supply of modern money was not so constrained, being produced by a stroke of a computer key, the law of supply and demand was *in principle* inapplicable to the determination of market-clearing prices of goods and services in any modern monetized economy. In his reply letter, Samuelson did not address the substantive point at issue, asserting instead that if governments acted as *if* money were a free good, the result might be "temporary" pressure on domestic prices and the external payments position. With the U.S. Federal Reserve System creating trillions of dollars to finance the rescue packages of the Bush and Obama administrations, Samuelson's hypothesis will soon be put to an empirical test.

Money, production, interest and profit

In *Foundations of Economic Analysis* (Ch. IV, 'A Comprehensive Restatement of the Theory of Cost and Production'), Samuelson wrote of factors of production as follows:

It is useful, I believe, to avoid the expression "factor of production entirely". This has been used in at least two senses, neither of which is quite satisfactory. First, it has been used to denote broad composite quantities such as "labor, land, and capital." On the other hand, it has been used to denote any aspect of the environment which has any influence on production. I suggest that only "inputs" be explicitly included in the production function, and that this term be confined to denote measureable quantitative economic goods or services. (p. 84)

In the context of entrepreneurial market economies, it is readily apparent that (a) payments by entrepreneurs for "inputs" represent the total supply cost of their final output equivalent, and (b) that such cost represents total nominal incomes of suppliers of "inputs" to the production process. In principle, therefore, total final output sales proceeds cannot exceed their total supply cost in the absence of what I have termed Final Demand Inflation – that is to say, the creation and injection of nominal purchasing power into the market for final output to supplement that of incomes received by suppliers of "inputs" to the production process. In other words, Final Demand Inflation is both a necessary and sufficient condition for the generation of net entrepreneurial profit and/or interest on credit obtained by entrepreneurs to finance their acquisition of "inputs".

This, I submit, is the answer to the question raised (provocatively) by Joseph A. Schumpeter in a 1934 preface to the English edition of *The Theory of Economic Development* as follows: "I have not been able to convince myself, for example, that such questions as the source of interest are either unimportant or uninteresting. They could be made so, at all events, only by the fault of the author." Schumpeter added that "[he hoped] to supply before long the detailed material which is here missing by more "realistic" studies in money and credit, interest, and cycles." (Oxford University Press, 1961, pp. x-xi) However, no such

studies ever materialized if only because Schumpeter favored a general equilibrium framework of analysis where *money does not matter*.

My own answer is implicit in the following remarks by Keynes in Ch. 16 of the *General Theory*:

It is much preferable to speak of capital as having a yield over the course of its life in excess of its original cost, than as being *productive*.

I sympathise, therefore, with the pre-classical doctrine that everything is *produced* by *labour*, aided by what used to be called art and is now called technique, by natural resources which are free or cost a rent according to their scarcity or abundance, and by the results of past labour, embodied in assets, which also command a price according to their scarcity or abundance. It is preferable to regard labour, including, of course, the personal services of the entrepreneur and his assistants, as the sole factor of production, operating in a given environment of technique, natural resources, capital equipment and effective demand. This partly explains why we have been able to take the unit of labour as the sole physical unit which we require in our economic system, apart from some units of money and of time.

With “everything produced by labour”, it is self-evident that interest on production credit cannot be held to reward the factor services which money provides to the production process. Therefore, such interest as well as entrepreneurial profit can only be the product of Final Demand Inflation – a conclusion which struck Milton Friedman as “egregious nonsense” many years ago.

In *Foundations of Economic Analysis*, Samuelson gave short shrift to Schumpeter’s question on “the source of interest”:

It is quite clear,” he wrote, “that in the real world net revenue is not zero for all firms, nor is it tending towards zero. This is true under pure competition as well as impure competition. It is clear that this residuum must be “due” to something, and it may be labeled by any name we please (rent to institutional advantage, etc.). (p. 87)

In 1939, Samuelson had actually tackled – but failed to answer – the question in a paper entitled ‘The Rate of Interest Under Ideal Conditions’ and published in the *Quarterly Journal of Economics*. There, he took note of certain remarks made by Keynes in the *General Theory* which Samuelson construed correctly as follows: “any increase in aggregate asset value must be equal to the value of *new* assets created, since the sale of old assets necessarily cancels out.” In the context of entrepreneurial market economies, this translates into the proposition that the value of an economy’s work in progress is commensurate with the net factor content (“inputs”) thereof. This logical explanation seems not to have occurred to Samuelson who proceeded to charge Keynes with being logically confused.

If this interpretation be correct, “it is, I think, demonstrably clear that Mr. Keynes has become enmeshed in Zeno’s paradox of motion. It is, of course, true that there are two sides to every transaction, and that there must be a corresponding buyer to each seller. It is further true that the value of sale must be equal to the value of purchase. But it is not true, and this would be necessary for the soundness of Mr. Keynes’s argument, that over an interval of time the value of an existing asset cannot change

or cannot be changing. It is only by concentrating upon the “instant” of sale that the cancelling out emerges.

Altho the use of any consistent method of accounting accruals will illustrate the point, I prefer to consider a special case where this is brought out strongly,” Samuelson continued. “Suppose only one kind of asset to exist in fixed amount (say land, government bonds, etc.). Furthermore, suppose all persons to be identical in every respect, including asset holding. Now imagine all suddenly to place a higher value on each unit of this asset. Its price will rise, total asset value will increase, and there will be investment in my sense, altho no transactions have taken place and no new capital equipment has emerged. It is investment in this sense which will be equal to savings. By working with time rates of increase of asset values, instead of concentrating upon periodic, discrete transactions, it is easy to avoid the apparent contradiction of simultaneous motion and fixity of position.

(The Collected Scientific Papers of Paul A. Samuelson, pp. 197-198)

Iceland – the canary in the mineshaft

There is no point taking on founding fathers of so-called schools where people simply take it on faith that their gurus know what they are talking about. Paul Samuelson is the one who laid the theoretical foundation for this [post-Bretton Woods] systemic anarchy. Milton Friedman then provided the emperor's new clothes, dressing it in the garb of neoliberalism. That is how these two leading figures in American economic thought were united in unleashing on the world community the [monetary] system which now has collapsed. (Myself in an interview on Silfur Egils, an Icelandic State TV program, February 1, 2009. My translation.)

"There is now a real risk of global financial contagion from Iceland as it increasingly looks like the canary in the mineshaft." (D K Matai, Chairman, Asymmetric Threats Contingency Alliance, March 27, 2008).

The collapse of Iceland's banking system in October 2008 had long been foreseen, as noted earlier, except for its timing and precise circumstances. In only five years, Iceland's newly privatized commercial banks and their foreign creditors had built a weapon of mass financial and economic destruction, with the banks' gross external debt position ballooning to several times the size of Iceland's GDP, while Iceland's Central Bank and Financial Supervisory Authority looked the other way. The Minister of Finance held government intervention in the decision-making of the country's banks to be ill-advised because they were run by experts. A point well taken if real-world market economies were "systems in "stable" equilibrium or motion" in which investment in the form of credit-driven asset-price inflation represented real savings and not ballooning debt.

A quarter century ago, the British economist Lord Thomas Balogh lectured senior staff of the International Monetary Fund in the IMF Executive Board's conference room. “One can be sorry in two different ways,” he said. “When one sees trouble coming, and when trouble comes.” Then Lord Balogh read the riot act to IMF Economic Counsellor Jacques J. Polak and other guardians of the international monetary system. “The IMF has decided to be sorry when trouble comes,” he said, waiving for emphasis a recent IMF Annual Report, declaring it to be the worst such report by an international institution since the final annual report of the League of Nations in the 1930s.*

In a 1982 lecture given at the invitation of the Icelandic Chamber of Commerce, I noted the rapid build-up of the ratio of global paper wealth to world output of goods and

services in the decade since the collapse of the Bretton Woods system. The key to successful economic management at national and international levels, I suggested, was the maintenance of some appropriate balance between paper wealth and real output. I likened this to a ship's superstructure, where the ship is production and the superstructure is paper. If the growth of the superstructure is excessive, there will come a point in time, which cannot be specified in advance, where the superstructure will overturn the ship. A superstructure was built on the mainstream blueprint of which Alan Greenspan spoke October 23, 2008: "The whole intellectual edifice collapsed in the summer of last year."

The God That Failed

In a recent *Financial Times* article entitled 'Seeds of its own destruction' (March 8, 2009), economics columnist Martin Wolf noted Greenspan's confession of being "in a state of shocked disbelief" over the failure of the "self-interest of lending institutions to protect shareholders' equity", and concluded: "Another ideological god has failed. The assumptions that ruled policy and politics over three decades suddenly look as outdated as revolutionary socialism."

* I might add that Polak had advised IMF Administration in 1978 that theoretical views expressed in a set of my personal working papers disqualified me from continued service as senior IMF staff member. Given my senior status, however, my dismissal would have required IMF Managing Director Jacques de Larosière to give formal advance notice to the IMF Executive Board of any action taken to initiate my dismissal. Lacking justification for such action, he declined to do so. His successor, Michel Camdessus, found a way around this procedural protection for senior staff in good standing and forced my early retirement in 1989.

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