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A number of economists have asked the question "Is the economic system self-adjusting?" In the face of sustained high levels of unemployment, Keynes believed the answer was clearly no and he set about developing an alternative explanation of the operation of the capitalist economic system and innovative proposals to remedy its natural defects. He proposed a theory that recognized the central role of money and finance in the determination of prices, investment and output. Nonetheless, economists have ignored the importance of money and finance and continued to elaborate and refine pre-Keynesian classical models in which the free competitive market, if left to itself, will react to prices that embody all the information needed to converge to full employment as its natural state of rest. Nothing needs to be done to offset the random shocks that from time to time displace it from its natural resting place. It is the absence of free markets for factors producing distortions of competitive prices, not the operation of the financial system, that is capable of disturbing the equilibrium of the system. Thus policy need only identify and reduce the frictions that prevent markets from returning quickly to equilibrium. This is in direct contrast to Keynes's expressed belief that "equilibrium is blither." And although Keynes did outline a theory in which the economic system might achieve stable stagnation at less than full employment, this was not his view on the normal operation of the economic system which I have suggested in a 1976 EJ article was caracterised by "shifting equilibrium" in which the system is an ever-changing state of flux.

While mainstream economists have developed theories in which financial matters are an exogenous, random disturbance, a number of economists before and after Keynes have asked the more specific question "Are financial markets self-adjusting?" Since evidence suggests that this was not the case, Hyman Minsky has argued that what is required is an economic theory in which financial disruption is a natural result of the operation of the system. That it should be the result of the endogenous responses of institutions in the system facing uncertainty against the need to act.

There are a number of existing traditions that have attempted to reject the self-adjusting vision of the system. In addition to Marx's ideas about realization crises, and Keynes, the work of Austrian economists,

such as early Hayek and especially Schumpeter's idea of creative destruction, as well as Minsky's idea of financial fragility, and more recently the general theory of reflexivity of George Soros all share a similar framework of analysis. But even earlier Veblen had argued that the assumption of rational economic man would imply a conception of equilibrium that would prevent economists from becoming an evolutionary science; he proposed employing what he called "cumulative causation":

"For the purpose of economic science the process of cumulative change that is to be accounted for is the sequence of change in the methods of doing things, -- the methods of dealing with the material means of life. ... when taken as items in a process of cumulative change or as items in the scheme of life ... The physical properties of the materials accessible to man are constants: it is the human agent that changes, -- his insight and his appreciation of what these things can be used for is what develops. ...the limitation imposed is on what men can do and on the methods of doing it. The changes that take place in the mechanical contrivances are an expression of changes in the human factor. Changes in the material facts breed further change only through the human factor. ... Economic action must be subject matter of the science if the science is to fall into line as an evolutionary science." Italics added.

Gunnar Myrdal also answered Keynes's question in the negative, applying cumulative causation first to social theory and then to economics of development in his Cairo lectures: "The idea I want to expound in these lectures is that, on the contrary, in the normal case there is no such tendency towards automatic self-stabilisation in the economic system, but that the system, if left to itself, will steadily be on the move away from such a state. If left to take its natural course, the economic process will be cumulative instead of equilibrating – in the meaning that secondary changes usually have the same direction as the primary ones and not the opposite one – and it will then most often tend to create inequalities and not equality, and to increase existing inequalities..." In the development field similar ideas can be found in the work of Hirschman and Prebisch.

Nicholas Kaldor has also noted the "irrelevance of equilibrium economics" and embraced the idea of cumulative causation. Here the germ of the idea comes from Allyn Young's views on increasing returns. "Once however we allow for increasing returns, the forces making for continuous changes are endogenous-" they are engendered from within the economic system and the actual state of the economy during any one "period" cannot be predicted except as a result of the sequence of events in previous periods which led up to it. As Young put it, with increasing returns "change becomes progressive and propagates itself in a cumulative way." Further, "no analysis of the forces making for economic equilibrium, forces which you might say

are tangential at any moment of time, will serve to illumine this field, for movements away from equilibrium, departures from previous trends, are characteristic of it. When every change in the use of resources-every reorganisation of productive activities-creates the opportunity for a further change which would not have existed otherwise, the notion of an "optimum "allocation of resources-when every particular resource makes as great or greater contribution to output in its actual use as in any alternative use-becomes a meaningless and contradictory notion: the pattern of the use of resources at any one time can be no more than a link in the chain of an unending sequence and the very distinction, vital to equilibrium economics, between resource-creation and resource-allocation loses its validity. The whole view of the economic process as a medium for the "allocation of scarce means between alternative uses" falls apartexcept perhaps for the consideration of short-run problems, where the framework of social organisation and the distribution of the major part of available " resources," such as durable equipment and trained or educated labour, can be treated as given as a heritage of the past, and the effects of current decisions on future development are ignored."

George Soros's theory of reflexivity is the latest in this line of analysis. Following Veblen it distinguishes between the taxonomy of material goods achieved through cognition and the actions taken by economic agents to change the type and disposition of those goods. Soros approach may be distinguished by the fact that it refers to the evolution of asset prices, but he has shown how it has wider application. Reversing Myrdal's application of cumulative causation in racial discrimination to economic development, Soros extended his theory from financial markets to economic governance.

It is important to note that all of these approaches incorporate what Soros has called the general "human uncertainty principle". However it is a guite different approach to the general principle formulated by Shackle and others who posit "radical" existential uncertainty. In all these theories uncertainty is the endogenous result of the operation of the cumulative process which has no preordained point of equilibrium and is thus impossible to predict. In Soros's theory of reflexivity, uncertainty in the sense of a non-self adjustment to commonly held equilibrium values is the result of the interaction of two means of dealing with human uncertainty: cognition, the attempt to increase knowledge, and praxis, the attempt to use that knowledge which when successful will change the existing body of knowledge and render cognition more difficult. This sort of approach recalls Keynes's criticism of Tinbergen's attempt at economic forecasting and his comment to Harrod that economic data are different from the natural sciences because Newton's apple can always decide not to fall to the ground at any point in time.

This sort of uncertainty makes economic modeling on the basis of relations fitted to time series data statistically problematical.

In Minsky's financial instability hypothesis uncertainty is the result of engaging in commitments to make future financial payments with financial receipts that are uncertain because they, too, will occur in future periods. In turn, those future receipts will not be forthcoming unless at that future time there is a willingness to enter into additional financial commitments (since spending in the future will determine future receipts). Both are self-referential or reflexive endogenous processes.

Adopting the endogenous approach can provide a strong alternative to existing efficient market fundamentalism. Let us cite just two examples using the approaches of Minsky and Soros.

Soros's theory of disequilibrium is based on the idea that there is some existing commonly accepted price produced by cognitive action, which is erroneous because it fails to consider the impact of praxis causes divergence and modifies market prices. For example the contrasts between positive and negative feedback loops seek to identify the directions of these price movements. However, a basic impact of these price movements is on the balance sheet positions of financial institutions. Thus a full explanation of the reflexive process would seem to be complemented by reference to consistent balance sheet equilibria of financial firms and how cognition and praxis impact the decisions to change balance sheets in the face of the changes induced by feedback loops.

Minsky's theory argues that the endogenous process of profit seeking innovation will be not only a source of instability, but also render nugatory attempts to design financial reform proposals that produce financial stability. The search for such regulations only makes sense within a theory of self-adjusting equilibrium. In an evolutionary theory of innovation and instability the concept of stability and the regulations that would be required are completely different. But to recognize this difference in the approach to regulation first requires the specification of the alternative theory of the operation of the financial system, which a combination of Soros's reflexivity explanation of the behaviour of prices and Minsky's explanation of the instability of financial institutions and the economy could provide.

As an example of the results that might emerge from such an alternative consider Coase's observation that firms engage in exchange at prices which are not determined in markets. Financial firms operate in a similar manner—indeed, assets are often held for

long-term gain independently of current price fluctuation as in a relative value trading strategy, with prices evaluated using proprietary models. However, the move to increase the use of mark to market accounting for firms' balance sheets can be seen as an attempt to introduce the market mechanism and market pricing into the operation of financial firms with the same destabilizing consequences that would have occurred had this been done in a manufacturing firm.

Thus, firms are forced to engage in a cognitive activity, identifying the fair value market prices, at the same time as they are engaged in activities to generate profit from those prices which will inevitably have an impact on prices. A clear application of reflexivity that shows how such a change in policy toward mark to market valuation only makes sense on the basis of the efficient market hypotheses in which prices reflect the reality of all existing information and economic fundamentals. Absent this theory, the proposal makes no sense and can be seen as increasing the instability of both financial institutions and financial markets. One might even be able to argue that the shift in business model from credit evaluation--evaluate and hold--to capital market intermediation--originate and distribute--is a result of introducing risk evaluation into internal pricing relations without recognizing the impact of reflexivity on the stability of financial institutions.