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Economics in Disgrace: the Need for a Reformation

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GIDS Discussion Paper No. 01-13

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March 2013

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Economics is, deservedly, a subject in disgrace. Its leaders, with rare exceptions, are silent. As a result of persuasive advocacy by some of them (and silent complicity by most) the theory that financial markets should be freed has been applied with disastrous effect across the world.

The malady is not local to financial economics but is an infection that permeates the body of academic economics: it is the general theory of market economics now orthodox. It is not that markets are bad. On the contrary, they are a wonderfully effective mechanism for inducing enterprising persons to produce things that consumers want to buy and for coordinating the network of production and distribution through which the wanted products must pass to reach consumers. The virtues of markets can be seen all around us, most conspicuously in China where the release of competitive enterprise after a long period of central planning has led to sensationally rapid growth. The problem is that competitive endeavour can run wild if it is not prudently constrained and policed by government. The orthodox theory of market economies has failed to provide adequate guidance as to why and how constraint should be applied. Instead, it has been used to justify the excessive removal of constraints in the financial sector – without being used, as it should be, to criticise the populist proliferation of petty regulations that now intrude, often at considerable cost, into everyone's life.

Fundamental Defects

Two fundamental defects of the theory are its assumptions about human psychology and about the nature of markets. As John Kay points out in his admirable book, *The Truth about Markets,* both are absurdly unrealistic.[1] A third defect, no less important, is that with slight exceptions the economy is treated as if it is static.

As regards psychology, it is assumed that all human beings are merely self-serving individuals who spend their lives making calculations of

[1] John Kay, *The Truth About Markets*, London, 2003.

gain and loss, uninfluenced by the behaviour of others around them but fully informed as to the nature and consequences of the choices they make. Thus an individual is perceived as a desiccated calculating machine, filled with economic information and operating on his or her own. This wholly unrealistic behaviour is labelled 'rational', with the implication that if people do not behave like this there is something wrong with them.

As regards markets, the central assumption is that they are perfect, meaning that, as is approximately the case in an auction for wheat, the product in question is all the same; buyers and many sellers have to take the price thrown up by the interplay of supply and demand - or go home. Something like those conditions are to be found in markets for agricultural products and some other raw materials where there is an unchanging product and the maximum economic scale of production is small; and in financial markets. But it has long been recognised that by far the greater part of a modern economy consists of industry and services in which competition is nothing like that. Rather, it is innovative and dynamic. Each supplier seeks to make his product different from his competitors' and seeks, through innovations in design and marketing, to persuade consumers that it is the best. There are economies of scale such that if a successful producer gets ahead he may increase his share of the market through lower costs of production, greater bargaining power with suppliers, more advertising, more research and development, and other advantages. He may expand his share of the market till he is stopped by competition from rival producers or by competition law designed to limit monopoly. It is a turbulent dynamic process.

The treatment of the economy as static can be described, at the risk of excessive simplification, as the consequence of attempting to explain how markets bring order to the economy in a manner akin to Newton's theory of how opposing physical forces come to rest in a state of equilibrium. Having started in that direction, mathematical economists moved on fifty years ago to analyse what precise conditions would be required for a market system to produce an ideal general equilibrium of the whole economy, a quest begun in the 19th century by the French economist Leon Walras. They found they could not model such an ideal outcome without making assumptions that did not remotely resemble the real world. The realists among them concluded that it was surprising

that markets worked as well as they did and did not produce chaos. Nevertheless an ascendant body of economists has continued to elaborate and teach the theory that market economies are self-equilibrating. That fundamentalist view has been the orthodoxy. It permeates textbooks. In the past decade or two it has been the creed of British and American governments regardless of party. And it has been the creed of the International Monetary Fund and World Bank.

How market economics of this unreal kind became the dominant creed will surely be debated by future historians of economic thought. Two causes stand out:

1. As the Cold War ran its course those who provided a favourable interpretation of how market economies work were backed with money and acclaim by western governments, by the business community and by funding bodies, private and public. Those that deviated, who were commonly from the Left, were squeezed and almost silenced. When the Cold War ended and capitalism triumphed, political support for market economics became increasingly dogmatic and uncritical, particularly in Britain and the United States. Cautions, seen as criticism, were spurned.

2. Discussion of mathematics displaced the discussion of reality. Mathematical economists believed that, like physicists, they could find economic truth by means of long and complex chains of deduction starting from a few highly simplified assumptions, and for that purpose they used the unrealistic assumptions about human behaviour and markets noted above. Since their mathematics appeared to be, and laid claim to be, rigorous and 'scientific', as well as producing politically acceptable results, its practitioners, through the normal process of competitive exertion, became dominant in the ruling bodies of academic economics. Faculties, journals, textbooks and the whole paraphernalia of economics have become inaccessible to the non-mathematician; words have given way to algebra, and there has been less and less discussion of the real world based on direct enquiries, stories and statistics. Assumptions, lost to view behind displays of mathematics, have ruled.

The Consequences

There are two clearly identifiable ways in which orthodox economics have contributed to the present economic crisis. As to the financial bubble, the facts are clear: financial markets in Britain and the United States were deregulated and left very largely to take care of themselves in accord with the totally unrealistic theory that all who deal in them - bankers, mortgage lenders, stock brokers and individual investors - are rational economic persons who have complete information about all the possible investments before them, including the risks attached to them, and make rational choices uninfluenced by one another, with the result that financial markets are 'efficient'. Abundant evidence that ignorance abounds in financial markets and that people follow one another in a herd, not knowing what risks they are running, consequently causing bubbles, was ignored not only by mathematicians who modeled risk-taking, but also by every kind of expert in financial markets and by policy makers. They became drunk with the financial and political gains they were making from the bubble they were creating. Some, now humbled, admit their mistake.

Second, there is the question how governments should respond to a collapse in demand of the kind we now face. The answer lies in macroeconomics, meaning the understanding how total demand, output and the price level are determined. It is a tangled subject. At the heart of it is money and financial assets, consisting of promissory bits of paper that anyone can invent and write, except in so far as they are constrained by government, and whose value, which depends on the expected but unknowable future of the economy, is determined from day to day by speculators. How this shadowy financial world influences the real economy, and is influenced by it, is a problem that economists have not solved satisfactorily, and have disputed frequently. The main difference of opinion has been between those who hold that the system is self-regulating (on the basis of the orthodox market economy model) and those who hold that the system is inherently liable to instability, as is shown by the periodic recurrence of financial and economic crises, and as was explained brilliantly by Keynes. As orthodox market economics became dominant, the instability school was pushed aside and the doctrine took hold that economies will grow steadily, subject only to disturbances caused by random 'exogenous shocks', for example, war. That fantasy is what students read in the textbooks and are taught today, even as the world economy is rocked by an economic

crisis that indisputably has been caused by instability within the system. Adherence to this doctrine led governments to be complacent about letting unsustainable financial imbalances develop in and between national economies in the build-up to the crisis; and, it has caused academic economists, with some honourable exceptions – more in the United States than in Britain – to have lost touch with reality and become incapable of contributing to current discussion of economic policy. Economic journalists and city economists whose business it is to watch the real world have been more valuable.

Evidence

Instead of being guided by evidence, economic theory has run away from it. In any true science, theory is tested and guided by evidence, and it is commonly inspired by it. In the case of economic theorists, the opposite has too often been true. As evidence has conflicted with theory, their reaction has been to tighten the assumptions away from reality and defend the theory with ever more fanciful mathematics.

Consider the contrast between evidence and theory as regards the psychological assumptions of market economics. These have their origin in Jeremy Bentham's assertion in the opening words of *An Introduction to the Principles of Morals and Legislation*, written more than two hundred years ago, that 'Nature has placed mankind under the governance of two sovereign masters, pain and pleasure'[2]. He went on to argue that governments should aim to maximise happiness by making laws that reduce pain and increase pleasure. That was the foundation of utilitarianism.

One may applaud or criticise Bentham for having directed attention towards the pleasures and pains of this life and away from fearful contemplation of the pleasures and pains of an afterlife, but in either case one must ask how valid was, and is, his division of man's feelings into only two categories?

In the 18th and 19th century, the assumption that income brings pleasure and work pain - or, to use the utilitarian jargon, income has utility and work disutility - and that these were the dominant determinants of behaviour was a convincing if simple description of the economic life in

[2] Jeremy Bentham, *An introduction to the principles of morals and legislation*, London, 1789.

Britain of most people. For the masses life was primitive and harsh, whether they lived in the country or in the new industrial towns. Think of Cobbett's descriptions of English rural life in the early 19th century, of the descriptions of mid-19th century urban life by Dickens and Engels, and of Rowntree's survey of York in 1897-98, where he found that one-third of working class families lived in poverty.[3] Work meant long hours of exhausting and often dangerous physical toil on the land, down mines or in factories. Wages typically covered or failed to cover the bare necessities of life, plus some drink and tobacco; the expectation of life at birth was 40 years. (Today it is 80 years for women, rather less for men.)

Those conditions still exist in undeveloped countries. But in Britain and other rich countries economic growth and social reform have improved conditions of work and standards of living so greatly that one must question how far work is pain and how far higher income gives pleasure, in the strong sense that it provides more money with which to satisfy serious wants.

Since 1861 the number of persons in Britain working in agriculture has dropped from 27 to 2 percent of total employment; mining has become negligible; employment in the production of goods of all types (including foodstuffs, fuel and buildings) has declined from nearly 70 per cent to 20 per cent of the total. On the other hand, employment in services has increased from 30 per cent to 80 per cent of the total of which the biggest component is employment in banking, finance and insurance which has increased from less than 1 percent to 21 per cent of the total.[4] The use of muscles has become rare, the use of computers almost universal. True, work for many is repetitive, disagreeable and exhausting, for example, those who work in call centres, those who assemble electronic devices, those who monitor computer screens and those who sew mass-produced clothing, but much of that work has been moved from the rich to the poor countries where labour is cheap. Lack of work is a source of distress, bringing as it does an excess of inactivity and a sense of rejection by society.

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[3] William Cobbett *Rural Rides,* London, 1853; Friedrich Engels, *The Condition of the Working Class in England in 1844*, London, 1892; Seebohm Rowntree, *Poverty: a Study of Town Life*, London, 1901.

[4] 1861 from B.R. Mitchell, *British Historical Statistics,* Cambridge, 1872, p.111; 2008 from *National Statistics Online; workforce - jobs by industry.*

As to how people have spent their income, the earliest figures I can find are for 1900. In that year food, drink, tobacco and clothing accounted for 50 per cent of total consumers' expenditure; now the figure is just under 20 per cent. With rising incomes, less essential expenditure, principally on services, has surged: 'transport and communication, restaurants and hotels, and recreation and culture' now take 44 per cent of expenditure compared with 12 per cent in 1900; expenditure on housing water and light has also risen markedly.[5] On average probably about half of income goes on satisfying basic needs, meaning those that have to be satisfied in order to avoid discomfort.

While conditions of life have been transformed by economic progress, our understanding of psychology has advanced to the point where scientific evidence as well as common sense tells us that human beings are not isolated individuals engaging in nothing but a pleasure-pain calculus. The evidence comes from many sources of which three stand out:

1. Direct questioning of people, mostly in the United States about how they make economic choices, how happy they are and so on.

2. Evolutionary psychology, meaning broadly the application of modern evolutionary theory to human behaviour.

3. Neuroscience, which is only just beginning to produce evidence about the responses of the brain to different stimuli but is likely to revolutionise our understanding of human psychology in the decades ahead.

The most important results are, firstly, strong evidence that humans, and primates before them, have evolved with instincts to trust one another and engage in group behaviour. This runs counter to a previously powerful school of thought which held that at birth human brains were, as regards social behaviour, quite blank and are wholly shaped by subsequent experience. Of course, how far people grow up to be cooperative and how far competitive will be influenced by the society in which they find themselves: a person brought up in a Neapolitan slum is likely to behave differently from a person brought up in a Scandinavian city. But group instincts will be there in both.

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[5] 1900 from C. H. Feinstein, *National Income, Expenditure and Output of the United Kingdom, 1855-1965,* Cambridge 1972, page T61; 2006 from Office of Statistics, *Social Trends*, 2008 edition, Table 6.3.

Secondly, experiments conducted by asking samples of people, usually American students, to choose between alternative hypothetical uses of money and similar questions showed that they do not behave like 'rational man' of theoretical economics in numerous ways: they use rules of thumb; their choices depend on how the choice is framed; they are strongly averse to immediate risk (as distinct from distant risk); they react strongly to evidence of cheating; they are influenced by what others choose; and they care about how large their income is relative to that of others around them.

Moreover the results of surveys asking people how happy they feel, which have been usefully summarised by Richard Layard, show that, beyond a moderate level, higher income has not brought greater happiness.[6] For example, from the 1960's to the year 2000 real income per head in the United States more than doubled but the proportion saying they were happy remained unchanged. When in earlier decades real income increased from lower levels, the proportion saying they are happy went up. If countries are compared, higher income per head is strongly associated with greater happiness in poor countries, but brings no gain in happiness in countries with average income of $20,000 per head or more. The clear inference is that there is a point of satiation at which basic needs for food, housing, clothing and the like are met, along with some margin for inessentials; beyond that point higher income does not bring greater happiness.

The fact that higher income is nevertheless pursued - recently with conspicuous greed by persons at the top of Anglo-American banking and finance - may be explained by three factors. First, as a person's income increases so do his or her aspirations, a notion captured in the words of an old music hall song, 'The more you have the more you want they say…'. Secondly, the newly rich compete with one another for status through conspicuous consumption, a phenomenon first observed in the United States in 1899 by Veblen.[7] Lastly, the appetite for new products is cultivated, indeed created, by advertisers, salesmen and designers: the new rich enjoy choosing and negotiating the purchase, or supervising the construction of the new goody that is dangled before them - a second house, a luxury yacht or a private jet, but once they have acquired it and its novelty has worn off they will find that those around

[6] Richard Layard, *Happiness: Lessons from a New Science*, London, 2005. See also Richard Easterlin, 'Income and Happiness: Towards a Unified Theory', *The Economic Journal*, 111, 2001, pp. 465-484.
[7] Thorstein Veblen, *The Theory of the Leisure Class*, New York, 1899.

them have acquired it too. No one has gained the relative advantage that he or she sought.

A number of economists, notably Daniel Kahneman in the United States, have played a leading part in these enquiries into the psychology of economic behaviour but their findings have had little impact on orthodox market economics whose theorists have carried on offering policy prescriptions based on their unreal assumptions, in particular their unreal definition of 'rational man'. Moreover, so dominant is the orthodoxy that those economists who have investigated behaviour different from that attributed to rational man commonly talk of looking for and finding 'deviations from rationality'. Implicitly they subscribe to the notion that 'rationality' is the right norm to use in economic analysis. They seem to be afraid of being accused of heresy if they challenge the orthodoxy by conducting open research, seeking to find and report without prejudice how human beings behave and what it is that motivates them in their economic activity.

Evolutionary Economics

In the 19th and first half of the 20th century various economists, notably Joseph Schumpeter, observing that economic growth is generated by the repeated introduction of technical advances, used evolutionary theory to describe what they observed; in some cases they went so far as to propose it as an alternative to equilibrium theory, and in the 1970's when economists began empirically to study the process of technical innovation they explored an evolutionary approach.[8] From that beginning a substantial school of evolutionary economics has grown up, led in the United States by Richard Nelson and in Britain by Christopher Freeman.[9]

The essential idea is that innovations are analogous to new species: in nature, random mutations and recombinations of genes give rise to new species of which a fraction survive; in economics, man's ingenuity gives rise to new products of which a fraction are commercially successful.[10] In each case competition operates to separate the wheat from the chaff.

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[8] Joseph Schumpeter, *Capitalism, Socialism and Democracy*, New York, 1942, Chapter VII, 'The Process of Creative Destruction'.
[9] Christopher Freeman, *Systems of Innovation: Selected Essays in Evolutionary Economics*, Cheltenham, 2008; and Richard R. Nelson, 'Recent Evolutionary Theorizing About Economic Change', *Journal of Economic Literature*, XXXIII, 1995, pp. 48-90; and 'Evolutionary Social Science and Universal Darwinism', *Journal of Evolutionary Economics*, 16:5, 2006, pp. 491-510.
[10] Paul Ormerod, *Why Most Things Fail*, London, 2005.

That is a simple but seminal idea. However, the analogy with the evolution of species must not be carried too far. The processes at work in economics are very different from those in biology.

Human beings are the product of genetic selection. In the slow process of evolution, our ancestors by chance possessed characteristics that enabled them to survive and multiply. In this we are no different from other species. But in a vital respect we are different: we have come to possess a mental capacity for language, writing and analytical thinking. Consequently we are able to generate and exchange ideas and pass them directly and cumulatively from one generation to another; and the ideas that we accumulate permit us in a manner not found in other species to exploit, with increasing power from generation to generation, the physical environment and to shape our society. We keep inventing not just new physical products and processes but also new ways of organising the institutions within which production is organised.

This process of innovation has been accelerating at an astonishing rate as nations, in pursuit of economic growth, have invested in education, research and development. Figures gathered by UNESCO record that in 2007 there were in the world no fewer than 7.2 million scientists and engineers engaged in research and development.[11] The figure for China, where the number of researchers must have been tiny fifty years ago, was 1.4 million, the same as that for the United States; it had increased by 600 thousand in the previous five years and was accelerating upwards. There is no reason to suppose that the growth in research effort, driven by competition amongst countries and, within countries, by competition between institutions – business firms, government laboratories and academic institutions – has slowed down since 2007 or will slow down. New ideas about how to shape economic life will go on being produced ever faster; new products will be offered to us faster and faster. The need for a dynamic approach in which economists watch for change and assess its implications, good or bad, has never been so great: the value of evolutionary economics in helping us to understand what is happening has never been greater; nor has the irrelevance of the essentially static equilibrium model ever been so obvious.

[11] *World Science Report 2002*, UNESCO.

The Need for a Reformation

There is no gainsaying the need for a reformation in economics. The first step must be to purge the subject of propositions based on unreal assumptions or faulty reasoning. One must be rid of the pervasive proposition that a market economy as a whole and in all its parts is self-equilibrating and must discard the false assumptions about markets and psychology on which it rests. Instead, empirical and theoretical work that is not dependent on false assumptions must be preserved and developed.

Thus purged, the subject may live on as a field of enquiry seeking theoretical explanations for local phenomena rather than a general theory of the whole system. In our present state of knowledge there would be nothing wrong with that. Or a new general theory may be found. In either case the requirements of new theory are that it

1. is formulated by reference to evidence and, as in any true science, is ruthlessly tested by reference to evidence and logical coherence;

2. is exploratory and tentative, not dogmatic: we are seeking to explain phenomena that we do not well understand;

3. is dynamic;

4. is linked to the study of surrounding subjects, feeding them and drawing from them: it must analyse changes in economic life as part of the evolution of society as a whole; and

5. is expounded in plain words, not obscure economic jargon, and has any supporting maths appended, so that those who want to know about the phenomena under consideration are able to understand and criticise what is said.

A possible general approach immediately suggests itself, namely evolutionary theory: we need to study the ways in which human efforts to exploit the scarce resources of nature have evolved and are evolving ever faster; we need to study current developments and history; and we need to break the barriers surrounding cognate subjects so that problems are studied in their totality, not in slices dictated by territorial disciplines; and ethical judgement needs to be reintroduced.

In scope this approach is a return to the unbounded subject studied by Adam Smith, Marshall and others before the era of ethereal mathematical theorising. In substance the approach needs to be eclectic. For the understanding of some problems evolutionary theory imported from other fields may be useful: evolutionary psychology has already been helpful in providing a realistic understanding of economic behaviour in place of the fiction of rationality; and evolutionary economics has been providing a realistic understanding of the dynamics of innovation and industrial growth. In other fields a looser, descriptive, historical approach, enriched by stories, will help understanding.

An approach of interest in an adjacent field is Garry Runciman's evolutionary theory of sociology.[12] He argues that:

1. Society is shaped by the pursuit of power, defined as the ability to influence or dictate the behaviour of other people in one's favour.

2. Power comes in three forms: economic power (which Marx dogmatically said was predominant); persuasive power (from the pulpit to modern media); and coercive power (the threat or use of force).

3. As technology and human ideas evolve, these three types of power change in a manner analogous to the genetic evolution of species: new machines, new weapons, new means of communication and new means of organising society keep changing the way each type of power may be exercised and its strength.

This theory does not mean that there are no exceptional people who are not driven by a greedy pursuit of power. Nor does it mean that there is no free will or anything like that.

What it implies is that you cannot predict how society is going to evolve because new technological ideas and social ideas evolve as unpredictably as new mutations and recombinations of genes in nature. Just as a biologist may be able to explain after the event, but not before, why a new species found a niche and prospered, so we may be able to say after the event why a new species of power was successful in changing a

[12] W.G. Runciman, *A Treatise on Social Theory: Volume II, Substantive Social Theory*, Cambridge, 1989.

society. Moreover it may be possible to make intelligent short-run predictions when you see that a new species of power is emerging.

I find this a wonderfully rational, unmoralistic and coherent approach to understanding society. Under its umbrella, evolutionary economics might be regarded as the study of the pursuit of economic power. But the temptation to squeeze evolutionary economics and evolutionary sociology into one theoretical box should be resisted. In each realm, and in joint studies, evidence is what must guide theory. The pursuit of tidy uniformity of theory too easily distorts one's interpretation of reality.

Within the realm of economics, equilibrium theory and game theory will probably continue to be useful in analysing why particular technical and institutional innovations have been a success and in selecting those which look promising for investment. And mathematics will surely be an important tool – but not a master. It will be essential however never to forget that the economy is evolving rapidly in a manner that is unpredictable - and possibly destructive of our species.

One can see fascinating important subjects to be explored by evolutionary economists freed from the old assumptions. Take three examples:

1. Economic growth and tax incentives: If, as evidence suggests, increases in real income per head beyond a moderate level bring no more than transitory happiness, should rich countries stop pursuing growth? Where many people today have two cars, do we want them to have four, or the equivalent number of some new kind of vehicle, in 20 or 30 years time? If we need to slow down and work less, how is that to be achieved, and what are we to do with our time? Suppose we want people to work less or more, what does the available evidence tell us about the incentive effects of taxation on persons who are far above subsistence level and have complex motives for working? Will higher or lower tax have a significant lasting effect on how much they work?

2. The related problem of pressure on the world's natural resources caused by the exponential increase in their exploitation and by pollution. It may not be possible to add to economists' techniques for making cost-benefit analyses of alternative hypothetical policies, but an evolutionary approach to politico-economic history, which is now a diminished and neglected subject, might help us understand

how decisions in this area have been and might be made, and it might help us to see the problem in perspective. Jared Diamond, a natural scientist, has set us an example in his book *Collapse: how societies choose to fail or survive*.[13]

3. The growth of speculation in financial markets that has absorbed such huge resources, including many of our best young brains. Is this an efficient way to use our resources? What have been its social effects? How far does it really contribute to the national income? And how does it affect that other highly important subject for research, macro-economics?

4. Government policies, national and international, already recognise that innovations may be damaging to individuals or society and screen them before sanctioning their introduction. The strict vetting of pharmaceutical drugs is a conspicuous example. Should not the same vetting be applied to financial innovations, and to established practices that have proved to be of questionable value, for example derivatives? What are the costs of the financial crisis compared with the possible costs of damaging pharmaceutical drugs.

The idea that economists should follow the path of Darwin has two particular attractions. Anyone who has read or dipped into *The Origin of Species* will know how widely and meticulously Darwin gathered and described evidence, and how cautious he was in proposing theory: he declared that he did not know how new species came into being, only that he was convinced that when they did a selective process came into play: he put evidence first, theory last, a salutary example for economists.[14]

Secondly, the idea of the selective process came to Darwin when reading the theory of Malthus, the economist, that the human population would be limited by lack of food: '....it at once struck me', Darwin wrote, 'that under these circumstances favourable variations would tend to be preserved, and unfavourable ones to be destroyed. The result of this would be the formation of new species. Here then I

[13] Jared Diamond, *Collapse: how societies choose to fail or survive,* London, 2005.

[14] Charles Darwin, *On the origin of species by means of natural selection, or The preservation of favoured races in the struggle for life,* London, 1859.

had at last got a theory by which to work.'[15] Thus the two subjects, both of which deal with competition for resources, have common roots.

The view that economics must change is not peculiar to non-mathematicians like me. In 1991 Frank Hahn, a leading mathematical economist, in an article headed 'The Next Hundred Years', predicted that '….theorising of the 'pure' sort will become both less enjoyable and less and less possible', because the pursuit of long chains of reasoning from a small number of fundamental axioms had run its course. Not for his successors 'the pleasures of theorems and proof. Instead the uncertain embrace of history and sociology and biology.'[16] Then in 1997 Robert Solow wrote '...there is a lot to be said in favour of staring at the piece of reality you are studying and asking, just what is going on here? Economists who are enamoured of the physics style seem to bypass that stage, to their disadvantage.'[17]

The compelling reason for a reformation of economics towards realism is that it may help save market economies from disasters: reformation is needed for the salvation of market economies; their destruction may come if there is none. I wonder by what evolutionary path this can come about. A new species of economist will need to come about and gain power by their appeal to realism.

Wider Implications

The adoption of an evolutionary approach might give all those who study society - historians, sociologists and others besides economists, whether they are professors or schoolchildren - a way to think about society that is free from embedded values and lays no claim to predict the future. At present there seems to be a vacuum, notably in the realm of history. Liberal Optimism and Marxism, those two value-loaded doctrines with their wholly unjustifiable promises of heaven on earth, in one case brought about by the pursuit of self-interest cum benign government, in the other by revolutionary violence, are in disrepute. In their place we appear to have grapeshot history in which facts are scattered and any organising principle avoided; in another box, narrow

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[15] Paul H. Barrett and R.B. Freeman (ed), *The Works of Charles Darwin, Vol.10, The Foundations of the Origin of Species*, London 1986, p.xiv.
[16] Frank Hahn, 'The Next Hundred Years' *The Economic Journal*, 101, 1991, pp. 47-50.
[17] Robert M. Solow, 'How did economics get that way and what way did it get?' *Daedalus*, Winter 1997, Vol. 126, p.56.

history in which small issues are studied with an excess of statistical technique and pseudo-scientific language; and thirdly tendentious history in which historians predict the end of history or the end of empires using sweeping generalisations and selected facts. Descriptive economic history, spurned by the mathematical economists, has been almost extinguished. Exceptionally, military history flourishes. This may be partly because we have had plenty of well-documented wars, but it is also, I surmise, because military historians are guided by a clear big retrospective question, who won and why? They are unconsciously asking an evolutionary question.

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June 2009 / revised February 2013

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