Taxis, Taxes & the Ideology of Virtual Economics

SCHOOLS of thought which divide economists reflect ideology rather than science.

In textbooks, economists say they search for scientifically valid truths about how income is created and distributed. They call this "positive economics".

But despite the claim to objectivity, they have failed to develop practical tools to eliminate disturbances to the economy. Business crises are systemic breakdowns that cause widespread unemployment and prevent millions of people from working their way out of poverty.

Despite two centuries of development, economics as a social science is discredited in the eyes of the public. Policy-makers are boxed in by the boom/bust cycles, but they lack that independence of mind that would enable them to challenge the strictures from economic advisers. Although mega-salary economists in Wall Street and the City of London are treated in the media as gurus, governments cannot muster the wisdom to ensure sustainable growth.

So people are resigned to the culture of despair. We now expect the worst to happen; and build our lives around the mentality of siege and failure. In the natural sciences, scholars embark on voyages of discovery. In economics, research fixates on failure, containment, the evil choices of trade-offs. This is not natural. Nor is it the progress that people want. How did it happen?

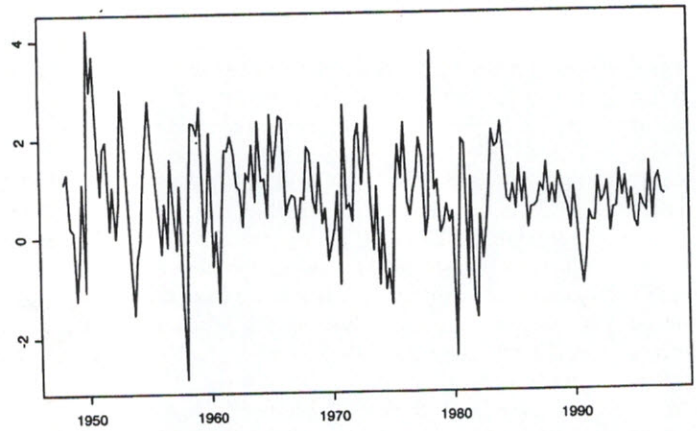
THE CRISIS in economics is regularly celebrated in books with titles like *The Death of Economics*. One insider's account - by Alfred Malabre, Jr., economics editor of *The Wall Street Journal* - provides a wealth of documented evidence that justifies the cautious approach to pronouncements by economists.

One of the leading news journals - *The Economist* - devoted a cover story to what it called The puzzling failure of economics (Aug.23, 1997), which conceded that bad policies based on bad economics "remain too numerous to mention".

Puzzling?

Fashionable schools of thought come and go, bequeathing a trail of ever-deeper mystification over something that ought to be easy to understand: a theoretical account of people's everyday working lives. But instead of offering clarity, theoreticians embed themselves ever deeper into models that bear little relevance to what happens on Main Street. Economics has become so removed from reality that it is a discourse among initiates who have been inducted into the code of the Virtual Economy. As *The Economist* put it: "Economics is hard to teach well. To the uninitiated, its basic principles often seem surprising or odd".

AS A RIGOROUS discipline, economics began in the 18th century with the philosophers of France.



Quarterly growth rate of US real GNP 1948-97

Their feet were firmly planted on the ground.

The Physiocrats knew that how wealth was produced, and how the income was shared, was no mystery. Their genius was in identifying the need for agreement over the role of the public sector. They sketched the rules that constituted the foundations of the holistic economy.

Adam Smith and other Scottish scholars joined the process of honing the concepts into analytical tools that classified the three factors of production - land, labour and capital. And they traced the appropriate policies for both the private and public sectors which, if adopted, would have produced a dynamic economy capable of withstanding external shocks and regaining stability.

The concept of equilibrium was central to the portrait of the economy that they articulated. There was no rational reason why people pursuing justice as well as workplace efficiency could not have adopted the policies that the classical economists identified to ensure a harmonious partnership between the public and private sectors.

It was not to be. The fault was not with economics, but politics. Branding the new discipline as the dismal science was the perverse displacement of responsibility by ideologists who declined to adopt the policies that logically flowed from the formative concepts of economics, particularly in the area of public finance. Resorting to smears against economics was the mark of the bad craftsman: someone who blames his tools rather than his skills. The outcome, in the 20th century, was the regressive deterioration in the relevance of economics to people's everyday lives. The Age of Virtual Economics was upon us.

THE EXPLOSIVE use of mathematics from 1944 did not help. But even the most distinguished practitioners were worried. Some of them warned the public.

Russian-born Wassily Leontief, who died last month, tried to alert the public. He had emigrated to the US where he refined the input-output method of analysing economies, for which he was to be awarded a Nobel prize in 1973. In his presidential address to the American Economic Association (AEA) in 1970 he warned that "the consistently indifferent performance in practical applications is in fact a symptom of a fundamental imbalance in the present state of our discipline". Economics had been detached from its empirical foundations, and was becoming "speculative economic theory".

Much theorising was reminiscent of the pre-scientific reasoning of the medieval schoolmen kind. They were preoccupied with abstruse problems like how many angels could dance on a pin-head.

Leontief reported "an uneasy feeling about the present state of our discipline" which had been growing among his colleagues, who "play the game with professional skill but have serious doubts about its rules". Too many succumbed to the rewards offered by their university employers; segregating themselves from disciplines located in the real world - anthropology, sociology, demography.

The warning was not heeded. The deterioration continued until another mathematician, from the University of California, became president of the AEA. Gerard Debreu was awarded the Nobel prize in 1983 for incorporating new analytical methods into economic theory, and for his reformulation of the theory of general equilibrium. He, too, noted how economists trimmed to accommodate career prospects. Mathematical economics had grown to the point where the work was accessible only to those economists "who have access to the code".

The mystification served the interests of the exclusive sect, but did little to smooth the boom/bust cycles.

Maths turned economists into an intellectual elite. Ideology was allowed to intrude, Debreu conceded. Research by the mathematical economist was not driven by the needs of the real world. "The very choice of the questions to which he tries to find answers is influenced by his mathematical background."

Mathematics, as the medium, had become the message.

Failures were dramatic, such as the demise of a hedge fund in the US - Long-Term Capital Management - which had promoted its services on the backs of Myron Scholes and Robert Merton. They were awarded Nobel prizes in 1997 for their work on the management of risk in the financial markets. They were hired by LTCM, which then went on to lose $4.4 bn (£2.7 bn) last summer. The fund would have disappeared if it had not been rescued by a $3.5 bn bail-out organised by the New York banking system.

When economic theory collides with economic reality, reality wins every time.

ECONOMICS, claimed Prof. Debreu - unlike, say, physics - would never be able to develop a Grand Unified Theory.

On what basis could such a claim be made? Are people really so random in their behaviour, so detached from the harmonious regularities of nature, that it is impossible to unify human behaviour in an inclusive theory?

Paul Ormerod, who authored *The Death of Economics*, says unpredictability is an inherent part of people's behaviour. He has followed up his critique with what he hopes are constructive proposals for advancing his discipline. In *Butterfly Economics*, the former head of the Economic Assessment Unit of *The Economist*, and former Director of Economics at the Henley Centre for Forecasting (a prestigious British think-tank), Ormerod does not pull his punches. Charlatans, he calls many of the pundits who speak on behalf of financial institutions. And the flavour of the month - Real Business Cycle theory - attracts a fatal verdict: its models "completely fail to capture the key characteristics of the post-war business cycle in the United States" (*see graph*).

He does not try to retool economic theory. Instead, he embarks on an excursion into the food-eating habits of ants. Understanding ants is treated as a short-cut to anticipating the "unforeseen adverse consequences" of humans, believes this former professor of economics at the Universities of London and Manchester.

One beneficiary of unpredictability - who prefers excursions into philosophy rather than the biology of ants - is George Soros. His quantum leap into Master of the Universe status - he is known as the man who once broke (well, nearly) the Bank of England - gives him access to the ears of presidents and prime ministers. He has now penned an instant analysis of the crisis of global capitalism, which includes a scathing attack on economists.

According to Soros, economic theory is dangerous because it still relies on the notion of equilibrium. There is no such thing. The problem, he says, is that we are locked into a psychotic state. "The behaviour of people, exactly because it is not governed by reality, is easily influenced by theories." This makes it impossible to use reason to anticipate behaviour.

But why are people dislocated from reality? Our ancestors would not have survived hundreds of thousands of years of evolutionary interaction with the natural environment if they had not developed the senses of reality. Collective unreality is a reversal of biological history. How did it happen? The search for the answer may be found in taxis and taxonomy.

Taxis is the skill of returning displaced parts to their natural place by means of manipulation. A surgeon who undertook this enterprise on a person's body without using the correct names of the limbs he was seeking to manipulate would soon get into trouble. He, and specialists engaged in all the other spheres of natural science, would hesitate to intervene in a working system without first calling....well, a spade a spade.

This identifies a distinguishing mark of economics. Economists tend to be cavalier in the use of their concepts. Taxonomy, the science of classifying phenomena, derives from the Greek word *taxis* - order. In economics, as everyone knows, disorder is the order of the day; and that is reflected in the concepts used by its practitioners, who are inconsistent in their application of what ought to be key words (such as inflation).

Most notably, modern economics has assumed that people exist in a disembodied (virtual) world of landlessness. The three factors of production identified by classical economists have been narrowed to two: labour and capital. That taxonomic sleight-of-hand was bound to yield a world of virtual reality, or what some excited theoreticians call the "weightless economy". How were people immaterialized - detached from earth?

The physiocrats saw that, to liberate

BOX 1

Feet-on-the-ground Economics

WHY have economists distinguished themselves in their work on agriculture?

According to Wassily Leontief: "An exceptional example of a healthy balance between theoretical and empirical analysis and of the readiness of professional economists to cooperate with experts in the neighbouring disciplines is offered by Agricultural Economics as it developed in this country [the USA] over the last fifty years. A unique combination of social and political forces has secured for this area unusually strong organisational and generous financial support. Official agricultural statistics are more complete, reliable, and systematic than those pertaining to any other major sector of our economy.

"Preoccupation with the standard of living of the rural population has led agricultural economists into collaboration with home economists and sociologists, that is, with social scientists of the 'softer' kind....demonstrat[ing] the effectiveness of a systematic combination of theoretical approach with detailed factual analysis".

This curious deviation from the historical trend needs to be explained. One possible explanation which warrants analysis: economists were not free to ignore the role of land in a sector where the resources of nature loomed large. The best statistics on land prices and rents are available in the agricultural sectors of all Western economies; such data is almost non-existent (in a useable form) for the commercial and industrial sectors.

So why this privileged empirical status? Agriculture extracts billions of dollars in subsidies from US taxpayers. Farmers are not dependent on consumers in the markets. Europe's Common Agricultural Policy directs 50% of the EU budget into farming. The average British family pays £1,500 to farmers in tax-financed subsidies. Who benefits? Not farm workers or the owners of capital equipment in agriculture, according to British farmer and Tory MP Sir Richard Body (a former chairman of the House of Commons Select Committee on Agriculture). The subsidies are converted into higher land values.

‘Economic Illiteracy’

LAUCHLIN CURRIE was an early advocate of treating housing as a “leading sector” in the advance of under-developed economies. This was a rational proposal that was vulnerable to one fatal consequence: success incubates a self-destructing mechanism.

Under the property laws and tax regime employed by market economies, accelerated growth in construction encourages speculation in land to the point where growing incomes are channelled into the creation of a real estate bubble, which is foredoomed to implode and shatter the economy.

The negative impact of the land market is excluded from computation by economists, but there is no mystery about the theory. Lauchlin Currie described the problem in a background paper which he prepared for Habitat, the UN Conference on Human Settlements, in 1976. He wrote: “It is a striking example of our economic illiteracy that we have more or less quietly acquiesced in the private appropriation of socially created gains, letting fortunate owners and their heirs levy tribute or claim a share of the national income to which they have contributed nothing”.

The case for capturing “all or a large portion of the pure monopoly gain of rising urban land has been impaired by failure to distinguish between land and capital in general, between land and building, and between the rise reflecting inflation and that traceable to pure scarcity”.

Currie proposed the capture of 75% of the stream of income going to land for reinvestment in public infrastructure to support the private sector’s capacity to produce wealth. This fiscal policy follows logically from pure theory. Currie noted that capturing rental income does not distort the use to which land is put: it is the neutral tool for raising public revenue and for disciplining the land market to serve the interests of everyone. Without this policy, as happened in Bogota, Colombia, urban expansion generates huge increases in land values which “will largely accrue to a relatively few and be a prolific source of large fortunes”.

By treating rent as public revenue the state plays its part in providing incentives to work and a balanced growth in the urban environment, including a reduction in the costs of commuting and the conservation of green fields.

Lauchlin Currie (right) with Misael Pastrana, President of Colombia (1970-74) and father of the present president, Andres Pastrana.

The policy was also necessary on moral grounds. Currie explained: “The rise in land values (and, to a small extent, building) that results from the growth in numbers and income of a community is a reflection of pure scarcity. It arises from the community and should belong to the community. It does not in any way arise from the work or saving of an individual owner and does not provide any incentive to work or save, since the supply of land is fixed.”*

* Lauchlin Currie, “Controlling land use: the key to urbanization”, *Ekistics*, 244, March 1976, pp.137-143.

working people, it was important to correctly define the public sector’s role. In essence, this entailed the removal of taxes on wages and the profits from trade, and collecting revenue for the state from the net income of society - the rent of land. Their Scottish contemporaries, notably Adam Smith and William Ogilvie, concurred.

This crucial insight was largely ignored by governments, which from the 1790s chose to burden labour and capital with taxes. The outcome was predictable. Taxation has the effect of disintegration, causing

- micro-economic failures: people are priced out of work, for example, because employers cannot afford payroll taxes on top of wages; and
- macro-economic failures: government failure to collect rents generated by public investment influences investment in favour of land speculation, which prices entrepreneurs out of business.

This explains why governments could not maintain equilibrium in the 19th century industrial economy: they pursued policies that had the opposite effect! Even so, the theoretical concepts were related to the real world. People were located on land, and they used their labour in conjunction with capital to produce wealth. All policy options remained open.

Then, at the beginning of the 20th century, something remarkable happened: economics was systematically detached from reality.

An explanation has been advanced by a professor of economics from the University of California. Mason Gaffney argues that the neo-classical school took root to neutralise the progressive politicians who were making a serious attempt to capture socially-created rent for the public purse. One technique used by leading economists in the US and Britain was to vaporize the concept of land: it was subsumed into the category of capital, done away with as a special factor with its distinctive internal logic. This closing of people’s minds helped to ensure that publicly-created rent remained in private pockets.

- Gaffney’s thesis explains why governments seeking to restore the economic ‘parts’ to their proper place after a boom/bust persistently fail. Taxis was thwarted by taxes and taxonomy.
- If Gaffney’s thesis is correct, modern economists may have a lot to answer for. Are they prevented from wrapping their subject-matter into a unified theory because of the recalcitrance of unpredictable people? Or because of a wilful failure to conform to the requirements of empirical science?

Consistent with Gaffney’s thesis, we need to note the curious exception to the regressive detachment of economics from reality. According to Nobel laureate Leontief, agricultural economists continued to locate their work in the real world (*see Box 1, p.5*).

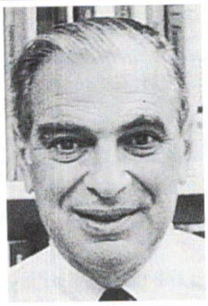
THE NEO-classical school dominated the first half of the 20th century. Helpless governments were perplexed by the Great Depression of the ’30s, but economics was not to blame. Economists could propose policies for rescuing the markets. The fate that befell one of them illuminates the way universities supported by grants from the major rent-appropriators manipulated the social science for private benefit.

Canadian-born Lauchlin Currie (1902-94) argued that, by applying scientifically valid principles, it was possible to fashion tools that would help government to haul the US out of the depression. The price he paid for his independent turn of mind was high. Currie lost favour at Harvard University, where he was teaching, because he proposed an increase in public spending.

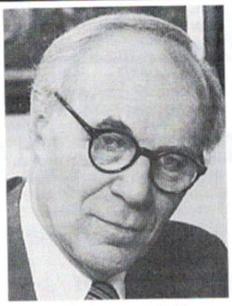
He was to be rescued by his competence as an economist. He moved to Washington, where he was to become the architect of the Federal Reserve Bank as the first true central bank of the US. He was also to become the first professional economic advisor to the White House: he was appointed by Franklin D. Roosevelt in 1939. He played a leading role in the Lend-Lease programme to China during the Second World War, but fell victim to McCarthyism when he was falsely accused of being a Soviet spy.

Currie devoted the last 40 years of his life to helping developing countries. One of his

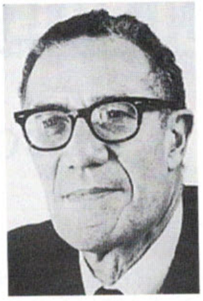
Were these Nobel laureates gagged?



■ Kenneth Arrow



■ Lawrence Klein



■ Robert Solow

RUSSIA'S economists have had a taste of how economics as a social science can fall foul of high politics in the West.

The story started with the publication in Moscow of *Reforms as seen by American and Russian Scientists* (1996). The editor was an elder statesmen of the Academy of Sciences, Prof. Oleg Bogomolov. The book critically examined the early Yeltsin years and signposted some new directions for an experiment that was going painfully wrong.

The book was a hit with the governors of Russia's regions. They decided to foster public debate by launching the book in the Council of the Federation (parliament's upper house). They wanted as their guests the eminent contributors from America, including the winners of Nobel prizes whose expertise could help to formulate new policies.

The professor designated to invite the US authors was Alexandr D. Nekipelov, co-ordinator of the Russian side of the Economic Transition Group. He told *Land & Liberty*: "I contacted the most eminent members of the group, James Tobin, Kenneth Arrow, Robert Solow and Lawrence Klein.

"I explained to them the possibility of the meeting and that they were invited to come to Moscow. They all answered positively. We fixed the approximate date in March or April 1997 and we collected funds. An excellent programme was compiled.

"Then, suddenly, when everything was nearly ready, we began to receive messages from our American counterparts that the situation had changed and they couldn't participate. Some mentioned they had obligations in universities. But then we received information, which I checked out, that when the book was issued in 1996 we published a declaration by all the authors in a newspaper which the President's team was not happy about. Some publications treated this declaration as support for the Communists, though it was not, of course".

Professor Nekipelov was informed that Boris Yeltsin's privatisation supremo, Anatoly Chubais, contacted Lawrence Summers, the US Government's Deputy Treasury Secretary with special responsibility for economic relations with Russia. He is Kenneth Arrow's son-in-law. "Mr. Summers called his father-in-law to say it was not a good thing to participate in this event. The reaction from Kenneth Arrow was strong, that he would participate, but then they were somehow told they should not. So they had to obey, as we understood it. They are not happy to admit this. They said they were called, but they declined to come to Moscow for other reasons," recalled Professor Nekipelov.

He was able to confront Dr. Klein and Dr. Tobin at a conference in Boston in December 1997. "They felt uneasy about what happened and tried to convince me that this was just a coincidence. They didn't deny that they were called and asked not to come, but they tried to convince me that this was not the only reason.

"It is interesting that we had an agreement to pay all their expenses, but they all later found reasons to cancel.

"Tobin had originally said he would like to come if his wife was also invited, because he was not a young man. We resolved this problem. And then he said it was too difficult for him to travel."

The pull-out of the Nobel laureates ruined the launch of the book and damaged the Russian economists' reputation with their sponsors in Moscow.

Chubais was relieved. The US economists did not turn up to lend their authoritative support for the dissenting Russian economists, which would have embarrassed President Yeltsin. The Kremlin team continued to control the terms of the economic debate, which favoured a monetarist strategy. That policy was bankrupting the government, enriching the Mafia and resulted in the debt default in August 1998.

▲ Chubais was the key player during the wild years of asset privatisation. Among those with whom he worked was financier George Soros, who wrote about his association with Chubais in his new book. Soros was part of a consortium bidding to buy a state enterprise. One of Moscow's financial "oligarchs", Boris Berezovsky, felt he had sweetened his way to the purchase of the enterprise at a knock-down price. Soros won. In his anger, Berezovsky threatened to spill the beans about his deals with the Kremlin. This "vicious quarrel damaged Chubais, who had acted as campaign manager for Yeltsin and had received illegal payments from the oligarchs, which were now disclosed", Soros reports.

most important contributions was to identify the net income-increasing impact of government expenditures and revenues, and how to assess the role of balanced budgets in economic development. He originally outlined this theme to the AEA in 1936. The strategy was governed by two golden principles:

1. Government must focus spending programmes on projects that increased people's private incomes.
2. Government must employ methods of raising public revenue which did not decrease people's incomes.

These twin disciplines, properly applied, would liberate the private economy by achieving two results:

- maximising the public contribution to the private creation of wealth, and
- minimising or neutralising the damage inflicted by taxes. The second rule would also prevent the collateral damage caused by the privatisation of rent.

Currie, in other words, wanted to take economics back to its classical roots; but to put the policies into action, he had to go into exile in Colombia (*story: p.6*).

ECONOMICS as conceived by the classical theorists was elegant to the scientist and accessible to laymen. But it suffered from one defect: it challenged the basis of private power - land monopoly - which was intertwined with public power.

By explaining that the market economy worked most efficiently if public finance was drawn from the publicly-created rents of land and natural resources, the classical economists were throwing down the gauntlet to the class that enjoyed the privileges of a leisured life.

This put economics as a social science at odds with the centres of political power. One, or the other, had to admit defeat. Economics lost. Examples of how this defeat manifest themselves in the world every day are not difficult to find: one example is the way in which the US government saw fit to interfer with the advice

Turn to page 9 ☞

month period will not necessarily match that in subsequent periods.

One of the solutions (in NZ) uses price/valuation ratios. There are lots of assumptions required in using such methods which increase the overall error of estimates.[10] Rental equivalent methods are adopted in other countries as a means of assessing value or price changes, but (for example) fluctuations in the percentage of rentals in the total market and the difficulty of defining a market rental as well as the high number of changes in the rental population itself make the system hideously complex, expensive and crude in the extreme.

Real estate agents often produce comment on the state of the market; their market. There are several obvious reasons why, even if they had comprehensive and recent sales data as a basis for their analysis, this could not form a reliable indicator for prediction of the economy in general. You may need to think about this, but for the sake of brevity I will comment no further on this line of investigation.

Investigators should evaluate what useful data may exist in other countries. Too much work carried out has had to make do with data that has had to be massaged to such a degree that the assumptions made along the way become the target for internal and external scepticism.

Statistical agencies should be targeted: ask them to produce data they may otherwise fail to publish, because they are unaware of any market for it. My own experience is that, particularly in larger countries, the costs may sometimes prove quite reasonable, providing the data finds an identifiable and sufficiently wide group of users, or at least well funded ones. The shifting of research expenditure from the mathematical phase to the statistical phase will not only reduce the overall costs, it will make the results comprehensible to the non-mathematician.

'Land values are a good indicator of macro-economic trends'

The graph traces New Zealand land values based on the so-called "gross equalised" figures. Gross, because they include the value of land which was in the past exempt from local and national taxes (eg national parks). Without a similar set of timely data from a country's trading partners may it still be difficult to predict events like the Asian crisis?

Footnotes

1 The simplest explanation consistent with the facts is accepted.
2 *The Dominion* 1 & 2/7/98; Matthew Brockett, *National Business Review*, 3/7/98; Peter V. O'Brien, *Otago Daily Times*, 2/7/98.
3 Bollard had only been in the position for six months.
4 The influence of United Nations statistical agencies may well be vital to achieve this on a wide scale.
5 See *1990 New Zealand Official Yearbook*, pp.409-410.
6 Ibid. The system was not compulsory until 1924.
7 There are technical distinctions between the definitions of "unimproved value" and "LV" defined in NZ legislation. See Rolland O'Regan, *Rating In New Zealand*, Baranduin Press, 2nd edn., 1985, p.30.
8 *Ibid*, pp.28-29.
9 E.g. legacies, exchanges, changes from joint to sole owner, etc.
10 E.g. Chain linking of valuations when zoning changes have occurred.

● THE AUTHOR was a Senior Survey Statistician with Statistics New Zealand, a government agency from which he recently retired.

Virtual Economics

– continued from page 7

that Nobel prize-winning economists could have offered to the Russian government (*story: p.7*).

To bottle up the best advice on public policy that economics could offer, it was necessary to cultivate a language of hostility towards those advocates who persisted in applying the principles with integrity. One victim is the American social reformer Henry George. His *Progress and Poverty* (1879) located the rent thesis in a framework that left its readers with little doubt that economic equilibrium was attainable; that a unified theory of economics was achievable, if economists kept their feet on the ground.

So he was, and is, consistently ridiculed as a theorist. A recent example is to be found in *The Economist*, which reported the fine results achieved by Estonia. After the collapse of the USSR, the Estonians decided to move swiftly to introduce a land tax on agricultural land. They found that they could collect the revenue. The collection rate was reported by *The Economist* (Feb.28, 1998) to be 95.5%!

And *The Economist* also noted other benefits of the land tax - such as counteracting the threat of idle land owned by absentee owners. "The land tax, even at a modest 2% of the site value, encourages them to develop the property or sell it. Government waste of land is penalised too: public-sector owners must also pay the tax."

Here was a fiscal policy that delivered results and ought to have earned plaudits from the pundits. Instead, *The Economist* took the opportunity to personalise its analysis by dragging in the history of land-taxation, in order to poke fun at Henry George as a "cult" figure. By this means does *The Economist*, which is puzzled by the failure of economics, manage to smother its subject by trying to intimidate those who favour rational public finance.

THE FLAW, it appears, is not with economics as a social science, or the diversity of human behaviour. The problem is with the perversity of government policy and the refusal to re-root economic thinking.

Intractable problems that defeat governments stem from laws and institutions that cause poverty, homelessness and social degradation. Governments have the power to alter laws and reshape the institutions. They consistently fail to do so. Determined intervention by an informed public is required.

Social reformers need a theory of government malpractice. One index would be based on public finance, over which governments exercise absolute control. When the rent of land is not claimed in return for the provision of public services, government is derelict in its duty. For by not charging rent, governments allow individuals to pocket a flow of income that they do not create.

The costs of this negligence can be measured. Government invades private incomes. This burdensome taxation costs US citizens more than $1 trillion a year in lost output of goods and services. Britain loses more than £430 billion every year, according to the calculations of two US economists, Nicolaus Tideman and Florenz Plassmann.

Such evidence helps to formulate an empirical theory of government malpractice as an institutionalised process. By indicting government in the course of democratic debate, people are re-engaged with the real-world solutions to problems that have defeated Virtual Economics.

Sources

Body, Richard (1991), "Protectionism, Rent and the Dynamics of Agricultural Degradation", in Richard Noyes (ed), *Now the Synthesis*, London: Shepheard-Walwyn.

Debreu, Gerard, (1991) "The Mathematization of Economic Theory", *Am. Econ. Rev.*(81:I.

Gaffney, Mason, and Fred Harrison (1994), *The Corruption of Economics*, London: Shepheard-Walwyn.

Leontief, Wassily (1971), "Theoretical Assumptions and Nonobserved Facts", *Am. Econ. Rev.* (61).

Malabre, Alfred L., Jr. (1994), *Lost Prophets*, Boston: Harvard Business School Press.

Ormerod, Paul (1994), *The Death of Economics*, London: Faber & Faber.

" (1998), *Butterfly Economics*, London: Faber & Faber.

Soros, George (1998), *The Crisis of Global Capitalism*, London: Little, Brown.

Tideman, N., and F. Plassmann, "Taxed out of Work & Wealth", in F. Harrison (ed.), *The Losses of Nations*, London: Othila Press.

For Lauchlin Currie's innovative financing for the housing sector, see his "Controlling land use: the key to urbanization", *Ekistics* (244), March 1976, pp.137-143; *UPAC: A theory converted into a successful reality* (1986), Bogota. Dr Roger Sandilands of Strathclyde University, one of Currie's postgraduate students and a co-worker in Colombia, has contributed to the literature: *The Life and Political Economy of Lauchlin Currie* (1990), Duke University Press; *Monetary Correction and Housing Finance in Colombia, Brazil and Chile* (1980), Gower; "Rural-Urban Migration and Macro-economic 'Increasing Returns': Illustrations from Latin America", in Ong Jin Hui *et al* (eds.), *Crossing Borders: Transmigration in Asia Pacific* (1995), Prentice Hall.