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# Ecology, Politics and the Nature of Rent

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How Much rent should be paid by people occupying the ozone layer with the byproducts of their aerosols and refrigerators? If a rent had been payable, the greenhouse effect might not be threatening a global crisis. The notion of placing a value on the benefits of employing this stratospheric layer of 'land' — broadly defined by economists to include all of nature's freely-given resources — is only unrealistic because the ozone layer protects life from exposure to dangerous levels of ultra-violet radiation. It is a critical part of the life-protecting ecological system, and therefore priceless. The only sensible action, in this case, is to forgo the rent and forbid anyone from occupying the space with the chlorofluorocarbons (CFCs) which inflict damage on the delicate chemistry of the ozone layer and heighten the risk of skin cancer.

But the principle of properly valuing the resources of nature and requiring users to adopt a responsible attitude towards man's common inheritance by paying for the privilege of using it now confronts the world's statesmen as the most difficult — and critical — political challenge before them. For the failure to make people pay rent for access to, or possession of, natural resources is at the heart of all major environmental problems, and is the cause of some of the most fractious geo-political confrontations.

The problem is most readily perceived at the local level, where we can see how rivers and seas are seriously polluted because users are not compelled to pay the full cost for occupying the water with their wastes. Put another way, the problem arises because the community is not properly compensated for allowing polluters to use its ecological habitat. This anomalous situation is not peculiar to a particular socio-economic system. It manifests itself in societies where resources are equally owned by, and theoretically available to, everyone, as well as in countries where land is privately owned to the exclusion of those who do not have their names on title deeds.

In the command economies of Eastern Europe property rights are vested in the State. In the Soviet Union, the phenomenal waste of natural resources over the six decades following the revolution is the direct result of the application of Marx's labour theory of value, which led the Communist Party to treat land as having no value because it had no cost of production. Rent, therefore, was not charged for its use. Its vast regions of virgin soil were exploited extensively in a process that successfully dissipated a large amount of labour and capital, as well as land. The process originated with Stalin's murderous programme of collectivisation, the destruction of the peasant's relationship with the fields and the over-taxation of rural incomes to finance socialist industrialisation. Mikhail Gorbachev's attempt to turn back the pages of history, by enabling peasants to farm more efficiently on plots held under lease, is aimed at raising productivity and enabling the USSR to feed its citizens. But 'in a country where there has been no proper price on land, working out lease contracts is tricky,' noted *The Economist* on March 11, 1989, six days before the Party's Central Committee approved the adoption of the leasehold system of private farming.

Without an accurate pricing mechanism, either the leasehold system will not work or the new kulaks will gain an advantage, through the privatisation of rental income. This has already happened in China. Some peasants have become disproportionately rich because of the failure to measure the full rental value of land and charge for its possession and use. This makes a mockery of the State's claim that it continues to own the title deeds to the land.

Ironically, the Western market economies are almost as guilty, even though property rights are owned by individuals who are supposed to jealously husband their assets. Here, as we shall see, it is the exercise of monopoly power that distorts the price and allocation of land and encourages the wilful waste.

## The Valuation of Land

A new approach, if it can be devised, has to start with an inventory of all natural resources and an accurate assessment of current market values. But according to some experts it is not possible to single out land for valuation purposes, especially the sites in urban locations. This view is expressed by eminent scholars, among them Donald Denman, the former professor of land economics at the University of Cambridge, and is articulated by James Boubright, a professor in the United States, in *The Valuation of Property, a Treatise on the Appraisal of Property for Different Legal Purposes* (Vol. 1: 485):

> Although a separate valuation of land and of improvements is called for by many of the statutes as well as by practice of assessors, the fictitious nature of this separation is apparent. One simply cannot find the value — by adding the value of the ground devoid of the building, to the value of the building devoid of the ground.

If correct, this suggests a bleak future. It implies a continuation of the profligate use of finite resources, with increasingly ominous implications for both the natural environment and international relations.

The perplexing aspect of the Boubright thesis is that property developers, and their professional advisers, routinely separate the value of land from buildings. The objection that this cannot be realistically executed transforms economics into metaphysics. This is exemplified by Boubright's illustration. Separating the value of land from the value of buildings, he claims, would be to commit the same error as would occur 'were we to seek the value of Raphael's "Sistine Madonna" by adding the separate value of the lower half of the canvas to the separate value of the upper half.'

In the United States, one can regularly photograph families jacking up their homes — the structures — on to the backs of lorries and trundling them away to other locations. They built (or paid someone else to build) those houses, whereas the land was not manufactured and is fixed permanently *in situ*, provided free by nature. The house depreciates in value, as it ages, while land appreciates in value as the community around it expands. Yet some authorities still seriously maintain that the value of a piece of real estate — land, and buildings on it — is a homogeneous whole, in the way that a painting is 'of a piece'.

This represents the rent of land as somehow just beyond the intellectual grasp of mortals, and leaves the impression of unfinished business that must one day be sorted out, perhaps in more reflective times. This attitude might not matter if it did not impinge on the business of public policy formation, but it does. For example:

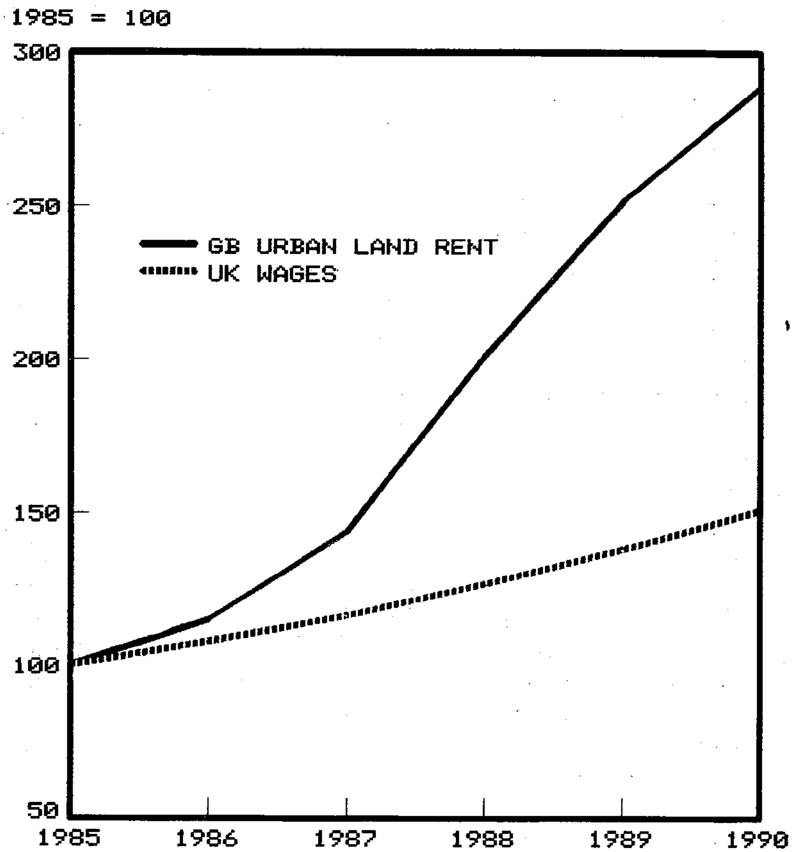
> Because land, unlike financial assets, is not homogeneous, the market value cannot be unambiguously defined, complicating the task of taxing land fairly (OECD 1988: 77).

The nebulous character of this reasoning reflects the low interest in the economics of land. There are rationalised explanations for this neglect. For example, Dr. Bill Robinson (then of the London Business School) explaining why trends in the level of rents did not feature in his analysis of the UK economy in 1983, wrote this: 'I did not include rent in my analysis for the good reason that rents, for the economy as a whole, have not grown especially rapidly over the period. Moreover there are good theoretical reasons for excluding rents: high rents are in general a symptom of success, not a cause of failure'.[1]

Had it been considered worthwhile investigating rent as a share of the UK's income, the marked increase that manifested itself in the second half of the 1980s might have been predicted. The value of urban rental income doubled between 1985 and 1988. The reply to this, however, might be: 'So what?' For on the orthodox view, any acceleration in the rate of growth of rents is no more than a measure of economic prosperity. The rent of land (as we shall see) is a surplus income. Under certain strict assumptions, it is true that an increase in this surplus income reflects the successful expansion of the rate of growth of the economy without implying any dysfunctional side-effects.

But what happens if that trend in rents is in part generated either by imperfections in the land market, or by other motives (such as a disposition to speculate in land)? In such an event, there is a risk that rental income might outpace the growth of incomes received

**Figure 1 : I**
**Growth of urban land rent and income from employment and self-employment 1985-1990**




*Source:* As in Table 1 : II

by employees for their work or by entrepreneurs on their investments. Theoretically, this could generate the possibility of a distortion in consumption and investment, which is what occurred in 1988/9. House prices in Britain rose by well over 30% p.a., while income from employment rose by under 10%. Over the last half of the decade, the value of urban land rents as a percentage of national income nearly doubled. Income from employment and self employment as a percentage of national income remained almost constant.[2] The bifurcation in the income trends (Fig. 1:I) had maleficent implications for homeowners, who had to sacrifice a great deal to finance their mortgages. Earnings failed to keep pace with the rate of increase in the cost of houses (more precisely, the rapid rise in the price of residential land). This caused social and economic stresses such as homelessness, over-crowding and labour immobility, the evidence for which should modify the complacent view that a rapid increase in rents is necessarily an index of success.[3]

## The Unique Factor

For practical purposes the valuation of land presents no problems for the professional: even so, we agree that the essential nature of the rent of land does display a certain elusive quality. The conceptual difficulties, however, dissolve once terms are used in a consistent manner.[4]

Land as a factor of production is unique, which therefore makes rent in some sense special. The stream of income known as economic rent is a surplus, in that it is not part of the costs of producing goods or services. In other words, the rent accruing to land is the difference between the costs of production and the revenue a business receives from customers. To qualify as land rent, this income must exclude the returns to the undepreciated capital — buildings and other man-made improvements — expended on land.

The notion that rent is not a cost of production may seem paradoxical to people who enter rent into their ledgers as a cost that has to be met if they are to remain as tenants on their landlord's premises. These facts of life disguise the nature of rent.

The rental value of land is a measure of the benefits that stem from the use of particular sites. To occupy an acre of land near its customers means that a firm's transport costs are lower than those of its competitor further afield, even though both charge the same prices for similar products. The difference in haulage costs — the savings enjoyed by the occupier of the land near the market — is not retained as higher profits, or paid out in higher wages, but is incorporated by the owner into the price of the site. This element of the land's rental value is a measure of *lower* marketing costs; it expresses the *saving* that accrues to the occupier of the fortuitously-located site.

The transformation of part of a firm's aggregate income into rent is neatly illuminated by the residual method of valuation.

Developers calculate the cost of construction, including the profits they require on the capital they are laying out on the building and other improvements to the site. They then compare these costs with the price they can expect to achieve by selling (or renting out) the building. The costs are subtracted from the revenue and the difference (the surplus) is the amount claimed by the landowner. The acquisition of a site may be the first practical step in the physical construction of a building, but it is only taken by a prudent businessman *after* he has calculated the revenue he can expect to receive, so that he knows how much will be left over once all his costs have been met. Only then can he talk turkey with the landowner.

This economic process is reflected in the application of the law for property tax purposes in the United States. Sec. 502(3) of New York State's Real Property Tax Law requires the assessor first to value the land exclusive of improvements on it, and then arrive at a total assessed value. The assessor is not required to value the building *per se*. 'To arrive at a total value he takes his land value and includes whatever increment the building adds to the land,' according to Horace Z. Kramer, writing as the counsel to the New York State Assembly Standing Committee on Real Property Taxation (*New York Times*, Nov. 15, 1983). Kramer adds, by way of illustrating that the tenets of jurisprudence are consonant with day-to-day realities:

The marketplace proves this method works. Where the land by itself

> becomes so valuable that the building does not add to its value, the building is demolished and a new one constructed which will maximize the value of the land. Where, in blighted areas, the buildings are not productive, the value of the property is in the land only, less the cost of demolition.

Kramer errs in suggesting that a new building 'will maximize the value of the land'. The land has already acquired the value by virtue of its location in relation to the current needs of the community, as expressed by the rent people are willing to pay for it. Erecting the appropriate building on the site to meet those needs is merely the first stage in releasing the full value.

## Markets and Monopoly

Academic economists persist in the view that high rents are a symptom of success (and therefore uninteresting for the purpose of measurement and further research), although they know that this is true only under conditions of perfect competition. What are the specifications of their theory? We are interested in two of them. First, the prospective users of land have to enjoy access to full information, so that they can make rational decisions. Second, individual landowners are assumed to accept the passive role of price takers who lack the power to regulate the market to their advantage.

If these conditions apply, the level of rents is not a problem for the efficient user of land. As prices rise and fall in response to the pressures of a dynamic economy (shifts in demand, as consumer tastes change; technological progress, which cuts costs; product innovation, and so on), the surplus (land rent) responsively diminishes or increases.

The land market, according to the postulates of this theory, is submissive, and cannot interfere with the myriad decisions taken by producers and consumers. It receives the left-overs, after labour and capital have been paid off for doing their job of satisfying the consumers.

Unfortunately, under the present system of tenure and taxation, land is not used and traded in a perfectly competitive market. Property owners are not forced by competition into docility. They enjoy the power to make decisions which can distort competition. They can consequently intervene in the productive process and, to an extent, they can *determine* the level of rents in particular sub-markets. An important feature of this power is the right to withhold land from potential users. This is an easily verified assertion: one only needs to drive through the heart of a city to observe the number of valuable acres that lie vacant despite the existence of unsatisfied demand for their use. By diminishing supply, the landowner alters the relative values of the remaining sites.

It is important to be aware that landowners, in exercising their power, are not directly forcing up the price of goods and services by reducing the supply of available land and driving up the level of rents. Rents are not a cost of production and they therefore do not enter into the price-fixing process.[5] The impact on the economy, however, limits the employment and production prospects. Firms that might have been commercially viable, in that their services could just be marketed at a bare but acceptable profit, find themselves unable to generate sufficient surplus to satisfy the landlord. Because of competition in their market, they cannot unilaterally raise prices to meet the demands of landowners. Since the landlord is not a price-taker, he evicts his tenants, who are relegated to the marginal hinterland. There, they go bust, taking with them the jobs that would otherwise have kept some people fruitfully employed.

This is not the outcome of collective meanness by landowners, but the logic of an economic system that grants to the owners of natural resources the privilege of being able to withdraw from competition. Property rights and the tax system do not require owners to account for their possession of land. On the contrary, as we shall see, the reverse is true: they are often provided with incentives that appear to be wilfully designed to persuade owners *not* to use their land. Whatever the motive, the outcome is unambiguous: the arrogation to some people of a power of monopoly over natural resources, which successfully undermines the efficiency of the market economy.

This identification of land markets with monopoly power is not readily accepted by free market economists such as Frederick

Hayek and Milton Friedman, who observe that property rights in land are diffused among thousands, even millions of people. Their attitude is shaped by the neo-classical definition of monopoly, which entails the collusion of a few people or corporations to rig a market in their favour and at the customer's expense. But this is one example only of a monopoly situation.

Far more important is the concept developed by the classical economists. They focused on the means by which a barrier could be erected to bar entry into a market. Such a barrier is most damagingly associated with non-reproducible natural resources, the engrossment of which

> on the first-come first-served basis ... denies to future generations access to these productive resources on the same terms as the first generation. What [Adam] Smith, J. S. Mill, and [Henry] George clearly meant when they spoke of land rent as a monopoly return was that land owned by one person cannot be reproduced by his competitors at its (zero) original real cost of production (Dwyer 1982: 367).

This concept of a barrier also entails the literal meaning. Landowners can, and do, prevent prospective users from gaining access to their sites, which limits production to the disadvantage of consumers. The 'No Trespassing' warning nailed to the fence is philosophically treated as a sign of the liberty of the individual, but little thought is devoted in the Lockean tradition to the possibility that it may also signify the negation of the life and liberty of the outsider.

In the communist countries, economic necessity is leading to a fundamental review of theories of property rights; in the capitalist countries, the debate will commence once we understand that the ecological costs of economic success are threatening the natural habitat. A starting point for any review of property rights has to be the thorough assembly of all information about the price of land and a new interest in how the market operates.

## The Politicisation of Rent

Politicians have a singularly important influence over the distribution of rental income. That this should be so is not surprising, for politics are at the root of property in land. Original rights of tenure derive from appropriation, not through saving, investment or production. It may therefore be correct for society, through the political process, to influence the manner in which land is used and the way in which the benefits are distributed. But if so, the process ought to be an open one; generally, it isn't. The political influences are almost entirely secretive. This contrasts in a stark way with the manner in which politicians seek to influence the labour and capital markets.

For macro-economic purposes, governments regularly pass laws and implement grand strategies to raise or lower profits of capital and wages of labour; they never declare their *intention* to alter the price of land. Entrepreneurs are encouraged to increase productivity through new capital investment, and inducements are offered ranging from special subsidies to lower taxes. Employees are exhorted to work harder, and governments use a variety of stick-and-carrot inducements to encourage the appropriate responses. Landowners are never lectured. And yet politicians do, as a matter of routine, exercise power that has far-reaching consequences on rent.

Analysis of the impact of governmental decisions on natural resources is of paramount importance, yet it cannot be satisfactorily undertaken because of the paucity of the most basic of information, such as trends in the price of land and the quantities that are being traded at any given time. Astonishingly, there is even a general absence of interest in the dynamics of the land market itself. One consequence is that, shrouded in what for all practical purposes is a mantle of mystery, the land market operates in a way which is not always consistent with the policy goals of government.

There is nothing novel about the statement that Governments routinely redistribute people's incomes. When the tax laws are changed, or special fiscal provisions are written onto the statute books, some citizens gain while others lose. In a democracy, this is acceptable; for by definition, everyone has had a right to express his or her views on the general thrust of policy through the ballot box. So when a government raises taxes from one section of the community, thereby reducing their living standards, for the sake of spending money on, say, health care or education for the poor, the process is at least subject to democratic scrutiny.

By contrast, there is a class of government actions which is concealed from public examination yet entails a massive redistribution of income. As a byproduct of their decisions on other issues, governments redistribute income both within the land market and as between land, labour and capital, while rarely being called to account. These decisions enhance or diminish the financial status of property owners, but unless they involve the clearest acts of 'taking,' as it is called in the United States, the owners have little chance of receiving compensation for the loss of the rental value of their land; conversely, the landowners who gain — the usual case — are rarely required to relinguish their windfall profits.

The covert manner by which some landowners are regaled with riches is rarely subjected to scrutiny, yet the most fundamental consequences flow from the political deeds. For example, until the Chancellor of the Exchequer changed the rules in the 1988 budget, Britain provided attractive tax incentives to people willing to invest in forests. The intention was to encourage the growth of more timber, but part of the financial inducements were capitalised into higher prices for land. It was this opportunity, not the desire to become foresters, which persuaded pop stars and TV talk-show hosts to invest their money in vast tracts of Scottish land. The money was effectively being ploughed into the selective pockets of tax havens within the British Isles.

The same process is at work in agriculture, where farmers are heavily protected from the disciplines of the market place by various price support and trade-obstructing measures. This reduces the living standards of consumers while enhancing the financial benefits absorbed by the land owners. According to Sir Richard Body, a farmer and Conservative Member of Parliament, in the 36-year period following 1946 the taxpayers and consumers were required by successive British governments to plough £40,000m in subsidies of one sort or another into agriculture. In this period, he estimated the increase in land values at £40,000m (Body 1982: 20, 32).

These outcomes were not intended by the government, but the subterranean process by which part of the flow of income is capitalised into higher land values results in the impoverishment of one group and the enrichment of another. This is never the goal of public policy. Rather, governments say they want the nation to be less dependent upon timber imports, or that they wish to provide working farmers with higher living standards. Instead, revenue that was supposed to fulfil these purposes is leaked away into rent for the owners of a resource whose contribution to the process of production is nil. The deleterious impact does not stop there, moreover, for the higher rents serve as a barrier that obstructs newcomers who want to enter the industry. This successfully limits competition, raises prices, probably diminishes efficiency and certainly reduces the benefits that would otherwise accrue to consumers.

The transfer of income is concealed by both the failure to monitor the trends in the value of land, and the absence of a meaningful debate about the way in which the land market operates. The appeal for more information about the market, then, is not a frivolous one. The availability of full information is a precondition for an efficient market; its absence, one of the ways of limiting competition and reaping the benefits of monopoly.

Because the land market can undermine the goals of governments the flow of influence ought to receive attention from political scientists as well as economists. History is full of examples. When the British government decided to abolish the local property tax on agricultural land in 1929, the declared objective was the provision of help for struggling farmers at a time of recession. This purpose was defeated by the landowner, who exacted higher rents from his tenants. The exaction was possible because the increase in the farmers' disposable income was not offset by a rise in the costs of production; so the money from the tax cut was a surplus which could be transformed into rent.

The same thing happened with the tax relief granted to families buying their homes with the aid of mortgages. The intention of public policy is the encouragement of home ownership. Politicians believe that the purchase of a house is more readily within the reach of a family that can offset part of the cost of the mortgage against income tax liabilities. (In Britain, that tax concession costs the Exchequer £5bn per annum.) But the logic of this proposition is dubious. The tax benefit has long been capitalised into higher residential land prices. This means that the value of the tax relief, having helped to raise the price of housing land, has damaged the prospects for newcomers who want to buy homes.

Why do the advocates of new policies fail to take account of the rent effect? The most charitable explanation is that the social and economic costs of distortions are concealed by the deficiency in the data on the land market. This is well illustrated by the way in which city governments in the USA attempt to encourage renewal of their central districts by attracting developers with offers of substantial 'holidays' from their property tax liabilities. Magnificent edifices have been constructed as a result of this inducement, but no account is taken of the wider consequences. The expectations of the owners of neighbouring vacant sites are elevated at least as high as the nearest gleaming skyscraper. They realise that they can capitalise the saving in property taxes into higher prices for their land. The result, not intended by the policy-makers, is that it becomes even more difficult for entrepreneurs and families to remain in the cities, and the displacement of the population to the suburbs continues apace. A similar economic effect was experienced in Britain when the Thatcher government granted exemption from rates, the local property tax, within areas designated as Enterprize Zones: rents rose to neutralise the benefit that was supposed to go to the prospective users of the land. This undermined the main objective of the tax relief, which was to create more jobs in pockets of high unemployment in the cities.

What are the lessons stemming from this discussion? One is that costly mistakes would be avoided if policies could be scrutinized for their effect on the use and value of land. If this information were available, the distortions would be fewer, and the valuation process itself would be simpler.

Under the present system, in which government influence over the market skews the distribution of income, we cannot be sure where the dividing line is between economic rent (the surplus after the costs of labour and capital have been met in a competitive economy), and what might be termed political rent (that portion of the income that would otherwise have gone to entrepreneurs and/or employees if governments did not distort the distribution of income). The market place, which is neutral, today records the income going to land as 'rent'; but we can see that a free and efficient market in land would chronicle a somewhat different value, probably to the advantage of wages and profits.

Another lesson has major implications for the general belief that governments help people and firms by giving them money or special dispensations. We have seen how the benefits of special tax treatment are hijacked by the owners of land, with undesirable consequences. By taking into account the theory of rent, we realise that many more goals would be achieved if a means were found for blocking the propensity of landowners to sidetrack the taxpayers' money which was aimed at helping others. A satisfactory solution would have the effect of reducing the level of rents, or slowing up their rate of increase.

## International Trade

The case for assembling an accurate inventory of the stock and value of a nation's natural resources is not limited to domestic considerations or even purely economic ones. This study does emphasise arguments built around the need to optimise the returns from the ownership and use of real estate.[6] But there are wider sociological and political reasons for monitoring the trends in the land market which transgress the boundaries of sovereign nations. The price of land in one country has a fundamental impact on the livelihoods of people on the other side of the world, and can even affect international relations. This hypothesis is illuminated by the case of Japan.

In 1988, the value of Japanese land was worth more than the land in the USA, Canada and France combined (Table 1:I). Population density does not provide a complete explanation, for central Tokyo is less densely populated than Manhattan or Paris. Given the paucity of data on rents and the land markets of North America and of Europe (with the exception of Denmark: see Chapter 11), one could be forgiven for imagining that this difference in values did not matter; that a close scrutiny of rental trends in Japan would yield little of significance to the factory workers of Birmingham, Alabama, or Birmingham, England, compared with, say, the relative costs of labour which are the subject of much rumination in orthodox analyses of the balance of foreign trade. Our proposition is that the price of land is crucial. We can consider this by

**Table 1 : I**
**Real estate in four countries**

| | *Japan* | *United States* | *France*[1] | *Canada* |
|---|---|---|---|---|
| Area ($km^2$) | 377,800 | 9,363,500 | 549,000 | 9,976,000 |
| Density (person/$km^2$) | 324.7 | 25.5 | 100.8 | 3.0 |
| Value of land[2] | 4,540.0 | 2,950.0 | 172.1 | 256.2 |
| (per cent GDP) | 317.5 | 74.7 | 29.4[3] | 70.1 |
| (per cent wealth) | 54.9 | 21.0 | 7.6[3] | 19.9 |
| Value of housing | | | | |
| (per cent GDP) | 49.7 | 88.4 | 153.9[3] | 64.0 |
| (per cent wealth) | 8.6 | 24.9 | 39.8[3] | 18.2 |
| Value of non-residential structures | | | | |
| (per cent GDP) | 48.9 | 50.0 | 92.8[3] | 140.0 |
| (per cent wealth) | 8.5 | 14.1 | 24 [3] | 39.8 |

1 1983.
2 Dollar billions at purchasing power parity exchange rates in 1985 (which value a dollar at Y 222, FF 7.27 and C$ 1.22).
3 The value of structures includes the value of underlying land.

*Source:* OECD 1988 : 75, Table 24, and references therein.

examining the housing sector and tracing the impact of the cost of the roof over the heads of a family living in Chiyodaku to the lifestyles of a family on Long Island or the Isle of Dogs in London's East End.

In Japan, the exceptionally high price of land is directly responsible for the extremely poor quality of housing. Accommodation compares very unfavourably with standards achieved in other market economies. Should we care about the price of urban land in Minatoku or Setagayaku, and the way in which the very low property tax leads to the under-utilisation of urban land? This issue has been considered by the Organisation for Economic Co-operation and Development (OECD), whose economists concluded that a higher tax on land values was the appropriate remedy.

The international implications may . . . be significant. Lower land prices

> would reduce the size of the down-payment needed to acquire a house, and this might reduce savings and encourage greater investment in housing. By thus affecting domestic saving-investment balances, this change would tend to reduce the current external (trade) surplus (OECD 1988: 78)

In other words, the price of land is a severe constraint on the lifestyles of the average Japanese family. It shapes the economic behaviour of men and women who squeeze on to the bullet trains every day to endure the long commuting trip to the Sanyo or Nissan factories. It forces families to save more than they would otherwise wish to, if they want to buy their houses one day. This produces very high rates of capital investment and comparatively low domestic demand, which compels Japanese manufacturers to seek their markets in other countries.

All of this translates into a significant impact on the consumption habits and employment prospects of citizens in the countries to which Japan exports her products. It has been known to squeeze out firms in North America and Europe which would otherwise be producing goods for their local consumers, and it creates political friction and the demand for limits to free trade.

The knock-on effects of the land market, then, are evidently fundamental. Yet the Secretaries of State who periodically convene to try and solve the economic problems generated by unbalanced international trade *never* discuss the price of land. The prices of borrowed money and of hired labour are scrutinized in minuscule detail. The land market, to judge by the silence, might just as well not exist.

## Some Current Issues

A finer appreciation of the nature and value of rent as a stream of income emerges if we explore some contemporary problems and the way in which they might be resolved.

*The efficient use of resources.* Despite two centuries of scientific and technological progress, and the perfection of the systems of mass production, millions of people suffer from inadequate incomes and homelessness. Many of the problems stem not from the fact that natural resources are finite, but from their wasteful use. That waste arises not through over-exploitation — the focus of anger of the political 'greens' — but through under-employment. The scale of that waste is disguised by the failure both to measure the value of land and to understand the allocative processes. A particularly poignant example will serve as an illustration.

The rich industrial nations throw away fortunes because they allow those who control land to misallocate valuable sites. The rot begins in the central city areas. Instead of using urban land in an optimum way, some owners choose to hoard their sites and allow them to stand vacant, or they limit the sites to some temporary under-use such as car lots or seedy porn shops. The motive of the owner is rational: by not placing the site at the disposal of potential users today, larger capital gains will be made tomorrow. The owner cannot be blamed for acting in his best interests; the responsibility for permitting this state of affairs rests with the community.

As a result of this speculative behaviour, people are displaced to the urban periphery or deep into the countryside. What happens? *Per capita* incomes are reduced, as some people are compelled to live and work on land that is not so well endowed as the tracts from which they, or their parents, were displaced. The cost to the population does not stop there, however, for now governments are obliged to increase the tax burden to finance the extra roads, sewers, hospitals and other amenities that the new, far-flung settlements require to make life tolerable. As new schools and community centres on the social periphery are erected, at great capital cost, local governments board up schools and community centres in the hearts of their cities for want of people to use them!

Geographers and demographers study this pattern of displacement. The process could be equally well monitored by economists if they had at their disposal maps which tracked the changes in land values. It would then be possible to compute the value of the capital that was being wasted, which would open up the prospect of an informed debate. The alternative ways of spending these resources could be explored, with the aim of enhancing the quality of life based on a more vibrant pattern of land use and population distribution. For the present, we have to rely on the informed view of one of the leading land economists, Professor Mason Gaffney of the University of California (Riverside):

> The high marginal cost of adding to spreading cities, and the low true value of the additions, are concealed, in our culture, by an elaborate and pervasive system of subsidies and cross-subsidies built into our institutions, and political power structures, which act to drain the old centres to feed the fringes. In a systemwide accounting we find the true social cost of urban sprawl as we know it today to exceed the gains at the margins. We are not so much adding land to cities as wasting capital (Gaffney 1986 : 15).

*The Tax Burden* The call for a reduction in the taxes that fall on people who produce the wealth of the nation was favourably received by politicians in the 1980s. The demand for lower tax rates, however, was not associated with an appreciation of how governments could reduce spending obligations to avoid running up a massive Reagan-style budgetary deficit.[7] The net result was that there was no reduction in revenue requirements; the same amount of money had to be raised from somewhere, and the extra burden generally fell on people receiving low incomes.

Real estate is very lightly taxed and could generate a greater proportion of public revenue. How much could be raised by a tax on property? And should that tax fall on the profits of capital (the buildings on the land) or should it be directed exclusively at the rent of land? Some answers are suggested by the levy of Value Added Tax on non-domestic construction in Britain as from April 1989.

This tax challenges the government's strategy of encouraging renewal of the fabric of the inner cities. A tax on capital improvements raises the cost of production and occupation and undermines the aspiration of an urban renaissance. An inevitable consequence is that fewer jobs will be provided in the pockets of high unemployment, and the vicious circle of population displacement will continue at an accelerated rate.

What would happen if the revenue was raised exclusively from the rental value of land? The answer depends on when and how the tax is levied. In the case of the Value Added Tax, it is payable at the point when the owner surrenders his interest in the land. This has an important economic consequence. The selling price of land is correspondingly reduced, for the net income that prospective owners can now expect is reduced. This, however, provides owners with an incentive to postpone the sale of their land. This version of a tax on land, then, is double-edged. A lower price is good, in that it opens up fresh opportunities for prospective users. But because this is not in the landowner's interest, he is likely to withhold his sites from use as long as he can. The holding costs associated with a vacant site are zero in countries such as Britain, which do not impose a property tax on land that is not being used, or insignificant, as in the United States, where the tax rate is set at a very low level or the assessed values are seriously out of date. And the rental income that is foregone today is more than recouped through the sale — at much higher prices — tomorrow.

VAT on land, then, repeats the errors that were made by successive Labour governments in Britain. For philosophical reasons they wanted to capture part of the community-created land value, but the taxes and levies which they selected were poorly structured and were ultimately abolished.

The nature of rent is such, however, that an efficient land tax can be constructed that would achieve the desired objectives. It would have to be levied at a uniform rate and fall on the annual rental value of land. Such a tax is the most neutral (and therefore the most efficient) of all fiscal instruments. This is not a controversial claim. Today's economists corroborate the findings of the classical economists to the effect that the tax on economic rent does not induce distortions or generate any loss in welfare. It is, in the words of Milton Friedman, 'the least bad tax' of the lot (Harrison 1983: 299). The tax cannot be shifted forward on to prices (Samuelson and Nordhaus 1985: 402), which means that the economy is not placed at a competitive disadvantage in international trade, as it is by other taxes. And it is perfectly neutral with respect to the allocation of resources (Lipsey 1979: 370), which means that it enables the market to operate efficiently.

Why, then, has it not been adopted by governments which are concerned to free people to maximise their incomes? The full answer has to be sought in the history of the struggle over property rights and the evolution of the democratic process (Douglas 1976). Even without these considerations, however, it is not surprising that politicians are reluctant to enter into an exploration of a policy without first knowing how much the tax could raise: hence the need for a valuation of natural resources.

*The Tax Base* In reforming the structure of taxation, governments have to take account of the buoyancy of the tax base. Natural resources represent a vast source of as yet untapped revenue. The radio spectrum is an example of a source of exploitable revenue, the full value of which has yet to be measured.[8]

Resource rents provide an ever-expanding base for taxation because they grow effortlessly in step with every improvement in the living and working conditions of a community. This underlying process is disguised because governments tend to make decisions about their spending programmes without analysing the full impact on rents and without attempting to directly capture even a part of that revenue for the public purse. One result is that less efficient taxes are preserved, which limits enterprise. Additionally, the decision-making process on public investment projects may be distorted, which can lead to missed opportunities. A project that is otherwise socially and economically necessary may be rejected because of the apparent, rather than the actual, balance of costs and benefits. Yet far from being financially unsound, the project may enhance the value of neighbouring land to the point where, coupled with user fees, the increased rental revenue could be sufficient to underwrite the cost of the investment. The controversy over the financing of the railway track connecting London with the Channel tunnel on the Kent coast is instructive.

On March 8, 1989, British Rail announced that it would run one-third of the 68-mile track through tunnels, adding another £500m to the cost. The decision was not based on the rational assessment that the investment would meet the 7% profit criterion set by the government, but as a result of public outcry against the blight on the value of some residential properties along the route and the threat to the rural environment. The initial reaction from City financiers (reported in *The Financial Times* on March 10, 1989) was that preserving the environment for the residents of Kent seriously weakened the commercial viability of the project. The government did not disabuse the financiers; it merely warned that the money would not come from the Exchequer. The Prime Minister told the

House of Commons on March 9 that it was 'government policy that users of the new line should pay the full cost, rather than the generality of taxpayers,' since they were the ones who would enjoy the benefit of the railway.

In fact, others were also going to reap some of the economic benefits from the presence of a high-speed link between the capital and Kent. These benefits were precisely measured by the increase in the value of land. Residential land in the commuter areas around the Medway towns and the coastline between Dover and Folkestone rose in anticipation of the improved transport link with central London (indeed, the benefits extended right into France: property values along the French coast rose in 1988 because these attractive rural areas were now going to be within daily commuting distance of the City of London). The benefits were also capitalised into the rapid rise in commercial, industrial and recreational land around Ashford, the town designated to operate as a link on the new Chunnel line.[9]

From a social cost-benefit analysis point of view, there may be no tension between the financial and environmental goals associated with the selected railway route and the construction plans. To test this, however, analysts would have to take into account the upward movement in land values as well as the decrease in prices of some real estate near the track. Nor need the financing considerations have been perceived as a problem. For if the owners of land whose assets increased in value were required to contribute towards the cost of the undertaking which bestowed its benefits on them, the financial outlook for the project would have been transformed. The cost burden could have been spread more equitably among all the beneficiaries of this improvement in the system of mass transportation.

*The Privatisation Programme* A feature of the post-Keynesian era is the desire to reduce the scale of public sector involvement in the wealth-creating process. Governments, it is contended, cannot better the performance of the individual in a market economy that is free and efficient. One way to alter the balance in favour of private enterprise, according to the advocates of the supply-side theory, is by selling publicly-owned real estate. This runs down the level of public involvement in economic activity. Margaret Thatcher led the way with this strategy, which in the late 1980s raked in £5bn a year. Her success was much admired and emulated by President Ronald Reagan and endorsed by the Bush Administration.

The efficacy of this strategy from the standpoints of either economics or ethics is not a subject to which we shall address ourselves here. The point we wish to highlight is that the public purse was deprived of many millions of pounds because of the valuation procedures employed in the privatisation of real estate. Critics were able to point out that land sold to the private sector was then resold for many more times the price which the public coffers had received, thereby apparently depriving the taxpayer of a great deal of revenue that might have been used to finance the health service. In fact, the government faced dilemmas which could not be properly resolved without having at its disposal the land value tax.

The use to which land can be put is constantly changing: recycling it is the one countervailing force against the fact that its supply, in aggregate physical terms, is immutably fixed by nature. When real estate is sold, it is not always possible to anticipate alternative higher-value uses to which it could be put: the needs of the community sometimes shift at a very rapid rate. At some stage, however, the seller has to place a price on the land which reflects the current market realities, and strike a deal with a buyer.

But does this mean that the government has to write off the large increases which might accrue to the new owner once, say, new housing needs of the community are expressed in the rezoning of industrial land for residential purposes? Not if the government is taxing the rental value of land. As soon as values increase, because of changes in user demand and planning permission, the Exchequer immediately recovers a part of that enhanced value. So while the direction of future changes in values cannot be anticipated, in perpetuity, for the purpose of agreeing on a selling price, the increase (or decrease) in land values can be accommodated into perpetuity by the land value tax.

Had this fiscal policy been at the disposal of the Thatcher government, some serious political embarrassments — and fiscal losses — would have been avoided. Take, as an example, the decision to privatise the 10 water boards. The prospect of the transfer of their 500,000 acres to private investors caused considerable political opposition to the government's plan. The Thames authority, in particular, owned vast tracts of land in the London area which, in a drained state, would yield a fortune in rental revenue. But the valuation of the assets, at the time of disposal, cannot take into account the value that would accrue on the hypothetical possibility that the choice sites would one day receive planning permission for a more valuable use. Valuation is based on current opportunities available to prospective users.

The suspicion persisted, however, that in private hands, some of the land would be drained and developed for commercial and residential use. We can now see that this added value need not be lost to the community if the increase in rental values produced additional revenue for the Exchequer through the tax on rental income.[10]

## The Future of Mankind

The lessons derived from the British case study (Part 2) can be generalised in global terms, and indeed the justification for a programme of further research can be mostly readily discerned from the stark ecological implications of *not* gathering more information about land. Valuation exercises will have to be conducted for every country in the world if the appropriate policies for husbanding the resources of nature are to be framed. Encouragingly, the world's statesmen appear to be unanimous in promising that they will confront the ecological issues during the 1990s. The prospects for defining sound remedies are not good, however, for there is an insufficient awareness of the origins of the crises.

Over 40 years ago David Bidney (1947:571-2) warned that economics, among the other social sciences, 'may reach a stage of incoherency which renders [it] unsuitable as a guide to consistent policy and conduct,' leading to a cultural crisis which he defined as 'the direct result of some disfunction inherent in the very form and dynamics of a given form of culture' (1946:537). On the evidence before us today, it seems that this stage has now been reached. The creation of the 'hole' in the ozone layer, the destruction of the Amazon basin, the deforestation on the slopes of the Himalayas which regularly floods the Indian sub-continent and kills people by the thousand, are just a few of the dramatic cases of systemic behaviour that is inconsistent with the preservation of man's ecological niche. The conceptual framework employed by economists, and on which politicians rely, fails convincingly to identify the roots of the problems.

Environmental and social crises, which are inter-related, are not inevitable. The responsibility for them rests not so much with economics, as a scientific discipline, as with the use to which it is put (or not put) by its practitioners. The steadfast refusal to plumb the depths of the land market is evidence of this, yet there are no remedies for the ecocrises that do not include a heightened awareness of the value of economic rent and the processes of the land market. The world does not have the time for prevarication or the trial and error approach — of learning lessons the hard way. An example may concentrate our minds on the relevant issues.

The Bush Administration's initiative on the Third World foreign debt, which in 1989 topped $1.3 trillion, stemmed in part from concern about the political impact of the greenhouse effect. Changes in world temperature by up to five degrees centigrade in the next 50 years are predicted to shift the balance of economic power between the Have and Have-not nations, and between the capitalist and socialist blocs. Political stability is essential during this period of ecological uncertainty. According to senior US officials in Washington the situation in Latin America is grave enough to warrant writing off part of their foreign debt. But who would benefit? The unemployed inhabitants of the *favelas* of Venezuela? Over 300 of them died in riots while protesting against the economic 'reforms' that were deemed necessary to fund the $38 bn debt. Would debt 'forgiveness' help the landless peasants of Mexico (debt: $108 bn in 1987) who, in desperation, have resorted to squatting on other people's farms in the hope of making a living?

Cancelling part of the debt amounts to the infusion of billions of dollars into these less developed countries (LDCs) which, under the existing tenure and tax regimes, would benefit the price of land rather than provide work for the landless. (A similar economic effect was produced in countries such as Colombia by the inflow of billions of dollars from the narcotics trade.) It would reinforce the distribution of income and asset values in favour of landowners, and would not encourage LDC governments to restructure their economies in favour of efficient markets. The implications of the rent effect ought to be weighed in the balance when we search for solutions, for what might be intended as an altruistic rescue operation by the Western banking system could serve to aggravate the structural defects in the economies of the LDCs. This becomes clear as we identify the links between economics, politics and ecology.

The major dynamic behind the over-exploitation of parts of the environment is the process by which hundreds of millions of people are displaced onto marginal land by the tax-and-tenure systems. In desperation they over-work resources that ought to be carefully nurtured. For every careless corporation plundering the resources of the Third World for a quick profit, before moving on to fresh opportunities, there is a legion of penniless peasants whose time horizons have been truncated by the need to search for the next meal. They are the ones who, like locusts, are forced to scorch the earth for sustenance, the inter-generational imperatives of their cultural heritage long ago destroyed by the intrusions from without.

Now, what are the consequences of raising the attractions of land as an investment medium by writing off part of the foreign debt? The West would reward the motives that played a large part in the under-use of those tracts that ought to be put to full use, the best acres in and near the towns from which the highest incomes could be generated, those very acres from which the landless have been expelled or from which they are denied access.

Being forced to repay the debt, on the other hand, need not be an economically painful process for those LDCs that neutralized the rent effect. If the pricing mechanism was made to work properly, the debt repayments flowing out of the country would be matched by an implosion in the land market: the burden would work its way through the system and ultimately fall on the *rentiers*. Instead of there being a deleterious impact on the capacity to produce wealth or raise living standards, the reduction of rental levels would lead to full employment and a rise in wages as the resources available to the economy were put to efficient use.

There would be a political price. Such a strategy would provoke hostility from the elites who control the LDCs. They are already on record as warning that the West should not interfere with their sovereign rights, which includes the right to determine the manner in which they exploit their natural resources. The sovereignty argument does not address some important questions that are fundamental to global survival. For example, who owns the oxygen produced by the Brazilian rainforests? Earth's ecological system works as a symbiotic whole: nature does not recognise territorial boundaries.

Diplomacy of the highest order will be necessary if these politically sensitive issues are to be properly debated, but it has to be admitted that the quality of analysis and advice offered by Western governments and scientists to LDCs does not invite confidence. The jet-set consultants as a class are perceived as not particularly well tuned into an appreciation of the nature of the problems that underlie the spill-over onto marginal lands. The manner in which Brazil (debt: $124 bn. in 1987) is censured for building the trans-Amazon highway is a case in point. What is the purpose of Western condemnation if no account is taken of the reasons why landless people from the fertile, under-used areas of the southern provinces migrate to the relatively inhospitable Amazon basin in search of a livelihood? Without such an appreciation the 'strings' attached to such help as is proffered usually only serve to intensify, rather than mitigate, the economic pain.

But there is no mystery as to the origins of the problems. A World Bank economist, Hans Binswanger, has already exposed the political character of the Brazilian ecological crisis. Fiscal and monetary policies encourage the extensive acquisition and hoarding of land, which triggers a leapfrogging chain of events. Businessmen buy farmland to reap the tax benefits, which then encourages the farmers to proceed to the Amazon where they stake their claim to tracts of land to qualify for favourable tax benefits! The owners of land in Brazil, then, both inside and outside the Amazon, are not so much farming the land as farming the Brazilian taxpayer. The tragic result is that fertile land in the south is under-used while fragile land in the Amazon basin is over-exploited.

One of the anomalies identified by Binswanger (1988) is the senseless structure of the tax on land. This is levied on unimproved land but is reduced by up to 90% on land used for crops or pasture. Forests are classified as unimproved land and therefore taxed at the full rate, which induces settlers to chop down the trees to reduce their tax liability. None of this would occur if the tax was an *ad valorem* one on the current realisable market value and was levied irrespective of how the land was actually used.

The need for a balanced solution to the Brazilian land market is emphasised by the Association of Researchers of the National Institute of Amazon Research (Inpa), which — as part of the strategy for saving the rainforests — advocates agrarian reform and an end to land speculation (reported by Louise Byrne in *The Observer*, London, March 12, 1989). The removal of damaging fiscal incentives and the implementation of a properly-constructed tax on the market value of land would lead to the optimum utilisation of the best farmland and the preservation of the ecologically vital (but economically poor — in terms of modern farming methods) lands of the Amazon. These concrete measures would stem the flow of people northwards. Wages would rise and the demands on the public purse would diminish, which in turn would enable the government to operate a prudent monetary policy. The temptation to inflate the currency, which is a favourite trick to disguise the structural imperfections and tensions in the economy, would also diminish. If the value of money is stabilized, another benefit to resource conservation accrues: the propensity to buy and hoard land as the best hedge against inflation is eliminated.[11]

Political controversy is unavoidably associated with any radical strategy involving questions of property rights and taxation policies. Creditor nations prefer to avoid such delicate issues, which go to the heart of every power structure. But if effective remedial action is to be instituted, they will have to be addressed. Only then will it be possible to define sustainable alternatives to the social institutions and economic processes that are encouraging man to debase mother Earth.

## NOTES

1 Letter from Bill Robinson dated Nov. 7, 1983, to Henry Law, referring to Bill Robinson and Geoffrey Dicks, 'Employment and Business Costs', *Economic Outlook* (October 1983 : 18-25).

2 We assume a 9% rise in earnings in 1989 and 1990. This is a worst-case position, for the government, but a best case assumption from the viewpoint of people financing mortgages. The rapid escalation of wages and salaries in the mid-1970s saved many homeowners from defaulting on their mortgage commitments; the land speculation of 1970-73 stretched household budgets to breaking point, and the same thing happened between 1986-89.

**Table 1 : II**
**Income as percentage of UK National Income**

| | *Urban rents (GB)*[1] | *Income from employment and self-employment (UK)*[2] |
|---|---|---|
| 1985 | 13.6 | 83.9 |
| 1986 | 14.8 | 85.1 |
| 1987 | 16.8 | 83.8 |
| 1988 | 21.2 | 82.3 |
| 1989 | 24.5 | 83.0 |
| 1990 | 26.5 | 85.0 |

1 Disaggregated from Table 2 : II.
2 *UK National Accounts*, London: HMSO, 1988, p.13, Table 1.3. Our estimates for 1988-1990.

NOTE: The national income as calculated in the UK accounts includes rental income received by home-owners, which is an imputed value, but understates the rental value of land because

(i) it excludes the rental income that ought to be imputed to land in other categories, in both the public and private sectors, which are not yielding a cash income; and
(ii) the valuation measures current use values, which in many cases are lower than if all sites were efficiently employed (as expressed by the needs of users in the market) within the guidelines set by the planning system.

This explains why the two columns in the table may add up to more than 100%, even excluding profits (not all of which would be included as profits in a properly constructed total of national income, for the official statistics misleadingly incorporate into this category land rent received from owner-occupied trading property).

Our estimates in Col. 1 only cover revenue that could be realised in the marketplace. They therefore exclude, for example, 115,000 hectares of urban land deemed to be undevelopable (see Ch. 8 and footnote to Appendix 1). This land is excluded from the data on urban area that was used as the basis for our calculations of total land values (Table 4 : VII).

3 The boom in the UK housing market that originated in the South-East in 1985 caused the escalation in the cost of mortgages which turned into a matter of death on December 12, 1988. During the two preceding months, British Rail electrician Brian Hemingway was obliged to work every weekend, and extra hours of overtime throughout the week, to finance his £250-a-month mortgage. He accepted responsibility for faulty workmanship in the signalling system that led to the crash of a train bound for Waterloo in which 35 passengers died.

4 Economists, despite their proclaimed dedication to positivism, have failed to employ some of their key terms in a scientifically consistent way. 'Rent' is the most abused. A recent example is by Nobel Laureate James M. Buchanan, who uses the term 'rent seekers' to classify those people who seek to manipulate the political process to their pecuniary advantage. See his 'Post-Reagan Political Economy', in *Reaganomics and After* (London: IEA, 1989, pp. 2 and 10). Americans have a perfectly adequate term for the activity of manipulating money out of the public purse: they call it the politics of the pig trough. There seems no good analytical or taxonomic reason why rent, given its classical association with land, should be diluted in this manner. For a systematic analysis of the history of the misuse of the concept, sometimes under the guise of evolving economic theory, see Gaffney (1982).

5 Soviet economists, who now have to reacquaint themselves with the theory of markets and the pricing mechanism, have yet to grasp this point. Gorbachev's principal economic adviser, Abel Aganbegyan, thinks that 'for historical reasons the prices for natural resources and agricultural products have been depressed, since these did not include rents ... (Aganbegyan 1988 : 133). The price of an item of food does *not* include an element of rent, payable for the use of land. This was clearly articulated by the classical economists, but it still needs to be reaffirmed.

6 Advocates of free market economics usually restrict their censures to governments which fail to uphold the appropriate standards of stewardship towards assets in the public domain. Surprisingly, however, even private owners display a cavalier attitude towards their real estate. Many companies in Britain have only the 'sketchiest notion of what they owned or occupied,' declared David Yorke, President of the Royal Institution of

Chartered Surveyors, in a speech to a CBI conference in London on January 24, 1989. But there is an expectation of improvement. 'The major change we are now seeing is the growing acceptance of the need for a property strategy and of the fact that this cannot begin without a clear, constantly updated, inventory of property holdings.'

7 For the United States, this dilemma was documented by Stockman (1987). In Britain, the problem was solved by a programme of public sector disinvestment. This contributed to a £14 bn budget surplus in 1989 but left many services (notably, the roads and mass transit systems) seriously under-financed. One economist concluded: 'If Britain were spending as high a proportion of GDP on public-sector investment today as the Heath and Wilson governments our £14 billion budget surplus would be wiped out. The extent of the government's neglect would be revealed if an annual statement of the worth of the public sector's assets and liabilities had to be produced' (Brian Reading, 'Budget ignores value of our public assets', *The Sunday Times*, March 12, 1989).

8 The Thatcher government proposal to market the airwaves over Britain by auctioning commercial TV franchises was not popularly received by existing franchise holders, the 16 commercial TV companies whose profits were estimated to have been £265m (1988). They argued that competitive tendering — more precisely, bidding a rent — for the privilege of using the airwaves would result in a deterioration in the quality of programmes. They claimed that what they regarded as the comparatively poorer quality of broadcasting in the USA was the fate that would befall British viewers. This is a curious contention, because American TV companies do not pay the full economic rent for the privilege of using a scarce resource.

Two British companies, Thames and LWT, explored a dodge to see if they could stay in business without paying the UK government a full market rent. Between them they paid £43m in 1988 for the licences to broadcast in the London area. Renting satellite time and beaming their programmes from outer space would cost them £2m (*The Guardian*, March 18, 1989). This ruse reveals the need for the world community to agree upon a united approach to renting outer space to commercial users in the same way that the Law of the Sea has stimulated a debate, through the United Nations, about the need to charge a rent for the use of the oceans. The rental revenue could be expended on globally useful projects.

9 The announcement of the extra building costs for the railway raised the value of shares in construction companies. Blue Circle, the manufacturer of cement, 'scored a double gain as investors re-evaluated its land bank in Kent,' reported *The Observer* on March 12, 1989.

10 The way in which the land value tax option provides a solution that encompasses environmental and economic considerations is illustrated by

the history of a 63-acre site occupied by Delhi Cloth Mills. In 1962 the city's administration ordered the closure of the textile factory on pollution grounds — then reversed its decision and opposed the closure because the owners would make large windfall gains if the site was used for commercial and residential purposes. The matter was resolved at the end of a 5-year legal battle when the Supreme Court ruled in favour of the company. This judgment was forecast to speed up the redevelopment of valuable industrial sites in the major cities throughout the sub-continent (David Housego, 'City Centres in India likely to be redeveloped', *The Financial Times*, London, March 29, 1989). If the Delhi authorities had spent as much time and effort in adopting the appropriate property tax — the one that fell on land values — it need not have worried about the prospect of windfall gains going into private pockets. It could have secured a cleaner environment for the citizens of Delhi and clawed back part of the enhanced rental value that was created by the community in the first place.

11 Ecological and economic problems rooted in the tax-and-tenure structure are not peculiarly associated with the Third World, it must be stressed. Alabama, the US state which proudly calls itself 'the timber basket of the whole world,' illustrates the hypothesis that there is a high correlation between the distribution of land and the displacement of population. A county-by-county analysis revealed that the greater the concentration of ownership, the higher the rate of out-migration and the lower the rate of economic growth.

This study, significantly, was not an official one (three-quarters of Alabama's senators own land other than the sites beneath their houses), but was sponsored by a newspaper. See *The Birmingham News*, February 5 and March 4-6, 1989. Some politicians and university scholars are quoted as blaming the property tax. Alabama's rates are the lowest in the USA, which does not encourage landowners 'to make their holdings more financially productive.' Owners can legally demand to be taxed on a 'current use' basis: so by planting timber they pay a minuscule tax of less than $1 an acre on assessed values that are a fraction of the free market prices that prospective users would be willing to pay for land — if they could get it.