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The Crisis of Transition from the Commons: population explosions, their cause and cure

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DEMOGRAPHY is a highly emotive subject. Objectivity tends to be submerged beneath a warren of interlocking prejudices. Until recently, the significance of questions concerning the size and location of populations had been mainly of a political character, usually involving disputes between nation-states. The size of a population had been presented as either inadequate for the purpose of establishing geopolitical supremacy; or as so overwhelming as to threaten the welfare of neighboring communities.

The new awareness of the ecological problems now facing Mother Earth has extended the demographic debate to embrace the destiny of humanity. Because of this global character, we can now anticipate the emergence of the view that an international approach to solutions is the only way to meet the challenge of 'over-population'. The justification for the use of coercive action would be that the survival of the species was at stake. Should this occur, the right of the individual to remain aloof from whatever corrective action is deemed to be appropriate may be disregarded. This prospect makes it all the more imperative that discussions should be placed on a rational footing, so that moral judgments may be made on the basis of the best information.

A new assessment must take the historic facts as the starting point, which means embracing, no matter how summarily, two million years of history for *homo sapiens*. We can then evaluate the foun-

dition hypotheses of demography, which means returning to Thomas Robert Malthus.

Public debate is generally conducted at the two extremes of beliefs about demographic issues. One school of thought views man as a locust who is parasitically living off the land. This neo-Malthusian attitude is colorfully summarised in a statement by Gore Vidal, the American author and social critic, who wrote:

Think of earth as a living organism that is being attacked by billions of bacteria whose numbers double every 40 years. Either the host dies, or the virus dies, or both die. That seems to be what we are faced with.¹

At the other extreme is the benign view. The life-forces of nature will not allow one species to pose a fatal threat to earth. A case for this perspective could be developed by employing the insights offered by James Lovelock, an atmospheric scientist who hypothesised that the world is a living organism — Gaia, he calls her, the name that the ancient Greeks gave to earth.² In this view, man is one of the millions of interacting species and processes that make up the totality of a living system that includes inorganic matter and the atmosphere above earth.

Lovelock's holistic model enables us to perceive that, at the outset, man's activities, and the demands he made on his ecological niche, must have accommodated the other species and living matter that make up this moveable feast. We would therefore expect that man evolved a formula for sustaining himself through adaptation not only to take account of other predatory species, but to limit his demands on the environment so as not to jeopardise the survival of the breeding population. That has been the case. It took two million years for the human population to reach an estimated 1 billion people in 1830. And yet, 150 years later — a flicker in time — the demographic situation was transformed. Before, man lived in harmony with nature. Now, the image of the locust, a malignant predator on the rich life systems of earth, appears to be legitimate. The number exploded to an estimated 5.3 billion in 1990. Something unique had occurred. Until we know what and why, the prospects of an enlightened debate on policies for dealing with 'over-population' are not good.

Man's survival and his natural habitat cannot be entrusted to

chance, but I am not convinced that current perceptions of what constitutes a crisis ought to be approached primarily in terms of demographic pressure. The position advanced here flies in the face of both popular and scholarly assumption that there is a problem of 'over-population' *per se* which invites correction by means of direct controls over procreative activity.

There is an apparent problem. Why is it necessary for 35,000 men, women and children to die every day from hunger when the world has the capacity to feed everyone without destroying the life-support system? This loss of life is needless; it is institutionally driven. The routinization of death as a cultural phenomenon is absent from the anthropological record. If, as I contend, the problem is not specifically one of 'over-population,' do we have to accept the claim that nature is being niggardly? Or have man's social institutions and behavior become unhinged from the verities that guided him through evolutionary history?

To clarify the nature of the problem, the priority task is to identify the turning points in history that were not consistent with the principles of adaptability and sustainability. I argue that these historical junctures are associated with the transition to private ownership of land. I then review the ideological biases in the writings of Thomas Malthus, in which he sought (not completely successfully) to exclude from his analysis the role of property rights in land as a determinant of 'vice and misery'. Finally, I outline the insights offered by Henry George, the 19th century American social reformer, which appear to correct the Malthusian analysis and lead to policies most likely to transform mankind's social and economic — and as a consequence, demographic — destiny.

Social Ecology

Our starting point is the description of a simple model of how an organism sustains itself. The organism can be anything from a cancerous cell to a healthy human being or a species-specific population. Figure 1 illustrates, in an idealised way, the two courses that life can take. Growth Path A represents the normal development, in which there is an initial formative phase of rapid growth before the organism settles down to a period of sustained and comfortable

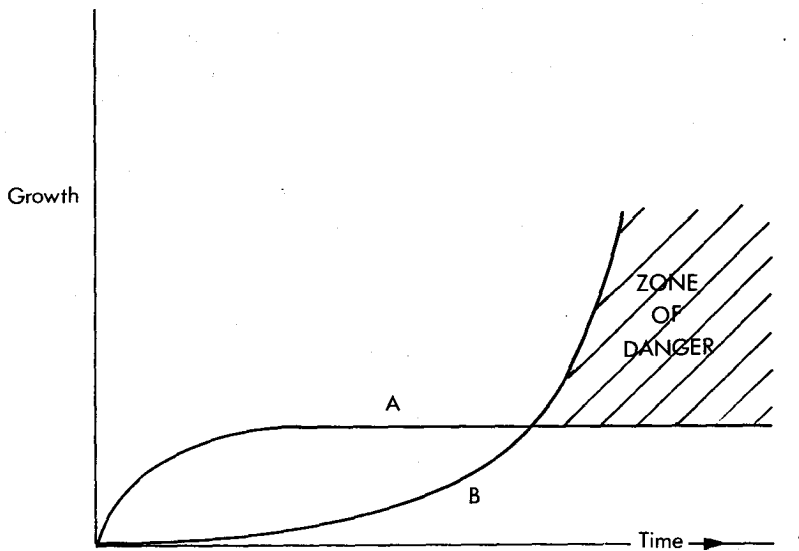


Figure 1

existence. For a human being, the first 20 years are the ones of rapid growth, with the rate slowing down during the teen years. Physical maturity is followed by a relatively stable period of 40 to 50 years, in which the life-force flourishes within what is normally a sustainable environment.

Growth Path B reflects the obverse conditions. The initial growth rate presents the character of a slow period of incubation, followed by an alarmingly rapid development until the growth path assumes an exponential profile. This ever-increasing rate of growth cannot be sustained by the host environment. Cancer follows this path: the time to catch it is during the early period, when the spread of the cells is slow and the damage is limited. By the time the spread has taken off, it is generally too late to contain the damage, which terminates in death for the host organism. In terms of social pathology, the AIDS virus (HIV) fits into this category. The virus started to spread slowly from the 1940s or early 1950s. The world's first recorded victim came

to the attention of British doctors in April 1959 when a sailor walked into Manchester Royal Infirmary. He wasted away and died five months later. His doctors, at the time, had no means of classifying the symptoms.³ For the next 20 years, the virus quietly worked its way through the human population, unrecognised for the killer that it was. Then, suddenly, in 1979, it made its presence felt, and within 10 years about 300,000 people died from AIDS: an exponential growth rate that is out of control and with terminal victims counted by the million, worldwide, within 20 years.

Growth Path A reflects the development of man for two million years. He evolved himself into a niche, multiplying rapidly at first, pushing towards the boundaries that were fixed partly by the endowments of his territory and partly by his own physical, mental and cultural potential. After expanding his numbers to the outer limits of sustainability, he then regulated the size of the population on the basis of homeostasis, achieving a state of equilibrium within a total environment that was in constant flux. That stability was imperative both for social evolution and the preservation of the environment on which man depended for his life.

Mankind's exponential growth rate of the past two centuries is represented by Growth Path B. The rapid rise in the size of the total world population is an unstable one, in terms of the ability of the environment to meet the need for food and natural resources over the alarmingly insignificant time period of the next 20 to 40 years.

The Zone of Danger exists above Growth Path A. Somehow, it is necessary either to curb growth above this level, or alter the parameters of the 'environment' (which consists of both natural and cultural factors) to restore long-run stability. This is not an unrealistic prospect. For in emphasising the sustainability of human behavior in the past, we are not saying that the population growth rate was always a constant one. Man developed from being an instinct-guided species into one that could *use* and enlarge his environment in a controlled way. Through the evolution of culture, man reduced his dependency on the genetic-based mechanisms that guided territorial behavior. In their place, he substituted social customs, some of which were developed into formal sets of rules. Customs that were demographic in character influenced the age of marriage, the size of families, and so on, to balance the desired

quality of life with the need to procreate at a rate that ensured survival of the species.

Harmonising with the social dynamics of demography, corresponding rules were developed to regulate the manner in which the environment could be exploited, rules that make up what we now call land tenure systems.

As man progressed from hunter-gatherer to pastoralist, new rules for the use of land were developed to harmonise both social relations between competing groups, and to ensure the continued viability of the ecological niche. Cultural evolution permitted incremental increases in the number of people who could be safely carried within a particular niche. In this earliest phase, living standards were at 'subsistence' level: but we must emphasise that this nonetheless permitted time for the enjoyment of leisure and the accumulation of resources that contributed towards the articulation of increasingly complex systems of knowledge and social rituals.

A major acceleration in numbers occurred with the development of agriculture 10,000 years ago: man could now nurture the soil to produce more food than nature would have made available if left to her own devices. The multiplication of surplus resources to develop ever-grander social institutions was now within man's reach.

Accompanying each of those social revolutions was a parallel articulation of tenurial rules to ensure that the guest population did not abuse its ecological niche. The reverence of nature was expressed through social behavior. Widespread hunger, when this occurred, was caused by climatic change, not malignant social institution.

In each developmental phase, what mattered was man's ability to synchronise his needs and desires with the available resources. He did not abuse his environment: to do so would have been suicidal and contrary to his genetically endowed instinct for survival. To undermine the carrying capacity of the ecological niche was to threaten the population with extermination. That was why it was crucial for man to adopt an appropriate system of land tenure, so that productive exploitation was sympathetically aligned with the available resources. The rules of tenure over land, then, were of primary importance: they were intimately related to the ability of a population to survive if an ever-changing environment in which other species were also competing for existence. The land tenure system

was crucial in determining whether a population had acquired the Darwinian capacity to survive over inter-generational timescales. Stability and sustainability were key principles of those systems of land tenure. The conservatism of that stability did not preclude dynamic change and growth: but these were controlled within a framework of adaptation. Thus, the absolute size of the population was not in itself the crucial consideration. What mattered was the ability of the population to achieve stability and work with the grain of the host environment.

Globally the rate of growth of the total human population has now assumed an exponential profile, taking mankind into the Zone of Danger. According to the Washington D.C.-based Population Crisis Committee, if a target of no more than two children for each family was not achieved before the year 2015, the world population would nearly double to 9.1 billion in 2050, but would not stabilise (at 9.3 billion) before the end of the 21st Century (Figure 2). Between now and then, the scope for regional crises is enormous and quite out of keeping with man's history. Why has this happened?

What is characterised as the modern demographic crisis coincided with the emergence of industrial society. This revolution in the mode of production was also accompanied by — but not dependent upon — the transformation of land tenure systems. Some of the dysfunctional elements of demographic behavior have been attributed to the new productive system, but this may be due to an erroneous perception. I believe there has been a serious neglect of the contribution by the new system of land tenure.

The historical paradox is self-evident. The power of the manufacturing process made it possible for Mother Earth to support many more people at ever-higher living standards. Furthermore, there is nothing intrinsic to the industrial system that precludes demographic stability.⁴ This is not obviously so for the new land tenure system, the significance of which can only be fully appreciated when compared with traditional systems of land tenure. To summarise the principles of land tenure that pre-dated private ownership, we now need to offer a general theory of land tenure that highlights the general principles that applied through evolutionary timescales.

In tribal-based systems society — not the individual — regulated the use of land. The benefits from land *per se* (as opposed to the fruits

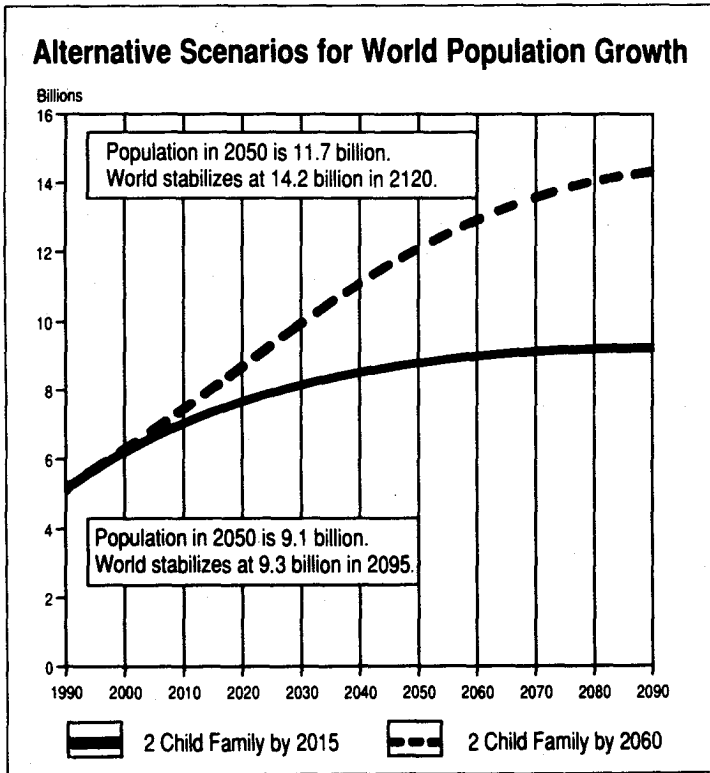


Figure 2

of individual effort) were distributed on a social, not an individual, basis. The right of access was based on the need to *use* land, a right that every member of the population enjoyed as a birthright. The exclusionary powers of private property ownership, which first became socially significant in Britain in the 17th century, were wholly alien to traditional societies. Previously, land was held in common for the benefit of everyone, and not for the privilege of a small class. This communal access to land was a central feature of societies that lived in harmony with nature, societies that homeostatically regulated their population numbers.

Today, for the first time in his history, man has the power to jeopardise his life-support system, and therefore threaten the existence of the species. This global danger is what gives demography a new importance, and imposes on commentators a new responsibility to interpret the known facts properly before proceeding to legislate for change. Our concern stems from the fact that time is not on mankind's side: given the long lags that are involved in any course of action that could conceivably have a measurable impact, the scope for an experimental approach, of abandoning methods that fail and starting anew, is critically limited. We may be near enough to the situation where, if we do not get it right first time, there may not be a second opportunity.

The lessons from the commons offer an understanding of demographic behavior which could lead to an integrated strategy for curbing the growth of population and the rate at which we are inflicting damage on Mother Earth. If we had to select a text to summarise our point of departure for fresh research, it would be fitting to cite the Rev. T.R. Malthus himself.

In the appendix to the third edition of his great work, which was published in 1806, Malthus offered the following emphatic statement:

It is an utter misconception of my argument to infer that I am an enemy to population. I am only an enemy to vice and misery, and consequently to that unfavourable proportion between population and food which produces these evils. But this unfavourable proportion has no necessary connection with the quantity of absolute population which a country may contain. On the contrary, it is more frequently found in countries which are very thinly peopled, than in those which are populous.⁵

Writing during the early phase of the period that we characterise as the Zone of Danger, Malthus acknowledged that the absolute number of people was not the important consideration. What mattered was the process by which people were rendered hungry and disposed to 'vice'. Paradoxically, however, he also acknowledged — in passing — that the existence of resources was also not the relevant consideration, because the hungriest people lived in relatively land-rich areas. Why, then, the 'vice and misery?' Could it be that the new land tenure system was not working properly in the interests of mankind and Mother Earth? Could it be that the misalignment of

land tenure to productive systems and ecological imperatives was such as to create a cultural crisis in which people were degraded to that state which Malthus was wont to label 'vice and misery'?

Culture Crisis: a Hypothesis

Thomas Malthus has attracted venomous attacks ever since his *Essay on the Principle of Population* was published in 1798. This essay was a polemical assault on William Godwin (1756-1836) and the Marquis de Condorcet (1743-94), who had broadcast a vision of social equality and economic prosperity that was anathema to Malthus. To neutralise the prospect of the English being infected by the revolutionary spirit that was then spreading from France, Malthus developed a theory of population that postulated the impossibility of everyone attaining the standard of living to which the revolutionaries aspired.

Having achieved immediate notoriety with the first version of his essay, Malthus then travelled abroad to gather empirical evidence. He published this in the second edition. His mature conclusions, however, were published 30 years later in *A Summary View of the Principle of Population* (1830). An author is entitled to be judged on his final statements, the ones that provide his rounded views after a lifetime's reflections, rather than on his earliest, incomplete hypotheses.⁶

The starting point in our appraisal is with the attempt that Malthus made to integrate his demographic theory with the theory of rent. David Ricardo (1772-1823), whose name is now associated with the theory of rent, devoted the final chapter of his *Principles of Political Economy and Taxation* (1817) to a critique of the Malthusian formulation.⁷ In the preface to his book, Ricardo magnanimously acknowledged that Malthus's *Inquiry into the Nature and Progress of Rent* (1815) presented

the true doctrine of rent; without a knowledge of which, it is impossible to understand the effect of the progress of wealth on profits and wages, or to trace satisfactorily the influence of taxation on different classes of the community ...⁸

There was, however, a theoretical difference between the two

economists. The nature of that difference identifies the fatal flaw in Malthus's theory of population.

Malthus explained that the rent of land was the surplus income after paying for all the labor and capital costs of the production. The higher the market price of a product, therefore, and the lower its costs of production, the more the landowner could cream off from the aggregate revenue. Ricardo agreed; but he added a refinement to clarify the process by which the level of rents was determined.

Rent, said Ricardo, was determined at the margin of cultivation. That was the point at which land (working with labor and capital) was able to generate just sufficient income to make it possible to employ labor and capital; there was no surplus to be appropriated by the landowner. People working on the rent-free margins of the economy set the benchmark for wages. Workers engaged on more fertile land could not demand higher wages, because competition in the labor market would hold wages at the level that was being accepted at the margin. Figure 3 illustrates the hypothesis. Wages received by labor on the marginal site (M_1) at time T_1 , determine the levels received on intra-marginal sites — those that are more fertile, or where the production costs are lower (as with the locational advantage that entails lower costs of transporting products to market). Ricardo, then, added the spatial dimension to the theory of rent, which, as we shall see, Malthus had failed to recognise as central to the dynamics of demography.

Malthus summarised his integrated theory on page 18 of *An Inquiry into the Nature and Progress of Rent*.

The accumulation of capital, beyond the means of employing it on land of the greatest natural fertility, and the greatest advantage of situation, must necessarily lower profits; while the tendency of population to increase beyond the means of subsistence must, after a certain time, lower the wages of labor.

The expense of production will thus be diminished, but the value of the produce, that is, the quantity of labor, and of the other products of labor besides corn, which it can command, instead of diminishing, will be increased.

There will be an increasing number of people demanding subsistence, and ready to offer their services in any way in which they can be useful. The exchangeable value of food will therefore be in excess above the cost of production, including in this cost the full profits of the stock

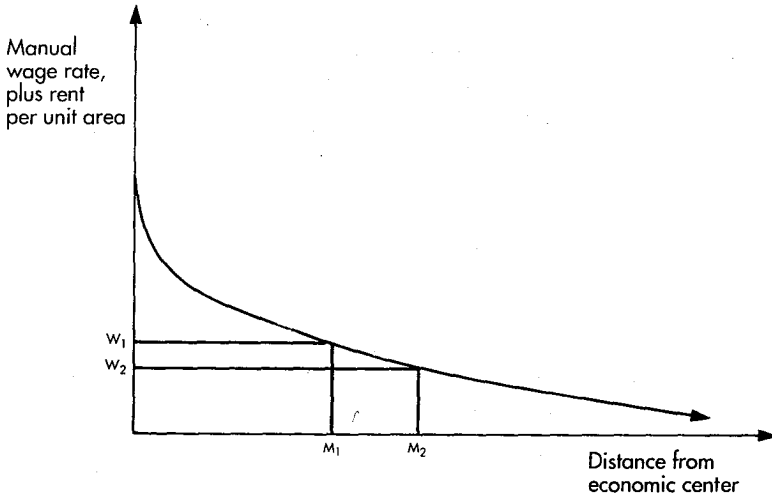


Figure 3

employed upon the land, according to the actual rate of profits at the time being. And this excess is rent.⁹

The Malthusian formulation was a simple one. Among the causes of the rise of rent was 'such an increase of population as will lower the wages of labor.' Ricardo disagreed. 'If wages fell,' he wrote, 'profits, and not rent, would rise.'¹⁰ For dramatic emphasis, he added: 'If the landlord were to forego his whole rent, the labourers would not be in the least benefited.' The beneficiary, he insisted, was the owner of capital. 'Nothing can raise rent, but a demand for new land of an inferior quality ...'¹¹ Again, referring to Figure 3, we can see what happens when, at time T_2 , people move the margin of cultivation outwards (to M_2): subsistence at this point is at a lower level, which through competition leads to a reduction in the general level of wages and leaves an increased surplus for the owners of land.

But although Ricardo insisted that 'If wages fell, profits, and not rent, would rise,' the difference between the two economists on this point was academic. For when it came down to the end result, Ricardo agreed with Malthus.

Every rise of profits is favourable to the accumulation of capital, and to the further increase of population, and therefore would, in all probability, ultimately lead to an increase of rent.¹²

The difference between them lay in the transmission mechanism by which lower wages led to higher rental income. What they did not disagree over, however, was that — sooner or later — the working poor grew poorer and the idle rich grew richer.

The Malthusian model is a static one, in which the addition of more people competing for jobs leads to lower wages. This seems unexceptionable, in itself, and it would be consistent with the basic economic principles adopted by Malthus if we elaborated his hypothesis to show that more people usually means an extensive sprawl onto less attractive land. Had Malthus incorporated this spatial dimension into his conceptual framework, he might have modified his demographic theory in a way that could have yielded significantly different conclusions about the nature of poverty and the causes of the high population growth rates which existed in the early period of the Industrial Revolution.

Ricardo, while reaching the correct conclusion, did so by a tortuous route: he drew on an early version of the Wage Fund theory (which has since been discredited¹³). Ricardo believed that lower wages, in raising profits, provided capitalists with the extra cash with which to employ more workers. This was a demand-led theory of population. The final outcome, however, in terms of the distribution of income, was the same: an increase in the population meant migration onto less attractive locations, which served to lower wages and raise rents.

But note that Ricardo shared an underlying assumption with Malthus: the rate of population growth would maintain downward pressure on wage levels, despite the increase in productivity which resulted from capital accumulation.

Malthusian checks and balances The three checks on the 'tendency' for population to grow to the limits of the land's capacity to produce food, according to Malthus, were vice, misery and moral restraint. This provides a picture of populations locked into an interaction between individual proclivities and social sentiments, on the one hand, and the environment, in which the supply of land is

assumed to play a neutral role, no more than a natural barrier to growth against which populations 'repress' themselves at the level of subsistence.

The Malthusian framework, then, is underpinned by a law of Immiseration. Missing from his analysis was the notion that a general rise in living standards was not inconsistent with stable population growth rates. The absence of this prospect was a logical outcome of his theory. If his equation was correct — more people resulted in lower wages and higher rents — a society in which a minority enjoyed absolute control over the resources of nature would not redistribute income to generate a general improvement in the quality of life.

Yet, paradoxically, Malthus was aware of the way in which culture — specifically, the land tenure system — could distort the supply of land and therefore directly affect population growth rates. He recorded the demographic consequences of variations in the supply of land by citing two examples which happen to illustrate each of our two contrasting paths of growth in Figure 1.

The benign interaction between man and land he illustrated with his example of the freely available land in the United States of America, 'where room and nourishment were the most abundant.'¹⁴ The frontier had not been closed, and so the population could expand in response to the supply of land. Culture, in the form of tenurial rights, was not a constraint: for as the speculators enclosed land, so the migrants leapfrogged onto new territory. The high fertility rates, in these circumstances, need not cause anxiety (though we now begin to get a picture of how land was not being used in an optimum way). Man was filling the available space through rapid procreative activity. What mattered was the ability of the population to regulate the birth rate once the supply of new land was exhausted. At that point, in a society whose tenurial system is of a mediating sort, the growth rate should level off on to a stable, long-run trend that could be sustained by the changing proportions of technology and natural resources.

Of a wholly different character, however, was the situation which observers discovered in the Spanish colonies of Central America. Malthus had assumed that the growth of population would be restrained where land tenure limited the supply of land to those who needed it. Much to his astonishment, however, the population was

exploding at rates much the same as those to be found in North America. In New Spain,

almost all the vices in the government of the mother country were introduced into her colonial possessions, *and particularly very unequal distribution of landed property which takes place under the feudal system.*

These evils . . . necessarily prevent that rapid increase of numbers which the abundance and fertility of the land would admit of.¹⁵

And yet, noted an astonished Malthus, births exceeded deaths by a large margin. Here was a demographic growth profile of exponential proportions, one that could not be sustained on ecological grounds and which implied a breakdown in those cultural mechanisms that traditionally served to regulate the relationship between man and land.

Cultural crisis and property rights Culture was developed through evolutionary timescales as a facilitator, to better equip *homo sapiens* to adapt to the natural environment. Where rights to land were held in common, the tenurial system was an integrative mechanism for stabilising the absolute number of people, the quality of life they desired, and the ecological imperatives of the niche that they inhabited. The development of private property rights, however, introduced a qualitatively new order. Tenurial rights could now be used to divide man from land; where this occurred, populations had to adapt to a historically unique *milieu*.

Because of the empirical evidence that had recently come to his attention, Malthus had to concede the possibility that land tenure might not be an invariably benevolent mediator between the host environment and the resident population. The awkward feature of the evidence from the Spanish colonies for Malthus's theory of population was the fact that the supply of land was not a constraint to demographic growth. Compared to the United States, 'in abundance and fertility of soil they are indeed superior,' noted Malthus.¹⁶ But people were artificially constricted to the 'evils' of what Malthus chose to tarnish as a feudal system. To sidestep the awkward implications, he sought to distance property rights in the New World (which he characterised as feudal) from those which were even then being used to enclose land and dispossess customary users of access to the commons of the British isles.

And yet it was beyond dispute that something new had been incorporated into society. With the transformation of property rights to land, the population was no longer integrated into a single social system underpinned by a common interest in its territory. Society was now divided between those who owned land — the financially rich and politically powerful — and those who were impoverished by their state of landlessness. Here was a cultural context to ecology. Tenurial rights rather than nature herself arbitrated to determine the supply of resources of nature to the population. If traditional demographic constraints are released, we have *prima facie* evidence of a breakdown in the social system.

The exponential profile of the growth rate, in these circumstances, cannot be sustained indefinitely. The absence of adaptive behavior entails an erosion of either living standards or the environment, or both. There are absolute limits to which a population can exploit either of these courses of action to sustain itself. It can diminish the standard of living until deaths occur for the disadvantaged members of society, and then deplete the rich resources of nature until the existence of the population itself is put at terminal risk. One or a combination of both strategies can be pursued until deaths on a mass scale bring the process to a tragic end. This is the Malthusian nightmare, but it is one which we have arrived at by a route that the reverend himself had failed to systematise into his theory of demography.

Nevertheless, Malthus *was* aware of the fact that land tenure can affect population growth rates. In defending private property rights as the most appropriate for encouraging production and 'to overcome the natural indolence of mankind,'¹⁷ he offered a major concession that has fatal implications for the prescriptions that flow from his theory of population:

... yet it is unquestionably true, that the laws of private property, which are the grand stimulants to production, do themselves so limit it as always to make the actual produce of the earth fall very considerably short of the *power* of production. On a system of private property no adequate motive to the extension of cultivation can exist, unless the returns are sufficient not only to pay the wages necessary to keep up the population, which, at the least, must include the support of a wife and two or three children, but also a profit on the capital which has been

employed. This necessarily excludes from cultivation a considerable portion of land, which might be made to bear corn.¹⁸

Was Malthus being dishonest? He explains the fact of idle land not by reference to the unrequited demands of the landowner (who cannot be paid rent from marginal land), but on the grounds that the laborer would not work on land that did not pay a return on his capital investment. In fact, of course, hungry men will work with their bare hands, so long as land is freely available.

There is little doubt that Malthus had in the back of his mind the exclusionary powers of the landowner. This emerges clearly in the following passage.

But it must perhaps also be allowed, that, under a system of private property, cultivation is sometimes checked in a degree, and at a period, not required by the interest of society. And this is particularly liable to happen when the original divisions of land have been extremely unequal, and the laws have not given sufficient facility to a better distribution of them.¹⁹

In fact, the *degree* of maldistribution, which Malthus cites in an effort to soften the responsibility of private ownership *per se*, is irrelevant. What matters, for the purpose of administering an efficient system of land tenure, is the enforceable right to exclude others, irrespective of their need of access to under-used land, whether of an acre or a plantation-sized tract.

Despite his damaging concession that private property rights are used to deny people access to life-giving land, however, Malthus would not make any substantive concessions on private property rights. He justified these as akin to natural rights.

... the laws of nature dictate to man the establishment of property, and the absolute necessity of some power in the society capable of protecting it. So strongly have the laws of nature spoken this language to mankind...

Allowing, then, distinctly, that the right of property is the creature of positive law, yet this law is so early and so imperiously forced on the attention of mankind, that, if it cannot be called a natural law, it must be considered as the most natural as well as the most necessary of all positive laws...²⁰

If this argument shows an intransigence of mind, nonetheless his analysis of the economic consequences of private property in land was

important. Malthus explained that landowners influenced the level of activity in the economy not only through their propensity to favor what we would today call conspicuous consumption, but also because their under-consumption of manufactured goods, 'if not fully compensated by a great desire for personal attendance, *which it never is*, would infallibly occasion a premature slackness in the demand for labour and produce, a premature fall of profits, and a premature check to cultivation.'²¹ Malthus was conceding that the distribution of income occasioned by property rights was such as to create a level of demand that fell short of full employment. This was an embryonic theory of business cycles that anticipated the analysis of American social reformer Henry George.

Given these fruitful macro-economic observations, based on a lifetime's reflections, why did Malthus fail to reformulate his theory of population? He stuck to the end with the Law of Immiseration, in which the burden of responsibility fell on the shoulders of the individual. Malthus also retained the notion that poverty, expressed in low wages, led to a diminution in the rate of growth of population.

... in every country with which we are acquainted where the yearly earnings of the labouring classes are not sufficient to bring up in health the largest families, it may be safely said, that population is actually checked by the difficulty of procuring the means of subsistence.²²

This generalised observation offered comfort to Malthus, in that it justified low wages as a necessary condition for stabilising the growth of population. Alas, it was refuted by his own evidence of the explosive growth rates in Spanish America.

Enclosures and Exclusion

As a chronicler of social trends in the early years of the Industrial Revolution, which happened to coincide with the enclosure movement, Malthus allowed his ideology to compromise the conclusions that he drew from his observations. Even so, he established a partial framework for a vital debate on problems associated with the accelerated growth of population. He employed a restricted classification of the factors that constitute the dynamics of demography, but his descriptive account was sufficiently comprehensive to pro-

vide later scholars with the opportunity to refine his conclusions. Among these was Henry George.

George's critique of Malthus stemmed from a passionate anger at the impoverished conditions of the masses, which he traced to the maldistribution of rights to land. The importance of George in this debate lies in the way he illuminated the issues that Malthus identified as problems but failed to resolve. His insights enabled him to articulate a theoretical framework which linked ecological issues with the spatial distribution of human populations and the process of production and income distribution. This was a full century before the environmentalists began to awaken solicitude for the biosphere.²³

George's thesis was that the private ownership of land unleashed economic behavior that was inconsistent with a balanced social existence. But by neutralising the monopoly power of the landlord (which could be achieved by the capture of the annual rental value of land through the tax system) the following distribution of population would result:

The destruction of speculative land values would tend to diffuse population where it is too dense and to concentrate it where it is too sparse; to substitute for the tenement house, homes surrounded by gardens, and fully to settle agricultural districts before people were driven far from neighbors to look for land. The people of the cities would thus get more of the pure air and sunshine of the country, the people of the country more of the economies and social life of the city.

This rational spatial arrangement would lead to an improvement in the social and economic welfare of the farmer, which would occur only 'if he and those around him held no more land than they wanted to use.'

Integrated into this qualitative enhancement of social and economic life was an explicit concern for the ecological environment:

Besides the enormous increase in the productive power of labor which would result from the better distribution of population there would be also a similar economy in the productive power of land. The concentration of population in cities fed by the exhaustive cultivation of large, sparsely populated areas, results in a literal draining into the sea of the elements of fertility. How enormous this waste is may be seen from the calculations that have been made as to the sewage of our cities, and its

practical result is to be seen in the diminishing productiveness of agriculture in large sections. In a great part of the United States we are steadily exhausting our lands.²⁴

Here, then, was the first model that recognised the impact of the spatial dispersion of the population, standards of living and methods of production on man's ecological niche. The model yielded demographic conclusions of a character that placed George in conflict with Malthus.

The cultural context of demography Malthus did acknowledge that, in certain circumstances, a fairer distribution of land would benefit 'the interest of society'.²⁵ Ultimately, however, the literal share-out of land was a self-defeating strategy. Malthus claimed that it would lead to procreation at a rate that would eventually create an economic crisis.

In a modern economy, employing that policy can cause an economic crisis even when the birth rate is static or decreasing (as in France in the years after World War 2). The systematic sharing out of land leads, with the passing of generations, to the fragmentation of holdings to units so small that farmers would be left impoverished if they did not find off-farm employment to supplement their incomes. The post-war Mansholt Plan to pension off farmers and amalgamate tiny holdings in Europe — particularly in France — affirms the reality of this concern.

Henry George solved this distributional problem. People need not be deprived of their land; rather, they ought to pay the economic rent of their tracts to the community. This fiscal pressure would, he was confident, lead to an immediate release of under-used land into the hands of those who needed it. This free market policy would correct the problem identified by Malthus, namely that some owners choose to hold land vacant even while people go begging.

Given this economic reform, would there nonetheless be the need for a social program of intervention to control the growth of population? Malthus argued that it was futile for government to attempt to legislate for birth control. For, he concluded, 'direct legislation cannot do much. Prudence cannot be enforced by laws, without a great violation of natural liberty, and a great risk of producing more evil than good.'²⁶ If correct, this effectively throws

the onus for regulating family sizes back on to the individual; and the failure to restrict procreation in line with one's economic circumstances relieves society from the obligation towards the welfare of the poor. This was, indeed, Malthus's attitude towards social welfare, as we will note below.

The contrasting perspective is represented by Henry George. In his view, the community is responsible for providing the *milieu* within which the individual may flourish and exercise a real choice over his destiny. At the heart of that cultural context was the system of property rights, which — so far as land was concerned (but not man-made capital) — Henry George regarded as subordinate to the equal interests of every member of society.

Malthus recognised the stark moral conflict that challenged his ideology. In defending the unencumbered right of private property in land, he was honest enough to acknowledge the existence of cases in which this right might interfere with the freedom of men to labor for their daily bread. What, then, was society's responsibility towards the dispossessed? The route by which Malthus reached his conclusion was, in his terms, the logical one: the rights of the poor were subordinate to the rights of property.

The existence of a tendency in mankind to increase, if unchecked, beyond the possibility of an adequate supply of food in a limited territory, must at once determine the question as to the natural right of the poor to full support in a state of society where the law of property is recognized.²⁷

For Malthus, the right of property was what differentiated man from 'the rank of brutes.' True, he began this part of his analysis with the claim that property was established to promote the public good, and this did allow for a modification — through, for example, a tax — if that served to achieve the ultimate objective.²⁸ There was a catch to this concession, however.

But there is no modification of the law of property, having still for its object the increase of human happiness, which must not be defeated by the concession of a right of full support to all that might be born. It may be safely said, therefore, that the concession of such a right, and a right of property, are absolutely incompatible, and cannot exist together.²⁹

Nevertheless, Malthus was willing to hold out the prospect of some relief from suffering, but his concession was conditional: the poor

were not to marry and procreate while they were receiving the hand-outs from the property owners.³⁰ If there was a risk of this happening, then the welfare support could not be countenanced; for this encouragement to population growth would undermine the well-being of society. When it came to a conflict between the rights of the poor and the rights of landed property, the problem had to be settled in favor of property.

Henry George sought to solve this conflict. He would not compromise on every individual's birthright to an equal share of land. That right, in his terms, was God-given. Natural resources were freely provided for the benefit of everyone, and no one man — or class — had a right to deprive future generations of *their* right to enjoy the bountiful fruits of nature. In this, Malthus and George were at odds. But George did not prescribe the forcible appropriation of land for the purpose of redistribution. Land-value taxation was the fiscal device that would bridge the institutionally-created divide between the property owner and the landless laborer. The full capture of economic rent, he argued, in providing the revenue for government, would in turn further liberate the individual by removing the need for taxes on the incomes derived by labor and from capital investments. Thus was guaranteed the right of every citizen to an equal share of the cash value of the resources of nature.

In Malthus, then, we are confronted by the core of the moral dilemma that faced society in the 19th century. Something had to be done about a system that was not functioning at levels of efficiency and equity acceptable to the populace at large. The degree of degradation was unacceptable to the sensibilities of enough people to warrant a progressive political amelioration of this condition. Ultimately, a choice was made which rejected the Malthusian position: the poor would be helped by the transfer of income through the tax system. Malthus could have been in no doubt what that would mean in economic terms: the redistribution of income away from the landowners.

If there was to be a redistribution of income through the tax system, it ought to have seemed sensible to take the money direct from the landowner. Adam Smith had laid the foundations for such a fiscal strategy. A tax on subsistence incomes, he said, would merely

be passed on, through higher wages, ultimately to reduce the income that was left to be paid as rent to the landowner.³¹

Both ground-rents and the ordinary rent of land are a species of revenue which the owner, in many cases, enjoys without any care or attention of his own. Though a part of this revenue should be taken from him in order to defray the expenses of the state, no discouragement will thereby be given to any sort of industry. The annual produce of the land and labour of the society, the real wealth and revenue of the great body of the people, might be the same after such a tax as before. Ground-rents, and the ordinary rent of land, are, therefore, perhaps, the species of revenue which can best bear to have a peculiar tax imposed upon them.³²

On efficiency grounds alone, it would have made sense to adopt a tax on the annual rental value of land, rather than to capture part of that revenue circuitously, via taxes on other sources of income (which were then passed on as costs of production). For not only was the outcome unavoidable (ultimately, the tax-take would be at the expense of the surplus income that landowners could claim as rent), but this was the economically most efficient policy, in terms of the incentives to those who worked to produce the wealth of the nation.

But the politicians were unwilling to adopt Smith's fiscal prescription. Rather, the industrial societies which were to become the first modern democracies adopted the income tax, which was first introduced in Britain by Pitt the Younger in 1800.³³

Social Policies

To Malthus we owe a debt for the first systematised study of demography. His lasting influence, however, has been seriously damaging both to the conceptual approach to demography, and for the formulation of policies to deal with socio-economic problems such as generalised poverty. Malthus did more than anyone to ingrain an attitude that colors people's attitudes today. He created the impression that nature was niggardly and that poverty was natural. Where blame was to be assigned, this fell largely on the individual who was presumed to have failed to act prudently. This tapestry of impressions has seriously biased social policy ever since. The starting point for the defence of our assessment begins with the philosophy that attracted Malthus into the public arena in the first

place: the French revolutionary vision of a good and equal society.

Among the victims of the revolutionaries was the landowning aristocracy. In Britain, Malthus had noted the blood-letting and his position was manifestly clear: he had 'cast his lot with the landed interests'.³⁴ Of itself, this does not make a convincing case for postulating that Malthus was seeking to defend landowners as a class. Recall, however, his vigorous opposition to the free trade movement in England in the post-Napoleonic war period. Free trade, argued Malthus, would encourage the manufacturing sector, which was not in the best interests of the lower classes. Another consequence of free trade in corn, one that would not have escaped his attention, was that it would lower consumer prices and therefore the rental income of landowners. But even this piece of biographical history is insufficient to accuse Malthus of bending his theory to accommodate a class interest. We search deeper, by asking three questions.

First, to what extent was the Malthusian philosophy successful in distracting policymakers from a realistic appreciation and amelioration of poverty? Second, did Malthus go out of his way to defend the landed interest? Third, was his theory of population a device for serving these twin goals?

Poverty and Welfare Policy A revealing incident in the history of social welfare in Britain occurred at the turn into the 19th century, when Pitt the Younger declared (in 1796) an intention to improve the level of public support for the poor. In 1800 he explained to the House of Commons that he had changed his mind under the influence, in part, of Malthus.³⁵

Had Pitt decided to embark on a rational strategy, he would have adopted Adam Smith's prescription as to the most effective way of raising public revenue — a tax on the annual rental value of land — which would have laid the foundations for an equitable distribution of income. This, in turn, would have eliminated the poverty that stemmed directly from the enclosure of land. The fabric of society would have been transformed, for the conditions would have been established for the emergence of a wholly different set of social institutions at this formative period in history. The distribution of income would have favored the creation of more jobs at higher wages. As a result, for example, employees would not have had to

resort to aggressive postures towards employers. The psychology of conflict that was built into industrial relations was the direct result of the state of dependency caused by the original loss of common use rights to land. Poverty wages provided fertile ground for the creation of trades unions and collective action based on the perception of divergent interests.³⁶

The moral dilemma created by the existence of poverty amidst plenty remains at the heart of political controversy today. The confusions of policy are perpetuated, however, as evidenced by the administrations of Ronald Reagan and Margaret Thatcher in the 1980s. They sought to tilt the scales away from the provision of welfare for the poor without simultaneously correcting the flaw in the structure of property rights which Malthus — in a very casual way — had conceded was one cause of poverty. Few people in the West are now persuaded that poverty can be eliminated by the incentives allegedly associated with the New Right's advocacy of cuts in public sector spending. We are, then, obliged to return to the two fundamental issues underlined but not satisfactorily analysed by Malthus: the causes of poverty and the rights of property.

The Landed Interest Malthus's attitude towards property is most tellingly disclosed by the manner in which he absolved the landowner of responsibility for poverty. Both empirical observation — that much land was not used, thus preventing people from providing for themselves — and Ricardian theory, equipped Malthus with the means to explain how unemployment and distress could be diminished, if not banished. The solution to poverty that seemingly eluded Malthus can be stated in these terms: if intra-marginal land is not being used fruitfully, a policy that attracted people onto it and *away* from the margin would result in a rise in real living standards. But this also has another consequence: in the shortrun, at any rate, there is a drop in the share of the nation's income that can be appropriated by landowners.

Malthus developed an answer that sought to checkmate the practical logic of this theory. In his *Principles of Political Economy* he strenuously denied there was any such thing as marginal (i.e., rentless) land.³⁷ All land yielded rent. Evidently if some land was kept vacant this was not because the owners were piqued by the prospect

of not receiving an income if they allowed others to earn their bread from it. There was no such thing as 'free' land; for Malthus, the Ricardian margin did not exist. By such reasoning, the landowners received absolution from responsibility for institutionalised poverty.

Theory as ideological device If there was a causal connection between poverty and private property rights in land, how could Malthus confute the charge that the owners of property carried special responsibility? The most effective argument was the one that he deployed as a theory of population: namely, that if wages rose above subsistence level, population would increase and force them down again. Hence the strategic futility of challenging the rights of property in any effort to eradicate poverty.

Malthus did not deny that a better use of land would raise income.

It is unquestionably true, that in no country of the globe have the government, the distribution of property, and the habits of the people, been such as to call forth, in the most effective manner, the resources of the soil.³⁸

He merely denied that this would redound to the benefit of the laboring classes for any length of time, for they would drop the checks on their sexual proclivities and increase the birth rate. Indeed, far from being a blot on history, their under-use of natural resources was a boon for the laboring classes, for 'if the distribution of property and the habits both of the rich and the poor had been the most favourable to the demand for produce and labour, though the amount of food and population would have been prodigiously greater than at present, the means of diminishing the checks to population would unquestionably be less'.³⁹ Fecundity would turn momentary prosperity into the tragedy of babies that could not be fed by their parents. The under-use of land, we are now led to believe, occasioned by the exclusionary powers of private property, was a providential blessing.

'Over-population': relative to what? We now turn to an examination of the manner in which policy is today bedevilled by the tone of discussion established by Malthus. We will review the problem in terms of an attempt to define over-population, the current validity of which is generally taken for granted.

The concept of over-population has no meaning unless we are provided with a second variable against which to measure the consequences of the absolute number of people. Whenever the concept is employed, implicit in its use is one or two possible variables: the depletion of resources or the level of poverty. The explicit invocation of these considerations does not, of itself, resolve the question of whether there is, or is not, over-population in a particular case; nor are they sufficient to establish over-population on a global scale. What we discover in each case, however, is that the analysis is initially complicated, but then clarified, by the need to analyse the distribution of property rights.

Depletion of natural resources Alarm bells over the ecological consequences of population growth rates were rung by Paul Ehrlich in *The Population Bomb* (1968), who restated them in *The Population Explosion*.⁴⁰ Studies such as these have a global approach which makes them difficult to analyse.

No one yet knows what is the optimum number for the human species. The analytic equipment needed to provide the answer is not yet assembled. Assuming the present per capita use of energy, we can guess that at less than 10,000 million we should still be in a Gaian world. But somewhere beyond this figure, especially if the consumption of energy increases, lies the final choice of permanent enslavement on the prison hulk of the spaceship Earth, or gigadeath to enable the survivors to restore a Gaian world.⁴¹

The postulates can be examined by turning to the treatment of micro-studies, even though this approach is open to the charge of anecdotalism. For example, Julian Ozanne, a journalist who described the Kisii district of Kenya in the *Financial Times*, suffused his facts with the value judgments that are Malthusian in origin and which cloud the fundamental issues:

As far as the eye can see, the whole district appears to be bursting at the seams under the sheer weight of its rapid population growth. A plethora of bell-shaped huts spreads across the hilly terrain like a carpet of mushrooms. Almost all the arable land is being cultivated, including steep slopes. Plots are becoming smaller and less economic as the holdings are divided up and bordered by hedges, making the fertile equatorial landscape resemble a cluttered chess board.

Soil erosion, declining productivity and exhaustion of fertility is

becoming more marked as farmers overwork the land. In Kissi town, the district capital, there is no more available land for urban development, prompting builders and town planners to build upwards several storeys high, a remarkable development for a small rural African town.

The pressure on school places and health clinics is immense and rural unemployment is growing . . .

Although Kisii district is Kenya's most populated district, the population explosion is nationwide. The Government believes Kenya's population growth will more than double the work force and put almost unbearable pressure on the environment, job creation, urban centres, land and food supply.⁴²

Here we have all the classic ingredients of a Malthusian scare story: visible stresses in both demography and ecology, which Malthus would have regarded as validating his thesis — though he would have been left wondering why the birth rates had not collapsed in the face of these intense pressures.

What the reader is not told, however, is that Kenyans suffer from a serious maldistribution of land, the recognition of which transforms the challenge into a strictly economic one for the policy-makers. In 1972 — nine years after formal political independence from Britain — the distribution of land in Kenya was recorded as severely skewed in favor of the fortunate minority. About 0.1% of the landowners shared land made up of holdings that averaged 714 hectares in size, while 96% of the landowners worked holdings that were on average 3.8 hectares. Put another way, about 1,500 owners occupied 1.1 million hectares, while at the other extreme — on the tribal 'reserves' — 5 million hectares were at the disposal of 1.3 million households.⁴³ In the ensuing years, the maldistribution was not corrected. But the fact that the growth of population on a finite resource base contributed to the *appearance* of a maldistribution of land does not, of itself, represent a demographic component to the problem; for absent from the system is a mechanism for automatically adjusting the equitable distribution of resources. It is only when the latter condition is met, and yet *per capita* incomes continue to be eroded, that we must acknowledge a specifically demographic problem.

What we see in Kenya is not a demographic problem but a political crisis. Society is not able to balance the distribution of life-supporting resources, so a large number of people are forced to over-exploit their meagre holdings to provide subsistence for their families.

The Paradox of Poverty Low incomes are also sometimes taken as an index of an insupportable number of people. If consumers do not have money they cannot buy food, so they die. According to the World Bank, 1.1 billion people in developing countries are living in poverty. Each person was able to spend less than £4 every week on average; half of that income was spent on food.⁴⁴ Such statistics are used to justify the need for a stepped-up campaign for birth control policies, but is this emphasis warranted? Again, global perspectives do not help us to disentangle and evaluate the underlying processes, so we focus on a few examples.

The poorest nation in the western hemisphere is reported to be Guyana, in South America; the wretchedness of her living standard is said now to eclipse that of Haiti, whose levels of poverty are notorious. And yet, 'The country should be rich; it has good soil, ample rain, timber, the world's purest bauxite, and fewer than 700,000 rather well-educated people in an area the size of Britain.'⁴⁵ Despite this richness of resources, 'Guyana imported rice last year [1989], could not fill its sugar export quota, and has not run its alumina plant since 1982.' Evidently, the reason for the abject poverty has to be sought not in demographic imperatives but in the institutional arrangements. A similar paradox emerges when we turn to Africa. Malawi, for example, is self-sufficient in food,

But these statistical claims mean little, said international aid workers, who reported not only extraordinary levels of mortality from child malnutrition but also high levels of stunted growth among those who survive.⁴⁶

A concern with fertility growth rates in Guyana and Malawi would not lead to a resolution of the plight of these populations; unless, of course, we start from the premise that institutional reforms are outside the scope of action. But in that case, further research into the problem of poverty would be without purpose.

Rapid increase in fertility rates Intermingled with considerations of poverty and the exploitation of the natural resource base of a population is the assumption that the problem could be solved if only people would bear fewer babies. Rather than confront the problems of the maldistribution of resources — which is another way

of saying that people are being denied the right to work — some governments tend to encourage people to migrate onto the periphery of society. Such has been the case in Brazil. Another example, which highlights the inter-relatedness of economics, ecology and demography, is provided by the Philippines, whose policy strategy aggravates the original problem.

Next to population pressures, perhaps no other factors foster more degradation than the inequitable distribution of land and the absence of secure land tenure. In an agrarian society, keeping a disproportionate share of land in the hands of a few forces the poorer majority to compete for the limited area left, severely compromising their ability to manage sustainably what land they do have.

In the Philippines, for example, agrarian policy over the last several decades has promoted land resettlement rather than redistribution. The elite retained their holdings while landless peasants were encouraged to move to designated resettlement areas. One such area was in Palawan, the country's largest province. Incoming migrants cleared forest to grow crops, but the land could not long sustain production under the methods they used; weeds invaded, farmers abandoned their fields, and new lands were cleared.

The government had made no provisions to protect the land rights of Palawan's indigenous communities, and so as migrant farmers moved in, the local farmers — who had developed sustainable agricultural practices — were forced to retreat to the interior hills. Their plots on the steep slopes yielded only half as much as their lowland fields had. As a result, fallow periods crucial to restoring the land's fertility were shortened from eight years to two, thereby exhausting the soil and further depressing yields. Similar scenarios have played out in numerous countries where striking inequities in land holdings compound population pressures.⁴⁷

Here, despite a perceptive assessment of the role of land tenure in the impoverishment of people and the degradation of the ecological environment, the author insists on associating 'population pressure' with these social processes, according the demographic dimension a validity which it does not deserve. First things first. The demographic dimension is put into its correct perspective when we apply the Ricardian theory of rent and the Georgist fiscal policy, which resolves the spatial distribution of population by neutralising the monopolistic character of property rights in land. Again, referring to Figure 3, we see that if the grip of the Filipino monopolists on the best of land was loosened, a centripetal effect would be unleashed

that would attract people into the centre of society and onto the most fertile land, producing an automatic rise in living standards which (on the basis of European and North American evidence over the past century) would automatically encourage a downward pressure on the growth rate of fertility.

A spatial theory of population It appears, then, that the fundamental problem with which we are grappling is a systemic one: a flaw in the structure of a cultural pillar — the land tenure system — rather than the aggregated failures of many individuals feeding off a finite resource base.

We find, furthermore, that contemporary 'crises' — whether initially approached from an economic, ecological or demographic discipline — are best analysed in terms of the fusion of the Ricardian theory with Georgist policy. According to projections made at the beginning of the 1990s, another 1 billion people would be added to the world's population within 10 years. By 2,025, the population will have increased by 3.17 billion. The United Nations predicts that the total will eventually stabilise at about 11 billion people, but, given present fertility rates, the figure is just as likely to be 14 billion. In terms of our model, given that the reforms necessary to dismantle the global Malthusian trap have not been implemented, this means that billions of people will be marginalised, the rent of land will rise and *per capita* incomes will decline. (For a fuller discussion of this process, see the Appendix.) This is, indeed, a social Law of Immiseration. The few will become richer (they are the ones who own the land) and the poor (who have been dispossessed of their traditional rights of access to the commons) will become poorer.

Malthus would regard this centrifugal effect, this displacement of more people onto poorer soil or less advantageous locations, as inevitable; it isn't. He would, furthermore, regard it as proof of his original hypotheses; it isn't that, either. The forces that are generating this outcome are the direct result of the existing structure of property rights in land, which are not — as Malthus would have us think — so akin to natural rights that they must be left untouched. Whether they are reformed, and the nature of any change, are political issues within the purview of a democratic society.

Birth control policies Nothing that we have said counts against the wisdom of social policies aimed at stabilising the growth of population, a facility for which has been with man from primordial times. The degree of social concern will be dictated by the profiles of the growth rates within individual socio-ecological niches. But if corrective policies of a practical character are to be defined, it is imperative to discover the appropriate relative emphasis between direct influence over parents concerning the number of children they ought to have (assuming this can be determined), and the strengthening of those social institutions that have traditionally helped in the regulation of fertility rates.

Malthus sought to place the burden of responsibility on the individual. To be logically consistent, he had to deny government any significant prospect of success through direct intervention. 'It is to the laws of nature, therefore, and not to the conduct and institutions of man, that we are to attribute the necessity of a strong check on the natural increase of population.'⁴⁸

The social stresses engendered during the 19th century precluded Malthus's view from achieving a dominant influence over policy. The failure to institute substantive reforms to those socio-economic processes during this period led to the articulation of two streams of oppositional thought. These found their most powerful expression the 1880s. One was the socialist philosophy represented by Karl Marx. The other was the free market reforms advocated by Henry George.

With the eclipse of the socialist alternative, the perspectives offered by Henry George now seem to warrant re-examination. On the question of population, he compellingly argued that the account provided by Malthus — the 'instinct of reproduction, in the natural development of society, tends to produce misery and vice'⁴⁹ — had to be drastically modified. He claimed that we had to embrace the consequences of 'a third check which comes into play with the elevation of the standard of comfort and the development of the intellect.' To bring that check into action constitutes a challenge to the political process, for 'any danger that human beings may be brought into a world where they cannot be provided for arises not from the ordinances of nature, but from social maladjustments that in the midst of wealth condemn men to want.'⁵⁰

It is towards the clarification of this hypothesis that new research needs to be undertaken, to settle the controversies about the causes of poverty and population explosions that originated with Malthus. In particular, property rights in land require close appraisal. In this new debate on the problems that intimately relate demography and ecology it will not be easy to turn a blind eye to property rights. The public concern with the threat to the environment forces the vexed question of property rights into the heart of discussion. The challenge is to discover the way in which a transformation of property rights may lead to the reconstitution of culture into a stable form consistent both with the needs of humanity and the natural environment.

APPENDIX

Institutional Determinants of the Malthusian Trap

The fundamental 'social maladjustment' which Henry George identified in *Progress and Poverty* was the private appropriation of land rent. Given full private land ownership and a population causing the margin of production to be at M_1 in the graph (below), he argued, in effect, that society had the choice of initiating either of two opposing socio-economic tendencies.

Were the government to capture the rent of land for the equal benefit of all its citizens, it would initiate a virtuous circle in which the growth of incomes outstripped the growth of population. The increased productive power of both labor and land would create a powerful tendency for the margin of production to retreat inwards, towards the centre (i.e., from M_1 to M_3 in the graph). Malthus's own macroeconomic observations concerning savings and investment levels, George's analysis of optimal spatial distribution and Adam Smith's strictures on optimal taxation combine to explain how the Malthusian trap would be undone.

But if society were to allow full private land ownership to continue unabated without the fiscal disciplines of the land-value tax, the vicious circle — the 'natural tendency' perceived by Malthus which resulted in the 'iron law of wages' — would continue to operate. This pushes the margin of production ever outward into remoter areas, onto less fertile or higher-cost (e.g., transportation) land. This establishes the conditions for increasingly unsustainable activity. The concomitant waste of capital (to provide infrastructure on an extensive basis), and natural resources, does nothing for conservation of the environment, either.

In the graph, the wage (plus interest) level W_1 , at time T_1 , and the future prospects of the unskilled manual worker at the base of the wage structure, are low enough to make a large family appear a surer basis for material security than economic enterprise. The dismal Malthusian mechanism of population growth exceeding the growth of production is therefore triggered, which forces the margin of

settlement out to its sustainable limit (M_2) at current productivity levels. In time, and out of desperation, people will even migrate beyond this point to fragile environments where periodic famine and permanent depreciation of 'nature's capital' occur (between M_2 and M_4). Beyond this point, however, mere survival by normal cultural means is not even temporarily possible.

In this dismal situation, capital accumulation which raises *per capita* productivity is insufficient to allow the margin of production to contract to the point at which the wages of the masses are enough to encourage them to change their procreative habits. The Malthusian trap is still closed. The productivity increase ultimately serves only to extend the sustainable margin beyond M_2 (to M_2^1). Wages do not rise, and society is called upon (through the Welfare State, or foreign aid) to ameliorate the impoverished conditions of the displaced families by means of income transfers or charitable donations.

Malthus appears, therefore, to have put his finger on the *proximate* cause of the population crisis within the current institutional setting. Henry George responded to him by pointing to the *underlying* institutional cause.

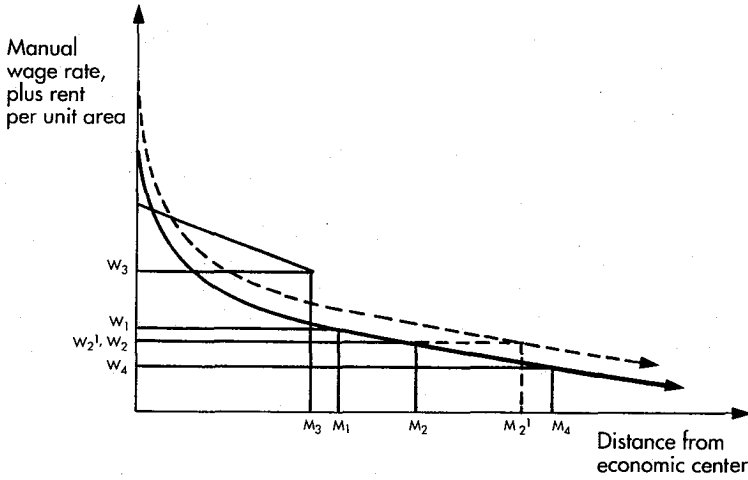


Figure 4

For graphical simplicity, W_1 , W_2 , etc., include both the absolute wages earned by an unskilled manual worker on a marginal site and the absolute returns to his capital. Competition turns the marginal wage into the going wage for all similar workers throughout the economy; it also equalizes the absolute returns to the same value of capital employed at all locations (interest rates are uniform throughout an economy). Hence, an unskilled manual worker working with the same value of capital produces the same value of output (W_1 , W_2 , etc.) wherever he works between the centre and the margin of the economy. In addition to the returns to labor and capital there is surplus output, rent, which accrues to the owner of land. The average rent per unit of land along concentric rings surrounding the centre of production tends to diminish with distance from the centre, so cross-sections of the rent in the economy are depicted in the figure by the triangular areas above the wage-plus-interest lines, W_1 , W_2 , etc. The triangular area above W_3 is drawn to depict how public appropriation of land rent leads to a more efficient use of land, an upward shift of the production curve, and a more even distribution of output between the center and the margin.

NOTES

- 1 Gore Vidal, 'Gods and Greens', *The Observer*, London, August 27, 1989.
- 2 J.E. Lovelock, *Gaia: a new look at life on earth*; (1979) page references are to the Oxford University Press paperback edition, 1987.
- 3 Phil Davison and Sharon Kingman, 'How the first AIDS case was unravelled', *The Independent on Sunday*, London, July 8, 1990.
- 4 Using Karl Marx's notion that 'capitalism' needed 'an army of surplus workers,' it might be possible to argue that factory owners would benefit from a breakdown in fertility control mechanisms. Marx, however, failed to explain how this could be materialised in a form that would influence behavior in the bedroom. On the other hand, we shall show that there is a perfectly good explanation for the scale of unemployed labor in the early period of the industrial revolution, stemming directly from the enclosure of the commons as a result of Parliamentary support for the new system of land tenure based on private ownership.
- 5 Quoted in Patricia James, *Population Malthus: His Life and Times* (London: Routledge & Kegan Paul, 1979), p.124.
- 6 Thomas Robert Malthus, *An Essay on the Principle of Population* (1798). Page references are to the edition edited by Antony Flew (Harmondsworth: Penguin, 1970), which contains *A Summary View*.
- 7 David Ricardo, *Principles of Political Economy and Taxation* (1817); page references are to the J.R. McCulloch edition London: John Murray, (1888).
- 8 *Ibid.*, p.5.
- 9 Quoted by Ricardo, *ibid.*, p.372, n.
- 10 *Ibid.*, p.251.
- 11 *Ibid.*
- 12 *Ibid.*
- 13 Fred Harrison, 'Longe and Wrightson: Conservative Critics of George's Wage Theory' in R.V. Andelson, *Critics of Henry George* (Rutherford: Farleigh Dickinson University Press, 1979).
- 14 Malthus, *op. cit.*, p.226.
- 15 *Ibid.*, p.234, emphasis added.
- 16 *Ibid.*
- 17 Malthus, p.245. This is a surprising defence of private property, given his description of private landowners as gentlemen of leisure prone to keeping their land idle for the benefit of blood sports. *Ibid.*, p.246. He did seek to ameliorate the implications of this under-use of land with his claim that private property secures to 'a portion of society' the 'leisure necessary for the progress of the arts and sciences' (*ibid.*). Artists and scientists did not pursue their objectives by leisurly means, of course, Malthus confused them with idle patrons, the rent-appropriating

- landowners.
- 18 *Ibid.*, pp.245-6.
- 19 *Ibid.*, p.246.
- 20 *Ibid.*, pp.268, 269.
- 21 *Ibid.*, pp.246-7, emphasis added. The demand-side character of this analysis may explain why John Maynard Keynes (1883-1946) was to side with Malthus against Ricardo. Henry George, taking the same facts, explained unemployment by pointing out the obvious: if landowners denied people access to the land they needed to generate their own wages, why seek further for the primary cause of unemployment?
- 22 *Ibid.*, p.247.
- 23 David Richards, 'The Greens and the Tax on Rent' in Richard Noyes, ed., *Now the Synthesis: Capitalism, Socialism & the New Social Contract* (London: Shephard-Walwyn; New York: Holmes & Meier, 1991).
- 24 *Progress and Poverty* (1879; centenary edn., New York: Robert Schalkenbach Foundation, 1979), pp.451-2.
- 25 Malthus, op. cit., p.246.
- 26 *Ibid.*, p.251.
- 27 *Ibid.*, p.268.
- 28 *Ibid.*, p.269.
- 29 *Ibid.*
- 30 *Ibid.*, p.270. This condition was presented in terms of the best interests of the laboring classes, whose 'natural tendency' was to 'increase beyond the demand for their labor, or the means of their adequate support, and the effect of this tendency to throw the greatest difficulties in the way of permanently improving their condition.' *Ibid.* Henry George's point was that, with the tax and tenure system favored by Malthus, there was no way the under-class would ever rise above the level of poverty, no matter how strictly they regulated their fertility growth rates.
- 31 Adam Smith, *The Wealth of Nations* (1776), pp.394, 400. Page references are to Vol. II of the Edwin Cannan edition (Chicago: Chicago University Press, 1976).
- 32 *Ibid.*, p.370.
- 33 The absurdity of the fiscal structure established by Pitt and his successors was dramatised in 1990 by the Thatcher administration, when it introduced the Poll Tax in England and Wales. The 120 workers on 12 government-owned farms (administered by the Agricultural Development Advisory Service, the commercial arm of the Ministry of Agriculture Fisheries and Food) were given pay rises to offset the new tax, which ranged between £250 and £500, according to locality. A clearer illustration of the worker passing on the tax to his employer — because he cannot bear the burden on his wages — it would be difficult to find.

That the government should incur the costs of clawing back money which it first paid to its employees raises questions of political pathology that are beyond the concerns of this essay. We must, however, point to the economic outcome, which supports Adam Smith's point. Because competition prevented the farms from raising the prices of their produce to offset the tax liability, the result had to be at the expense of the rental income appropriated by the landowner in this case, the government itself.

- 34 Joseph S. Keiper, Ernest Kurnow, Clifford D. Clark and Harvey H. Segal, *Theory and Measurement of Rent* (Philadelphia: Chilton Co. 1961), p. 30.
- 35 Antony Flew, 'Introduction', in Malthus, *op. cit.*, p. 12.
- 36 Newcastle schoolteacher Thomas Spence was one of those who, at the time, accepted the logic of the Smithian tax on the rent of land, and he advocated its adoption. Had the tax been employed as a major plank of government policy, owners would have been obliged to place their sites at the disposal of people who wanted to use them. This would have been unavoidable: how else could they have met their fiscal obligations? Urban settlements would not have sprawled, prime agricultural land would have been conserved, and the capital costs of providing infrastructure would have been reduced. Spence was imprisoned for his impudence. See Fred Harrison, *The Power in the Land*, London: Shephard-Walwyn, (1983), p. 30.
- 37 Thomas Malthus, *Principles of Political Economy* (1820), pp. 181-2.
- 38 Malthus, *op. cit.*, p. 247.
- 39 *Ibid.*, p. 248.
- 40 Paul R. Ehrlich and Anne H. Ehrlich, *The Population Explosion* (New York: Simon & Schuster, 1990).
- 41 Lockelock, *op. cit.*, p. 132.
- 42 Julian Ozanne, 'Kenya's family planning gospel wins too few converts', *Financial Times*, January 9, 1990.
- 43 Claude Ake, *A Political Economy of Africa* (London: Longman, 1981), p. 122.
- 44 World Bank, *World Development Report* (New York: Oxford University Press, 1990).
- 45 'Poor man's gold rush', *The Economist*, London, May 12, 1990.
- 46 Jan Perlez, 'Starving Children of Malawi Shatter Leader's Boast of Plenty', *New York Times*, April 3, 1990.
- 47 Sandra Postel, 'Halting Land Degradation' in Lester Brown et al., *State of the World, 1989* (New York: W. W. Norton, 1989), p. 38.
- 48 Malthus, *op. cit.*, p. 248.
- 49 George, *op. cit.*, p. 138.
- 50 *Ibid.*, p. 139.