Land, Culture and the Biology of Man

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Part I
Territoriality

TWO arguments are traditionally used against the private ownership of land:

1. This form of tenurial system can be economically very inefficient—as when urban land is left idle, while people live in slums or ramshackle caravans;

2. It is morally wrong for a few people to monopolise the natural resources on which a community depends for its very biological existence.

These are, in fact, just subsidiary parts of a larger argument against private ownership of land. In essence, the private appropriation of land is anti-evolutionary— a statement which, when expanded, will be seen to include the economic argument and to imply the moral one.

As we trace the various forms of land tenure, in Part II, we shall note that they become progressively complex as they adapt to new innovations which change, and sometimes improve, man's capacity for coaxing greater yields from nature thereby permitting increases in the size of populations. Underlying all these systems which pre-dated the right to alienate land are three fundamental principles:

Regulation: society, not the individual, determined

the structure of land tenure systems.

Distribution: benefits from land were shared out on a social, not an individual, basis.

Efficiency: individuals enjoying access to parcels of land did so for as long as they could show both need for, and use of, the land.

Thus, we shall see that individuals enjoyed rights of use, not outright ownership; that land was redistributed as changing demands for it—as with fluctuations in population—altered; and that the rules governing changes in use rights were vested not in individuals but in some wider social group.

Interest in land tenure systems goes beyond a narrow concern for any theory of property rights or economic modes of production. These systems, in fact, were integral parts of on-going processes in the human experience, processes intimately related to each other but which we shall separate, for analytical purposes, in the following way. They were vital for *social cohesion,* without which there would have been no stability to enable man's ancestors to develop a tool-using culture. They were vital for *conserving the ecological environment* within which man had his niche. And finally, they were of *biological importance,* in that they facilitated the evolutionary survival and development of man as the dominant member of the primate species. These can be properly understood only within the context of evolution, a few concepts of which need to be briefly stated.

1. *Evolution*

Man, and his cousins the monkeys and apes, have a biological history — according to archaeological evidence — going back about 50 million years. They must be understood as products of an evolutionary process, which takes the form of *adaptation.* Alland defines it thus: "Evolution is a process through which

systems develop and are modified in relation to specific environmental backgrounds. All the theory requires is that there be mechanisms of variation (producing new variables) and mechanisms of continuity (preserving maximization) present in these systems and that these systems be subject to environmental selection."

The process of evolution is in the direction of maximized efficiency within the context of ecological niches. "Species which are able to maximize their self-regulatory capacities in relationship to more generalized environments may widen their niches and override previously successful species. Warm-blooded animals, for example, spread into a wide range of environments differentiated by temperature competed successfully with less well-adapted cold-blooded forms." Alland adds: "A higher degree of maximization means that more individuals can survive and exploit an environment."

Life has existed on earth for over two billion years, and the fossil record shows that there has been an increase in the total number of species—the result of continuous and successful specialisation of species into specific ecological niches. Some have failed to sustain the process of adaptation, and are now extinct; man is a relatively new species, with a distinct record going back about two million years. He has come to dominate earth in the way that no other creature has been able to, through exploiting the second of two major types of adaptive behaviour in the animal kingdom: learning. Through the medium of culture, man has reduced his dependence on the primary mechanism—innate responses, or instinct. Thus, as a culture-bearing animal, he stands at the opposite end of the developmental scale from simple organisms like the one-celled protozoa in which even innate behaviour is limited to a small range of responses.

We have to be careful not to assume that evolution has been a simple process, a linear one moving from simple organisms to complex man. Nonetheless, evolution is directional, taking the form of adaptive sequences. And man, thanks to his culture, is the most complex of creatures (measured in terms of the different environments in which he can live, and the numbers of people he can support).

Culture is so crucial in the process of human evolution that we have to stress that it has been part of the total environment within which man has had to adapt himself (Dubos). For example, man's bipedal gait freed the hands from locomotive activity; this enabled the human hand to develop the opposable thumb for gripping tools, the fashioning and use of which required the development of the brain.

In a sense, then, which is not true of other creatures in the animal kingdom, man has helped to make himself. Diet is an example worth citing, for it can be related to the aspect in which we are interested—territoriality. By hunting for, and eating meat, man's ancestors accomplished two things. First, they acquired animal protein high in energy-giving calories. Secondly, to be successful, hunting had to be arranged on a cooperative basis, which in turn influenced social organisation. We are specifically interested in the cultural systems of land tenure which sprang out of the instinctual behaviour called territoriality.

2. *Territoriality*

Lancaster defines territoriality as "the maintaining of exclusive access to a home range from other members of the species who do not belong to the same social group, usually through active defence or aggressive display." This part of the story of natural evolution, of the connection between social groups and specific territories, goes back "several hundred

million years to palaeozoic times, and has taken a major part in shaping the course of animal evolution," according to Wynn-Edwards in his influential study of *Animal Dispersion in relation to social behaviour.*

The concept represents an extremely complex interaction between organisms and their physical environment (although it is popularly represented by a Stone Age man, axe in hand, standing at the entrance of his cave ready to take on all-comers). The biological foundations of territoriality and related phenomena are most thoroughly reviewed in Chapple's *Culture and Biological Man.* The problem for primates, other mammals, and fish and birds, is to locate themselves in spots where they might eat, procreate and be safe from predators. Chapple emphasizes that "wherever they may locate themselves, this location is partly controlled by those others with whom they react and interact"; and furthermore, the site chosen "has its own special properties. These play an essential part in maintaining an active neurophysiological state."

Chapple lists two factors at work in the individual organism's identification with a territory:

(a) The familiar environmental setting is crucial to the arousal of the reticular formation of the brain—which is central in controlling the orientation process of one animal towards another. "Without such environmental settings within which adequate outlets for spontaneous activity can be obtained, the organism can undergo severe physiological trauma. Reliance on the familiar, safely providing the intermediate states necessary for dynamic equilibrium, in fact enables the organism to function at a level approaching its optimal state." Organisms identify with, because they are adapted to, their ecological niches.

(b) The self-regulating behavioural mechanisms used

by an organism as a result of interaction with the environment produce emotions associated with the territory. Take, for example, the problem of producing a stable population. Population growth is controlled by the way in which crowding, resulting in territorial conflicts, influences the endocrine system and so the appropriate physiological functioning of the organism.

The interplay of organic, social and ecological factors produces a beautiful harmony in nature (called homeostasis), a balance which permits stability in specific groups and long-term conservation of their environments. This creates the conditions for survival and evolutionary development.

3. *Animals*

Heape, as early as 1931, boldly asserted: " . . . although the matter is often an intricate one, and the rights of territory somewhat involved, there can, I think, be no question that territorial rights are established rights amongst the majority of species of animals. There can be no doubt that the desire for acquisition of a definite territorial area, the determination to hold it by fighting if necessary, and the recognition of individual as well as tribal territorial rights by others, are dominant characteristics in all animals. In fact, it may be held that the recognition of territorial rights, one of the most significant attributes of civilisation, was not evolved by man, but has ever been an inherent factor in the life history of all animals."

Research has since fully substantiated this assessment. Many creatures have been studied, from three-spined sticklebacks to Southern Michigan wood mice, from the Uganda kob to the Swedish thick-billed nutcracker. (The most readily accessible bibliography appears in Ardrey.) Various methods are used to stake out the territorial boundaries (for example,

mammals and the use of scent, birds and the use of sound).

One of the first researchers into the territorial behaviour of animals, zoologist William Burt, defined at an early stage the crucial importance of staking out and sharing land. Territorial behaviour, he observed, was important for regulating food supplies, controlling the density of populations and—through dispersal—minimising the effects of plagues. After the early field studies, based on observation through binoculars, experiments were conducted which yielded fascinating data. Carpenter, for example, manipulated dominant members of a troop of rhesus monkeys.

> "The relation between the maintenance of a group's territorial range and the dominance status of males in interacting groups was clearly shown . . . . After I had defined the dominance rank for the seven males of Group 1 on Santiago Island, I captured and held in confinement first the most dominant male, then the next most dominant and then the third most dominant male of the group. I observed this group almost continuously for five consecutive days following each removal of a dominant male. The first and most important change which followed the removal of the most autocratic male was a marked reduction in the territorial range of the group. Whereas, Group 1 had previously not only had a relatively exclusive territory but also at times ranged freely throughout the territories of the five other groups on the Island, especially at feeding time, now Group 1 was confined to its own limited range within a coconut grove. Clearly the wider freedom of group movement depended upon the dominance of Group 1's supremely dominant male relative to the most dominant male of neighbouring troops."

We know that animals which find themselves in

the periphery of their territory react as if they were feeling insecure and they become most aggressive and self-confident against intruders when standing in the centre of their territory. (Thus, animals on their home range almost always win in any conflict situation, even when the intruder is physically much stronger.)

The limitations imposed by having to be physically present to observe animal behaviour have now been partly overcome. Deer, among other animals, have been tracked by means of radio communication: and it is even possible to use satellites to track polar bears.

4. *Ideology*

The concept of territoriality, in its application to the human species, is a controversial one. There are two principal reasons. The first is that we have only begun, in the last two decades, to scratch the surface of the cultural and biological implications of territoriality for man; much more empirical research and clarification of concepts need to be undertaken.

The second reason is that the notion of territorial behaviour has been partially distorted — with the greatest interest being shown in aggression and the establishment of hierarchical systems—and used ideologically. The man who has done most to both popularise and damage the concept is American playwright Robert Ardrey.

In *The Territorial Imperative*, Ardrey argues that the territorial behaviour of animals validates the argument for private ownership of land in human social systems. As proof, he cites the agricultural yields from collectively-run state farms in the USSR, which compared very badly with the economic performance of small family-owned farms in the USA. He states:

"In any final inspection of the Soviet-American ex-

periment with the territorial imperative, one might thumb through statistics as dreary as they are endless to demonstrate the superior efficiency of the man who owns over that of the man who shares or works for wages."

This reasoning is based on faulty logic; for if it were true, we would have to find a statistically significant difference in the performance between the tenant and landowning farmers of the UK or the USA: such a difference does not exist. But since Ardrey emphasises *peasant* farmers working harder if they own their plot of land, we can produce an interesting piece of evidence against his ideological stand. Chayanov, a Russian agronomist, carefully studied the economic performance of peasants in the last decades of the nineteenth century. He found that, for various reasons, peasants who owned their land curtailed their labour inputs at an earlier stage than peasants who had to pay rent for their land. Yet according to Ardrey's interpretation, the reverse ought to have been the case!

It is the perverse use to which Ardrey puts what he calls "the biological value of the pair territory" which has given critics ample opportunity for diminishing the value of territoriality as a biological mechanism regulating (in part) the behaviour of man (Alland, 1972). Freedman, a professor of psychology, who recently examined Ardrey's work, boldly asserts:

"I hope this makes clear how misleading this argument is as evidence for the existence of an innate territorial imperative in man. Unfortunately this is the kind of argument and the kind of evidence that is often presented as 'proof' of innate biological mechanisms in human beings."

In fact, the weight of evidence so far accumulated is sufficient for us to firmly declare that man does, in

part, react to a biologically determined pattern of behaviour which we call territorial. In Part II, we shall examine examples of how that territorial faculty has been adapted to increasingly complex cultural developments, in order to serve the long-term social and biological interests of the human species.

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Part II

Cultural Adaptations

MAN is a territorial creature, by which we mean he defends a certain space in order to guarantee a secure food supply, ensure social stability and conservation of the ecology on which he depends for survival. Yet the concept of territoriality has been reserved as a defining characteristic for the political state.

"Stateless" societies are popularly defined by anthropologists as *kinship* systems, with blood relationships regulating social interaction. States are defined as *territorial* systems, in which people derive their identities from residence in a precisely delineated geographical area.

These definitions distort our understanding of man's evolutionary history and of the present-day human condition. For, as we shall show below, societies which pre-dated the political state were in no way less territorial than the modern state; and, as will be pointed out at greater length in Part III, the modern state is today fragmenting precisely because of the pull of kinship and culture, which are not finding adequate expression within the context of the political "territorial" state.

There was, however, an important qualitative dis-

continuity in the relationship between man and land with the emergence of the Western political state, which is traceable back to the classical traditions of European civilization. We can use Soja's useful generalisation, in which he notes that in earlier systems "there was a social definition of territory rather than a territorial definition of society."[1] Before the influence of Europe, man viewed (and interacted with) territory at the social and biological levels. Then came the momentous change. "There is a distinctive bias or distortion of the way Americans and Europeans tend to perceive the political organisation of space. Conventional Western perspectives on spatial organisation are powerfully shaped by the concept of *property*, in which pieces of territory are viewed as 'commodities' capable of being bought, sold or exchanged at the market place. Space is viewed as being subdivided into compartments whose boundaries are 'objectively' determined through the mathematical and astronomically based techniques of surveying and cartography," writes Soja.

The important point here is not that modern man has found a way of precisely staking out territorial boundaries; for primitive men are able to pin-point their boundaries using trees, hills, rivers, rocks as are mammals (for example, through the use of glands to deposit scent at the limits of their territory). Rather, the important element is the historically new development of viewing land as something to be alienated, disposed of without reference to the needs of others or to the rights of a larger group. To quote Bohannan: "The African view of terrestrial space tends (there are half a dozen exceptions) to be one based on the regulation of social relationships. The Western view of the same space is irrevocably based on exploitation. . . ."[2]

1. **Tenurial systems**

We describe below some of the tenurial systems which regulated man's relationship with his territory, so that the principles that have operated may be understood. The material is classified into four categories, which fall into two main groups. The first

FOOD SOURCE	SOCIAL ORGANIZATION
A. Gathering	Dispersed Bands
B. Hunting	Concentrated Populations (tribes)
C. Low-yield Agriculture	Dispersed Villages
D. High-yield Agriculture	Concentrated Populations (towns)

two are "situationally fluid"—they entail movement in the pursuit of food, and of living *off* the land. The second two are sedentary systems, and entail the cultivation of land (i.e, harvesting the rewards after sowing seeds). The broken line serves to emphasise the momentous discontinuity in the value systems which dates from the arrival of the Agricultural Revolution and the demand for private ownership of land.

A. Gatherers

Primitive man, like primates, relies in the main on gathering his food from the trees, the bushes and roots from beneath the ground. The social organisation most efficient for this purpose is the small band of people numbering between 25 and 50, dispersed within a territory and living off food found in predictable locations. But this does not imply an

anarchic situation with small bands wandering around in purposeless fashion. Rules operate. (Mercer[3] calls territoriality a "primitive rule system").

The idea of a fair distribution of resources exists. Wilmsen, in an important article on territorial behaviour, states: "Spatial allotments to each band unit appear to be demarcated in such a way that access to several different plant producing areas is assured. Compensation is thus made for fluctuations in real productivity, and consequently each group has an appreciably better chance of meeting its requirements for this type of resource. Steward documents the way in which band territories among the Owens Valley Paiute were oriented across the valley so that each spatial unit included substantial portions of the different botanical zones that were present. Family-owned pinenut gathering plots were arranged to include both early and late ripening sections so that all families were assured rough equivalent of access to this important food."[4]

Territorial demarcations, stresses Wilmsen, defined *use rights*, which continued for so long as the users demonstrated their need for access to nature's fruits by their actions—going and taking and eating them. The idea of not needing the food resources from a tract of land, but nonetheless seeking to exclude others (or allow them access only at a price) simply made no sense to primitive peoples—such behaviour was the product of a later civilisation.

The rules which operated were not written down in statute books, but were of a natural kind based on primordial custom. Diamond: "It is premature to say there is 'ownership' of land or goods. The question is, who has the right to hunt or gather food upon a tract of land; who has the right to share in the hunted prey or who can exclusively take or use without permission the few available goods. The

answer is governed by the situation that whatever is regularly or generally done is considered rightly done, whether it is prompted by natural human emotion or social interests—or, as is usual, both—and the right of one person is limited by the rights of others."[5]

B. Hunting

In evolutionary terms, hunting—made possible by the development of tools—followed the practice of gathering food. In hunting bands, the element of exclusivity over territory evident in other species, and described in Part I, is held to be weaker. First, as Diamond states: "The Early Hunters, indeed, have less notion than the Food Gatherers that a defined hunting territory belongs solely to a family, a band or a tribe. . . ." Second, a new element is perceived: mobility of people between bands. This does not constitute evidence for the elimination of territorality. It does, however, tell us how early man augmented his biologically-based territorial behaviour with cultural variants, which enabled him to extend his influence over the earth.

Hunting, as a means of acquiring high protein animal food, entailed a new form of social organisation, and new behaviour. The most efficient form of social organisation—given that the quarry is usually on the move in usually unpredictable directions—is one in which populations are concentrated into larger groups; this especially applies where the source of food is a large mobile species moving in herds (e.g., bison).

We can adduce an explanation for mobility between groups from the dynamics of hunting. Washburn and de Vore state: "Human hunting is incompatible with the kind of society that does not allow any of its members to leave the group. When hunting, one or a few men must leave the band, sometimes for days, and the hunters of the Middle Pleistocene

could not have been living the same kind of group life as did the nonhuman primates."[6]

The development of language and cultural mechanisms such as exogamous marriage and rules of residence facilitated and regulated movement of individuals between groups. But the empirical position is summarised by Anderson: "Association between a named land area and a fairly stable social unit is common, whether the centripetal factor is a totemic spot, a resource place, a water hole, or a 'home base', i.e. a relatively limited range within a wider area to which the activities of aged, young, sick and reproducing persons are restricted."[7] If aggressive defence of territories is less evident in primitive man than in other species, this can be attributed to the use of new forms of communication—ones based on culture— which lessened (but certainly did not remove altogether) the need for physical and/or acoustical methods of warning off intruders. (Wilmsen: ". . . the equation of territoriality with aggressive behaviour is overly restrictive and masks important aspects of this phenomenon. . . .")

The ultimate reason for mobility is to be found in the need to equalise resources. If one area is well populated, and another is relatively under-populated (in terms of the numbers that the ecology could support), it comes as no surprise to learn that there is an exchange of people. Mobility across territorial boundaries, then, is simply a human expression of a natural law: sharing the fruits to the best advantage of the whole population. This serves a dual function:

(1) It ensures a continuation of homeostasis in a natural system (human groups, including hunters, within the context of their ecology);

(2) It enables individuals and families to maximize the fulfilment of their wants within the context of short-term fluctuations in resources and conditions

of life.

The advent of hunting, far from altering the territorial basis of man, merely changed the size of the land required. Washburn and de Vore observe: "If strangers hunt game, or even disturb it, scaring it from its normal routes, the plans of the local hunters are ruined. Hunting man requires a large area free from the interference of other hunters. When man became a hunter, his relation to the land changed from one in which a small range was adequate to one that demanded a large territory." Wilson reports that, according to the "rule of ecological efficiency", roughly ten times more area surface is needed by hunters compared with peoples living off plant food.[8]

C. Low-yield Agriculture

Agriculture arrived as recently as 10,000 years ago. Now, arid regions could be artificially irrigated to yield rice; cattle could be husbanded, and crops could be grown. This portented a dramatic change in the territorial activities of man. But while rights of property were sharpened up, the right of individuals to alienate tracts of land did not exist. Social rights of tenure were loose, in the early stages, because land was abundant—but the underlying principles, of equal distribution, and claims to possession based on use, remained firm. New rules were developed: those of inheritance, for example, to provide for orderly succession of possessory rights.

Elementary farming includes the wasteful slash-and-burn techniques, in which farmers chop down a clearing in a wooded area, burn the vegetation and grow crops for a year or two before moving on. Grigg states: "The land tenure systems of shifting cultivators are extremely diverse. But most of them include the following concepts: land belongs to the tribe rather than to individuals; boundaries with neighbouring groups are well-defined physical fea-

tures; the allocation of the communal land is undertaken by the tribal chief, but every member has a right to land. Each individual has the right to the products of his swidden—usufruct—as long as it is being cropped. When the swidden is left to fallow, rights to it lapse, except for the fruit of perennial trees. The idea of the alienation of land has been, until recently, completely unknown."[9]

Problems associated with the fact that land is of varying fertility arose when man learnt the art of nurturing the ground to yield food over longer periods —digging it, watering it, caring for it, and being seasonally rewarded with crops. We illustrate the point below. Along the horizontal axis we chart plots of land, with tract A yielding very much more than D because of its greater fertility (we here assume equal inputs of labour). Yields are measured on the vertical axis, and OX is held to be the minimum product necessary to sustain an economic unit.

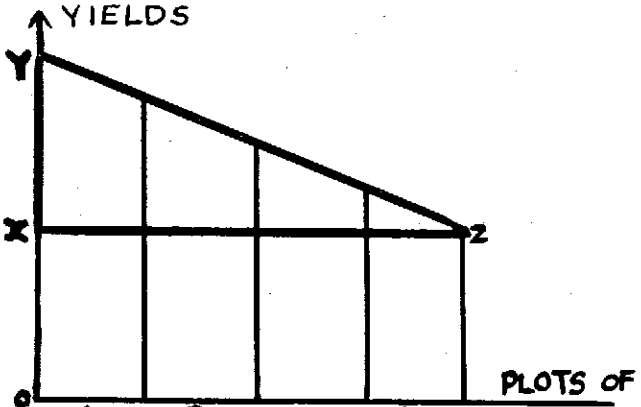

FIG.1

Who should have plot A, and who would be left with plot D? In an unjust society, the decision

would be decided on the basis of the sword—the mightiest shall possess. But this was not the rule ordering the affairs of pre-"civilized" men.

One formula was the straightforward division of land, so that members of a co-operating community —organised on village lines, and structured on the basis of feudal or kinship bonds—had strips from the various grades of land. A well-known model of this is the open field farming of the English Middle Ages. Another example has been described by Leach,[10] and applies to arid zones which rely on artificial irrigation. Leach closely studied one village, Pul Eliya, in the dry area of northern Ceylon, and showed how each economic unit had two strips of land—one from among the most fertile strips adjoining the water reservoir, another from the less fertile land downstream from the reservoir.

Another approach consists in periodically re-allocating the various tracts of land, so that each member unit of the community enjoyed the benefits of the A grade land, then moved on to the B grade and so on down to D grade—before returning to A grade. Obeyesekere has described in detail a traditional community operating on this basis in southern Ceylon, which enjoys a wet climate.[11] We quote his account of the ideal model because it highlights a critical problem facing agricultural systems where the supply of land is fixed:

"Theoretically, then, the original 'owner' of any *gama* (village) is its founding ancestor. On a kinship chart the founder would be at the apex of a triangular scheme. But there is no physical partitioning of the estate. On the contrary, the founder's sons will have equal shares or *pangu* of the estate. The characteristic of *pangu* is that like stock-market shares they are not 'fixed', or attached to any single area of property or land; the shares are 'floating'. Thus a de-

scendant who works a share does not work a fixed partitioned area of the estate; rather he works on a rotation basis, so that every year he moves to a new area, till the whole length of the field is covered. This is based on the equalitarian ideology governing the concept of shares or *pangu*: one has shares in the *gama* as a whole, hence one must have access through a period of years to the total area of land, ensuring an equitable distribution of both fertile and infertile land among the respective shareholders. Shares or *pangu* are defined as fractions of the total area of land. It follows that with the increasing number of heirs at every descending generation from the founding ancestor, the number of shareholders would increase resulting in an increased fractioning of the estate."

The rise in population of a village causes fractioning into many shares which, as Obeyesekere stresses, makes the rotation scheme unworkable or unwieldly. The practical solution for traditional societies was for someone to leave his village (when it had reached a demographic upper limit) and clear wasteland elsewhere: he founded a new village, based on the equal distribution of natural resources. Faucher[12] has neatly described this process operating in Russia—producing, in effect, an account of incremental migration through the establishment of new villages radiating outwards from existing centres of population.

But what happens when the freely available land runs out? Since depriving future generations of their equal share of nature's resources is incompatible with the foundation principles of natural, including human, societies, a new mechanism for allocating them becomes necessary: what form should it take? What system comes closest to the historical ideal of egalitarianism and of compatibility with the prin-

ciples we itemised in Part I?

D. High-yield Agriculture

Besides the finite supply of land, another challenge presented itself with the agricultural revolution in the 17th century. New techniques and technology were discovered which dramatically altered the farmer's potential output. But in order to produce higher yields, with which to support larger populations or higher living standards (or both), the farmer needed time: that is, he needed longer possession of specific tracts of land into which he could invest capital and on which he could use agronomic methods, and be certain that he would be able to reap the rewards as they came to fruition over an extended period of years.

Open field farming, with its scattered strips and periodical reallocation of plots based on demographic need, was an unsuitable system. For, as Flinn put it, "In protecting the weak, it inevitably hampered the strong and enterprising."[13] But did this mean part of a community (the weak and unenterprising, in Professor Flinn's terms) should be sacrificed to ensure the advancement of the rest? The empirical answer is known to us all: yes. For the solution which was adopted to enable the exploitation of science and technology was absolute ownership of land: which, in turn, necessitated the exploitation of people.

Need it have been so?[14] In terms of Figure 1, was there some instrument available to ensure the equal distribution of the product contained in the triangle XYZ—the economic surplus arising from differential fertility—while *pari passu* securing for farmers the long-term possession of land? The answer was well-known to the kings and politicians and philosophers of the time: a simple fiscal solution—the tax on the economic rent of land—would have served, and in doing so would have accomplished two things:

(1) Equalised the opportunities of labour and capital (the XY line in our figure would have risen, to provide for a return on capital envestment);

(2) Produced a revenue which would have constituted the natural source of expenditure for social purposes.

2. **Value Systems**

Underlying the historical phases of change which we have sketched were—as we saw—certain underlying principles which remained firm. These were sacrificed with the advent of private property in land. This one change constituted the single biggest, and most destructive, change in man's history; for it destroyed the material foundations which underpinned the value systems developed by man to sustain his survival and evolution over hundreds of thousands of years.

Gluckman,[15] and other anthropologists, have noted the striking similarities in ideas and institutions which have manifested themselves in widely distributed areas among human beings. We have seen how these ideas include the notion of equality in the access to life-giving products of nature (not always articulated—but we can ascribe it on the basis of observed behaviour); of fair dealing, of sympathy and a willingness to help those in need—all the product of basic social and ecological conditions. There was *nothing* about the circumstances of the Agricultural Revolution which warranted a total break with the ideas and institutions which had hitherto served man so well. All that was needed was an adaptation to the new conditions via a suitable (and, as it happens, not so new) mechanism. From there, we would have witnessed a wonderful success story based on scientific and technological pioneering—yielding higher living standards for all, the freedom to attend to civilised arts, reduced dependence on the vagaries of the

weather.

Instead, private property in land produced misery. There was a new *distributional* problem—while some luxuriated, others starved. There was a new economic *efficiency problem*—while some landowners held their properties idle, speculating on the prospects of higher returns in the future (in part arising out of the scarcities they created), other people found themselves landless and so workless. There was a new problem of *social cohesion*. While an elite appropriated political power through the exercise of property rights, others were forced to regard themselves as "lower classes", aliens in the society within which they laboured.

By conceptualising man inside a system which embraces the social and ecological dimensions, we are able to see how ill-served he has been by the modern land tenure system. It is from these facts that we are led to the moral concept that land ought not to have been monopolised by a few people who were free to disturb social and ecological harmony. In Part III we shall review some of the problems caused by the disregard for ancient territorial behaviour, and we will elaborate the argument that private ownership of land (by which we mean the private appropriation of what in a monetarised market economy is called rent) must be dropped if man is to survive the cataclysmic challenges with which he is now confronted.

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Part III

The Future

ASCRIPTION of rights to land to all groups in human societies, up until recent times, constituted the mechanism for ensuring stability: for it guaranteed material security for everyone. Social structures were not rigid, but were flexibly tailored to ensure a high-level adaptation to the natural resources on which mankind depended for his survival and evolution. But never was the right to life, through guaranteed access to land, sacrificed.

Disruption of traditional land tenure rights brought about dramatic changes in social relationships. The depth of those changes have not yet been fully plumbed: but the consequences have been injurious.

We are familiar with the agonising social and economic results of the Enclosures in Britain. Some of the impact on us is lost, however, since the processes dragged out over many decades. But there are recent examples which we can examine. One, a tribe in Morocco—the *Ait Ndhir*—find themselves and their social constitution presented with a similar breakdown: "Massive acquisition of tribal land for agricultural colonisation and the forced introduction of private property . . . led to the breakdown of the

tribal framework and . . . the formation of a landless, anomic rural proletariat."[1]

Competition between traditional values and practices and those invoked by modern judicial systems based on the European model, gives rise to profound social and psychological disorientation. Sharman has detailed such a conflict within the *Adhola*, a tribe in Uganda.[2] She shows how land disputes can be settled by the clan chiefs, but in some significant way altered in the courts. There is a direct conflict over the principles to be applied by these two sources of authority. While the clans are concerned to emphasise the rights to *use* land, "The government courts uphold the right of individuals to alienate land over which they have rights of allocation. and to allocate land without reference to their traditional obligations."

Unscrupulous members of the tribe, who think they might succeed in litigation, can enhance their proprietary rights by going direct to the courts, which "do not distinguish between rights of alienation, rights of allocation and rights of use, so that where rights of use are upheld they are transformed into rights of administration and alienation."

The clan chiefs. not surprisingly, were dissatisfied with the conflict between the two approaches. They wished to retain the traditional system of multiple rights based on personal status. whereas the courts conducted their reasoning on the basis of contracts and absolute rights. While the traditional system could protect the rights of those who needed, but lacked land, the government courts disregarded need and favoured those who possessed, and could produce proof of a right to the use of a piece of land.

Groups in conflict

Conflict over land at the individual level is paralleled by conflict at the higher level of groups. The

causes, however, are frequently disguised (religion is a favourite "explanation" of friction). For while the cause of tension in relatively simple societies like the *Ait Ndhir* appears clear enough, where cause and effect have been telescoped into short periods of time, problems arise when we turn to complex societies like the UK. We shall refer to two problems, Ulster and the devolution of power.

The working class people of Northern Ireland are daily at each other's throats; horrifying murders are now routine events. The cause? The most potent theory for criticising Western political democracies, Marxism, is rendered mute. For according to that ideology, the working class (comprised of Catholics and Protestants) ought to be united in directing its fury at capitalists—not each other.

The demand for devolution of power to Scotland and Wales and even the regions of England (with some people in Cornwall already claiming the ancient right to set up its own Parliament) is threatening the political stability of the rest of the UK. Why, after centuries of political and economic unification, do the Scots and Welsh vigorously demand recognition —institutionalised in Parliaments set up on their own soil—of their differences?

Orthodox political science, placing emphasis on institutions, on administrative efficiency, on the disbursement of benefits, is no better equipped to explain these phenomena than Marxist dogma. The explanation has to be sought in the primordial territorial loyalties of groups of people, the complex elements which give them their identities and constitute their unique cultures; these are the things which lead them to challenge the sanctity and strength of the modern political state.

Only by a thorough understanding of the synthesis (through evolutionary time-scales) of groups of people

with their physical environment—an interaction which heavily determined the substance of their cultures—can we understand why thousands of *Ibos* gave up their lives in a bid to separate from Nigeria; why the people of East Pakistan insisted on breaking up the state of Pakistan to create their own territorial identity, Bangladesh. Similarly—but in the opposite direction—why so many peasants of North Vietnam died in their bid to unite with their kin in the south; why so many citizens of Cyprus identify with Greece as their motherland.

Only then can we see how the transformation from communal rights to land into private rights has been a fundamental cause of disequilibrium in social systems. Only then can we understand the dynamics of change in the contemporary world, which are seeking to undo the work of the European powers which over three centuries have amalgamated territorial peoples into artificial political unions within borders which have no cultural or biological validity. Only then can we begin to get down to the work of redefining rights to land which, harmonised with the fundamental principles developed over not thousands but millions of years, will serve the future interests of mankind.

Ancient and modern societies

Societies have functioned as stable units because they implicitly recognised the need for a communal basis to land rights. These rights, as we have seen, subsist in groups—rather than individuals—and are founded on need for, and the actual use of, land.

These latter principles are abstracted from land tenure systems in their various forms employed throughout time in contrasting ecological environments. Their persistence has not been due to a convenient accident. They were built into the genetic structure of man the social animal. There is no

other way to account for their presence in different social systems and persistence through time; only now are we beginning to understand the significant causal relationship between genetics and cultural forms. As Hamilton affirms: "Thus we would expect the genetic system to have various inbuilt safeguards and to provide, not a blank sheet for individual cultural development, but a sheet at least lightly scrawled with certain tentative outlines."[3]

The challenge to man today is to undo the mistake of our (comparatively recent) ancestors, and transform rights to land back to their multi-dimensional form (serving the interests of both the individual and of society) and to ensure that possessory rights are grounded in need and use. We argue that the system which meets modern needs takes a fiscal form: the distribution of land values among the community through the taxation system—the taxation of land values, which was effectively the system adopted by human civilisations extending back several thousands of years. We can examine the efficacy of our proposed solution in the context of some of the awesome problems which need to be—and eventually must be—tackled. We shall examine two (related) problems: food shortage, and despoliation of the environment.

The UN estimates that about 460 million people—about 15 per cent of the total world population—are suffering from malnutrition. If anything, this is an under-estimate. Now one way of tackling the problem is the creation of more family farms on the huge tracts which are either idle (but privately owned, therefore excluding those in need) or, through their very size, are farmed at below optimum levels. Land reform programmes in the third world aim to resettle people on to land. Where this is actually accomplished, two main results can be discerned:

(1) less pressure on urban areas, and (2) increased food output, due to improved productivity.

But what of the people who are not included or who are left behind in the urban slums? Are they to be denied a share of the benefits? And why should those on the land be free to enjoy the higher economic rent which results from increased yields? An *ad valorem* land tax slices a part of the farmer's income away from him—the part he had no hand in creating—and enables a government to disburse it for the well-being of the whole community.

And now, the ecological hazards facing mankind. From north-west India, to Senegal and Chad in Africa, the sands of the deserts are creeping over the natural fertility which sustains life. Peasants in highland Pakistan and the valleys of Indonesia cut down saplings for firewood and trigger off soil erosion which in turn floods the fertile plains, silting up the irrigation channels and smashing the ecosystems built up over millions of years. The lesson is clear: somehow, to restore the earth to its natural fertility, man has to engage in a gigantic crusade aimed at conserving the existing environment—only then can the deserts be pushed back.

But who is to undertake such a task? Individuals have neither the strength nor the resources. Clearly, it must be a communal task. Let us assume, then, that man has the wisdom to undertake such a land reclamation project; let us assume that the resources are channelled into developing the skills which enable us to turn infertile soil into lush gardens of wheat and fruit. Who should own that land? Which theory of property rights is consonant with the objective?

It would be anathema to justice if such land, having been converted from desert to grassland, were owned privately by individuals! Ought it not to be recognised as the property of the whole community? And

yet, the physical work of watering and planting the edge of the desert would be performed by individuals, people who loved the land, enjoyed lives paced by the seasons of nature: these people, too, must receive their rewards. How can their interests be harmonised with the rights of the community? Again, we can reach no conclusion other than the institution of a tax on the value of land. For this fiscal measure both guarantees returns for labour expended on the land, and ensures the creation of a social fund from which to finance the arts of civilisation (which include the development of knowledge and resources for pushing back the encroaching deserts).

In search of answers

The foregoing conclusion may seem self-evident; yet the ethic which dominates the non-communist world today is that of private property which, when related to land, is barely decades old in most countries of the world, and only a matter of hundreds of years old in a few European countries (though traceable back to its socially-significant origins in the Classical world—with which, not surprisingly, we associate slavery on the massive, institutionalized scale).

It was the new ethic of private property in land which turned brother against brother, and suspended the biosocial constraints which inhibited groups from coveting their neighbour's territories. It was in immediate need of correction from the moment that John Locke gave it philosophical respectability. And yet, apart from the remarkable efforts made by Henry George in the latter part of the nineteenth century, the idea that it was legitimate to own land despite the needs of others has gone substantially unquestioned.

Hitherto, the challenges to the ethic of private property in land have been founded on religion (which

in this scientific age is for many people an unacceptable basis for implementing drastic reforms) or on the overkill dogma of socialism.

The past twenty years, however, have seen the accumulation of a vast store of new knowledge, pieced together by archaeologists, anthropologists, biologists, ethologists and other scientists. This information enables us to launch a devastating attack on the sanctity of private property in land—an attack scientific in approach and marshalling the history of all territorial species (not just man) behind it.

Unfortunately, the scientific evidence has not been used to best effect because the interpretation of the results have been ethnocentric—seen through the eyes of men conditioned by European culture. Note, for example, this passage from Wynne-Edwards' book *Animal Dispersion*:

"It can be surmised that, as the society increases in size and complexity, with the growth of personal and family wealth in servants, cattle, land, domestic equipment, robes, jewels and gold, and with the consequent widening of range in social standing between the richest and the poorest, the noblest and humblest, the principle of heritable possessions becomes firmly established. It follows, necessarily in a simplified and largely sex-limited manner, the natural course of inheritance of genetic factors from parent to offspring, and has grown out of the general custom in animal societies that property held by the social unit is retained in their possession by each succeeding generation."

Wynne-Edwards here uses biological and ethological evidence to justify private ownership of land. In doing so, he makes some fundamental mistakes in his interpretation of the evidence.

First, he fails to distinguish between the private ownership of artifacts and of land. The former,

created by the effort of individual labour, may claim validation from the evidence of history: the most primitive societies have recognised individual property in tools and clothes. But no such warrant could be claimed for the private ownership of land.

(2) He makes the indefensible leap from the historical experience of *group* inheritance (based on territoriality, with all the constraints and opportunities which that implies for the individual and the group of which he is—or ought to be—an organic member) to the modern experience of *individual* inheritance. He assumes that the former somehow validates the latter, when qualitatively they are different (individual ownership has no basis in man's biological history, and the dynamics of the two systems are dichotomous).

(3) Wynne-Edwards accepts without question the consequences for society of the transformation of rights to land. Yet group dynamics—as even a superficial study of territorial behaviour shows—are crucial for the survival of a species. For example, cohesion within the group is of paramount importance. This cohesion has been maintained because rights to natural resources have been multi-dimensional: groups of human beings have ventured through time and space as unified wholes, which has been possible because of the cooperative approach based on sharing material resources. The right to alienate land split up societies, creating classes with distinct experiences which could not identify with each other. The ensuing disharmony is more than just a danger for the social and political future: it also constitutes a serious threat to man's genetic future.

The European interpretation of the evidence of territoriality blocks any attempt at deriving the crucial lessons about the role played by group property rights in integrating human social systems. At the

risk of repeating ourselves, we emphasise that man's genetically-based territorial behaviour, and the cultural variants which he developed in sympathy with it, have ensured both internal (social) and external (ecological) harmony. The anti-evolutionary switch to individual ownership certainly simplified the structure of rights; but it also struck a deadly blow at the foundation principles of human societies.

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