

Land, Culture and the Biology of Man (Part II)

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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.

There was, however, an important qualitative discontinuity 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

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 Concentrated Populations (tribes)
B. Hunting	
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).

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. (Mercer² 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."⁵

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.

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 territoriality. 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."⁴

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.

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.

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 portended 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.

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.

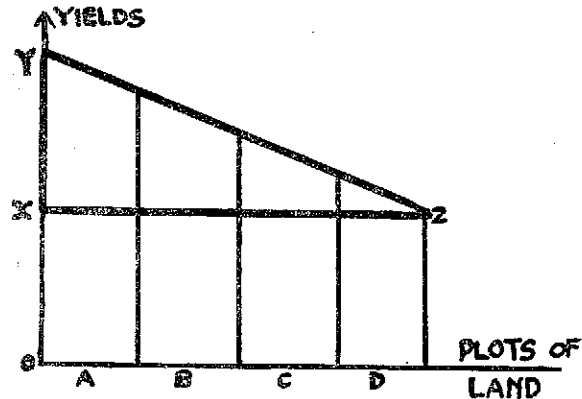


FIG. 1

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,⁵ 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.⁶ 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 descendant 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 unwieldy. 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.

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 principles 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. 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?⁷ 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 investment);

(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.

Private property in land produced want and 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.

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2. Mercer, *Living in Cities*, Penguin, 1975.
3. E. N. Wilmsen, Interaction, Spacing Behaviour, and the Organisation of Hunting Bands, *J. of Anthropological Research*, vol 29, 1973.
4. S. L. Washburn & I. DeVore, Social Behaviour of Baboons and Early Man, in: *Social Life of Early Man*, ed: S. L. Washburn, Methuen, 1962.
5. E. R. Leach, *Pul Eliya*, Cambridge, 1961.
6. G. Obeyesekere, *Land Tenure in Village Ceylon*, Cambridge, 1967.
7. F. Harrison, *The Industrial Revolution: A New Perspective*, Land & Liberty Press, 1974.